CONNECTINGHEALTH:
Connecting the dots within digital health innovation ecosystems

Shaping the Future of Digital Health in Europe: A Multi-Year Action Plan

Authors:

Robyn Freiheit, Innovation Project Manager at ECHAlliance
Karolina Mackiewicz, Innovation Director at ECHAlliance

Contributors:

Andy Bleaden, Adriana Diaz, Amanda Döme, Sagarika Gnanaolivu, Inés Luján, Kirsi Paavola, Sami Perälä, Regina Pethő, Nicola Watt

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Project Consortium:

Executive Summary

The CONNECTINGHEALTH project, a two-year Horizon Europe initiative, co-funded by the European Union (EU) presents a strategic roadmap: the Comprehensive Multi-Year Action Plan.

This Plan outlines vision for advancing digital health innovation and building sustainable health ecosystems across Europe until 2030. The Multi-Year Action Plan reflects a commitment to inclusive development and stakeholder engagement. It integrates insights from diverse stakeholders gathered through: four stakeholder-specific focus groups, two comprehensive validation sessions, various stakeholder engagement initiatives, and project-generated reports.

With a focus on sustainability and impact, the Plan prioritises realistic and sustainable funding models, allowing for scalability across regional, national, and international levels. This maximises the potential for broader impact. Additionally, The Multi-Year Action Plan aims to equip policymakers and various stakeholders with key actionable recommendations for driving positive change. These include:

1. **Fostering Multi-Stakeholder Collaboration:**
   Building interconnected innovation ecosystems that leverage expertise from academia, industry, government, and civil society.

2. **Investing in Future Generations:**
   Developing health-related curriculum to equip future professionals for the digital health landscape.

3. **Enhancing Public Awareness:**
   Raising public understanding and trust in digital health solutions.

4. **Creating a Policymaker Map:**
   Mapping relevant government stakeholders for streamlined policy development and funding opportunities.

5. **Building a Knowledge Hub:**
   Establishing a knowledge-sharing marketplace to facilitate best practice exchange and collective learning.

Combined with previously published Policy Recommendations coming out of the project, this Action Plan aims to shape a thriving digital health landscape in Europe by 2030.

The Importance of Inclusive Development and Co-Creation

In the context of the CONNECTINGHEALTH project, the emphasis on inclusive development and co-creation is crucial. As the project aimed to establish a joint program among stakeholders within Europe's digital health ecosystems, it underscored the importance of inclusivity in fostering interconnected innovation networks.

The Quadruple Helix Approach for innovation integrates academia, industry, government, and civil society as equal partners in the innovation process, emphasising collaboration and co-creation.

- In digital health innovation projects, this approach is important as it leverages the expertise and perspectives of diverse stakeholders, including healthcare professionals, technology developers, policymakers, and patients.

- By fostering interdisciplinary collaboration and incorporating end-user feedback from project outset, this approach ensures that digital health solutions are not only technologically advanced but also socially acceptable, ethically sound, and effectively implemented, leading to more sustainable and impactful outcomes in healthcare delivery.

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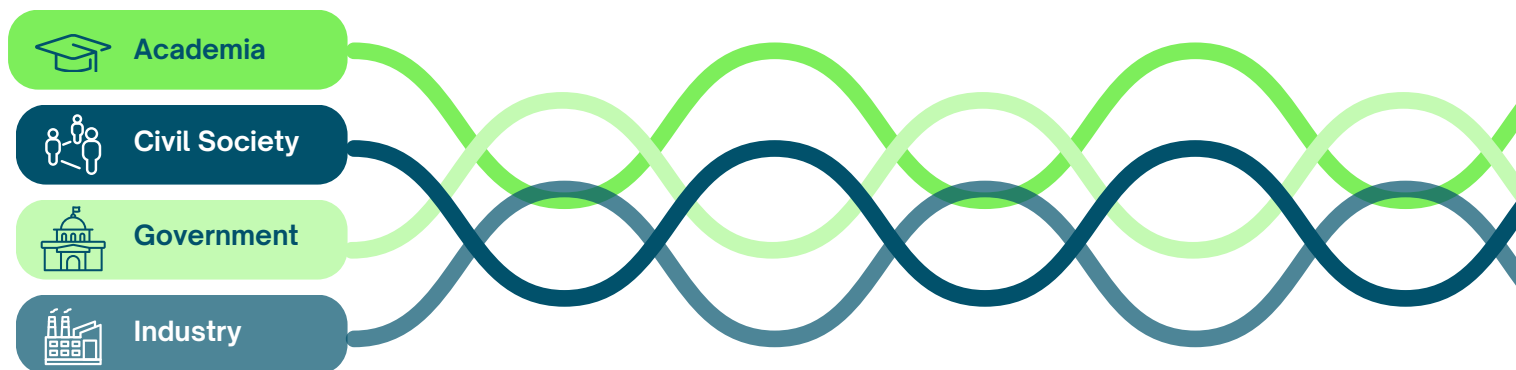
A Pressing Need for Digital Health Innovation in Europe

The European healthcare landscape faces significant challenges. Ageing populations, rising costs, and increasing chronic disease burdens call for a transformative approach. Digital health innovation offers a powerful response, promising to revolutionise healthcare delivery and improve patient outcomes.

This urgency is reflected in key policy initiatives. The European Union's Next Generation EU and European Union Innovation Agenda emphasise harnessing innovation to address global health issues, aligning closely with the United Nations' Sustainable Development Goals (SDGs) – particularly Goal 3 (Good Health and Well-Being) and Goal 9 (Industry, Innovation, and Infrastructure).

Digital health innovations like telemedicine, wearables, and artificial intelligence hold immense potential. They can:

- **Enhance access, quality, and efficiency:**
Digital solutions can work to bridge geographic gaps, improve service delivery, and empower individuals to manage their health more effectively.

- **Transform preventive care:**
Early detection and intervention through digital tools can lead to better health outcomes and reduce overall healthcare burdens.

- **Optimise population health management:**
Data-driven insights can facilitate proactive strategies for managing chronic diseases and improving population health outcomes.

However, success hinges on collaboration. Policymakers, healthcare providers, industry, and civil society must work together to ensure equitable access, address potential disparities, and build resilient healthcare systems capable of leveraging these digital advancements for the benefit of all Europeans.

The Quadruple Helix:*
*graphic adapted from ECHAlliance

Academia

Civil Society

Government

Industry

1   https://digital-strathttps://commission.europa.eu/strategy-and-policy/eu-budget/eu-borrower-investor-relations/nextgenerationeu_en#:~:text=NextGenerationEU%20is%20a%20groundbreaking%20temporary,digital%20and%20more%20resilient%20futureegy.ec.europa.eu/en/policies/data-spaces
2   https://ec.europa.eu/commission/presscorner/detail/en/IP_24_1572
3   https://sdgs.un.org/goals/
4   https://sdgs.un.org/goals/goal3
5   https://sdgs.un.org/goals/goal9

The Proposed Action Framework

The Multi-Year Action Plan Framework outlines a strategic vision for digital health in the EU from 2025 to 2030. This document serves as a flexible blueprint, adaptable to changing circumstances, cross-sectoral stakeholder input, and resource availability. It is intended as a policy guideline at the regional, national, and European levels. The plan details four main activities and outputs using SMART goals, offering a comprehensive roadmap for the sector's future. While projections and timelines are provided, these are subject to change, ensuring the plan remains relevant and feasible. A detailed explanation of proposed activities and deliverables is included below.

Activity 1:

Creation and nurturing of one multi-stakeholder cross-border ecosystem in Europe

Outputs:

1. Stakeholder Identification Report
2. Stakeholder Partnership Development Strategy
3. Government-Specific Stakeholder Mapping Exercise
4. Government-Specific Stakeholder Engagement Strategy
5. Stakeholder Engagement Workshops and Meetings
6. Online Collaboration Platform
7. Cross-Border Networking Events
8. Initiation of Cross-Border Projects
9. Best Practice Sharing Guidelines
10. Policy Briefs
11. Advocacy and Lobbying Campaigns
12. Stakeholder Engagement Metrics, Evaluation and Monitoring Framework

Activity 2:

Development and implementation of digital-health-focused curriculum for current healthcare students and pre-existing healthcare practitioners for European contexts which request support

Outputs:

1. Development of Curriculum Framework
2. Development of Curriculum Modules and Lesson Plans
3. Digital Learning Resources
4. Teacher Training and Professional Development Workshops
5. Pilot Implementation Programs
6. Quality Assurance and Accreditation Guidelines
7. Evaluation and Assessment Tools
8. Community Engagement and Outreach Activities

Activity 3:

Roll-out and expansion of gatherings that improves awareness and visibility of digital health initiatives

Outputs:

1. Event Speaker Recruitment and Program Development
2. Event Planning and Logistics
3. Marketing and Promotional Materials
4. Participant Registration and Engagement
5. Content Creation and Documentation
6. Evaluation and Impact Assessment
7. Sustainability and Scaling Strategies
8. Continuous Improvement and Iteration

Activity 4:

Creation of a knowledge-sharing database and/or open marketplace Europe wide for cross sectoral, multi-stakeholder use

(i.e., for industry to find funds/testers/etc., for academia to have their innovations uptaken by industry, for civil society to be included in consultations at initial innovation phases, for the government to support with enabling policies, etc.)

Outputs:

1. Database Design and Architecture
2. Content Curation and Aggregation
3. User Interface and Experience Design
4. Platform Development and Implementation
5. Quality Assurance and Testing
6. Quality Assurance and Testing
7. Community Engagement and Onboarding
8. Monitoring and Analytics Tools
9. Governance and Moderation Policies

Activity 1:

Creation and nurturing of one multi-stakeholder cross-border ecosystem in Europe

By the end of the first year of our suggested Multi-Year Action Plan launching, Activity 1 will aim to have successfully established and cultivated a diverse multi-stakeholder cross-border ecosystem. This ecosystem will actively engage stakeholders from various sectors, including government bodies, industry associations, academia, NGOs, financial institutions, technology hubs, civil society groups, and media channels. Through targeted outreach, collaboration initiatives, and knowledge exchange programs, the ecosystem will foster partnerships, drive innovation, and facilitate the sharing of best practices across European borders. The goal is to create a dynamic and sustainable ecosystem that accelerates the adoption and implementation of digital health solutions, ultimately improving healthcare outcomes and promoting innovation-led economic growth throughout Europe.

Timeline of potential outputs:

Short-Term Actions:

Stakeholder Identification Report:
Begin gathering initial data on key stakeholders, their roles, and interests through desk research and preliminary outreach.

Stakeholder Engagement Workshops and Meetings:
Organise initial stakeholder engagement sessions to gather insights, feedback, and input for the identification report.

Online Collaboration Platform:
Start the development process for the online collaboration platform by outlining basic requirements and functionalities based on initial stakeholder needs assessment.

Cross-Border Networking Events:
Plan and schedule the first series of cross-border networking events to kickstart relationship-building among stakeholders.

Medium-Term Actions:

Stakeholder Partnership Development Strategy: Develop a comprehensive strategy for fostering partnerships with key stakeholders, including detailed outreach plans and collaboration frameworks.

Government-Specific Stakeholder Mapping Exercise:
Conduct a thorough mapping exercise to identify and categorise government-specific stakeholders, their roles, and potential contributions.

Best Practice Sharing Guidelines:
Create guidelines for sharing best practices, drawing from insights gathered from initial stakeholder engagement activities.

Policy Briefs:
Begin drafting policy briefs advocating for supportive policies and regulations for digital health, based on initial research and stakeholder input.

Long-Term Actions:

Government-Specific Stakeholder Engagement Strategy:
Implement a tailored engagement strategy for government stakeholders, incorporating insights from the stakeholder mapping exercise and ongoing feedback.

Initiation of Cross-Border Projects:
Launch pilot cross-border projects based on identified common challenges and stakeholder interests, leveraging insights from stakeholder engagement and networking events.

Advocacy and Lobbying Campaigns:
Roll out advocacy campaigns to promote supportive policies and regulations, leveraging policy briefs and stakeholder partnerships.

Stakeholder Engagement Metrics, Evaluation and Monitoring Framework:
Develop a robust framework for evaluating stakeholder engagement efforts, incorporating metrics and mechanisms for ongoing monitoring and improvement.

Activity 2:

Development and implementation of digital-health-focused curriculum for current healthcare students and pre-existing healthcare practitioners for European contexts which request support

By the end of the second year of our proposed Multi-Year Action Plan, Activity 2 aims to develop and implement the framework of a comprehensive digital-health-focused curriculum tailored for current healthcare students and pre-existing healthcare practitioners which could fit the needs of European contexts requesting support. The goal is to equip healthcare professionals with the necessary knowledge, skills, and competencies to effectively manage digital transformations in the workplace and leverage digital health technologies in their practice. This curriculum will be designed to address the specific needs and challenges of healthcare delivery in diverse European settings, emphasising best practices, evidence-based approaches, and ethical considerations, and can be ideally used as is or further adapted based on specific needs. Through strategic partnerships with academic institutions, healthcare organisations, and industry experts, we aim to ensure the widespread adoption and integration of digital health education across European healthcare systems, ultimately enhancing patient care, improving health outcomes, and driving innovation in the field of digital health throughout Europe.

Timeline of potential outputs:

Short-Term Actions:

Development of Curriculum Framework:
Initiate the development process by convening a team to outline the scope, objectives, and structure of the curriculum framework.

Community Engagement and Outreach Activities:
Begin planning and organising outreach activities to engage stakeholders, raise awareness, and gather input for curriculum development.

Teacher Training and Professional Development Workshops:
Schedule and conduct initial training sessions for educators to introduce them to the digital-health curriculum objectives and pedagogical approaches.

Digital Learning Resources:
Identify existing digital resources and begin compiling a repository of materials to supplement curriculum development.

Medium-Term Actions:

Development of Curriculum Modules and Lesson Plans:
Create detailed modules and lesson plans for different topics within the curriculum, incorporating feedback from educators and stakeholders.

Quality Assurance and Accreditation Guidelines:
Establish quality assurance standards and accreditation guidelines, ensuring alignment with educational best practices and industry standards.

Evaluation and Assessment Tools:
Develop evaluation criteria and assessment tools to measure student learning outcomes and the effectiveness of the curriculum.

Pilot Implementation Programs:
Implement pilot programs in select educational institutions to test the effectiveness of the curriculum and gather feedback for refinement.

Long-Term Actions:

Community Engagement and Outreach Activities:
Continue and expand community engagement efforts to maintain stakeholder involvement and support for the curriculum.

Digital Learning Resources:
Develop additional digital learning resources, such as e-books, videos, and online courses, to enhance the curriculum's accessibility and effectiveness.

Teacher Training and Professional Development Workshops:
Conduct ongoing training and professional development workshops for educators to ensure they are equipped to deliver the curriculum effectively.

Evaluation and Assessment Tools:
Refine and improve evaluation and assessment tools based on feedback and data collected from pilot implementations and ongoing evaluations.

Activity 3:

Roll-out and expansion of gatherings that improves awareness and visibility of digital health initiatives

Year two onwards of the proposed Multi-Year Action Plan, Activity 3 aims to successfully roll out and expand gatherings that enhance awareness and visibility of digital health initiatives across the region. The goal is to establish a series of high-impact events, including conferences, workshops, seminars, and webinars, which serve as platforms for knowledge exchange, networking, and collaboration among stakeholders in the digital health ecosystem. These gatherings will bring together key players from government agencies, healthcare institutions, industry partners, academia, NGOs, and civil society groups to showcase innovative solutions, share best practices, and foster partnerships that drive digital health transformation in Europe. Through targeted marketing, strategic partnerships, and stakeholder engagement efforts, we aim to increase participation, diversity, and impact of these gatherings, ultimately raising awareness, building momentum, and catalysing action towards achieving our overarching goal of advancing digital health innovation and improving healthcare outcomes across Europe.

Timeline of potential outputs:

Short-Term Actions:

Event Planning and Logistics:
Secure a venue, set a date, and establish basic logistical arrangements for the first event.

Marketing and Promotional Materials:
Begin designing and creating marketing materials such as flyers, posters, and social media graphics to promote the event.

Participant Registration and Engagement:
Set up an online registration system for participants to register for the event and start promoting registration through various channels.

Content Creation and Documentation:
Start documenting the event planning process and create a preliminary outline for the event program.

Medium-Term Actions:

Event Speaker Recruitment and Program Development:
Reach out to potential speakers and finalise the event program based on their availability and topics of expertise.

Participant Registration and Engagement:
Launch a targeted outreach campaign to encourage more registrations and engage registered participants with event updates and reminders.

Content Creation and Documentation:
Develop detailed content for presentations, panels, and workshops, and establish a plan for capturing key insights and outcomes during the event.

Evaluation and Impact Assessment:
Develop a framework for evaluating the event's impact and effectiveness in achieving its objectives.

Long-Term Actions:

Sustainability and Scaling Strategies:
Explore opportunities to secure long-term funding and partnerships to sustain and expand the event series beyond the initial phase.

Continuous Improvement and Iteration:
Gather feedback from participants and stakeholders to identify areas for improvement and innovation in future iterations of the event series.

Event Planning and Logistics:
Streamline event planning processes and logistics based on lessons learned from previous events to improve efficiency and effectiveness.

Marketing and Promotional Materials:
Develop a comprehensive marketing strategy for promoting future events and reaching a broader audience.

Activity 4:

Creation of a knowledge-sharing database and/or open marketplace Europe wide for cross sectoral, multi-stakeholder use

Starting development year two onwards, and completing by the end of the fifth year of the proposed Multi-Year Action, Activity 4 aims to establish a comprehensive knowledge-sharing database and/or open marketplace accessible Europe-wide for cross-sectoral, multi-stakeholder use. The goal is to create a centralised platform that facilitates the exchange of expertise, resources, and best practices among diverse stakeholders in the digital health ecosystem. This platform will serve as a repository of valuable insights, case studies, research findings, and practical tools related to digital health innovation, enabling stakeholders to access relevant information, collaborate on projects, and accelerate the implementation of innovative solutions across Europe. Through robust infrastructure development, stakeholder engagement strategies, and ongoing quality assurance measures, we aim to ensure the sustainability, usability, and scalability of this knowledge-sharing platform, thereby fostering collaboration, driving innovation, and improving healthcare outcomes throughout the European region

Timeline of potential outputs:

Short-Term Actions:

User Interface and Experience Design: Conduct user research and surveys to understand user preferences and requirements for the platform's interface design.

Community Engagement and Onboarding: Develop a plan for engaging potential users and stakeholders through outreach campaigns, social media presence, and informational materials.

Quality Assurance and Testing: Begin testing the initial prototypes of the platform for usability, functionality, and compatibility with different devices and browsers.

Medium-Term Actions:

Database Design and Architecture: Finalise the design and architecture plan for the knowledge-sharing platform, ensuring scalability, security, and compatibility with future enhancements.

Platform Development and Implementation: Begin development of the platform, focusing on core features such as user registration, content management, and collaboration tools.

Governance and Moderation Policies: Establish initial guidelines and policies for content creation, curation, and moderation, considering input from stakeholders and legal experts.

Long-Term Actions:

Content Curation and Aggregation: Continuously curate and aggregate relevant knowledge resources to populate the platform, ensuring that the content remains up-to-date and aligned with user needs.

Monitoring and Analytics Tools: Implement monitoring and analytics tools to track user engagement, content performance, and platform usage metrics, providing insights for continuous improvement.

Quality Assurance and Testing: Conduct ongoing testing and quality assurance to identify and address any issues or bugs that arise during the platform's usage and development lifecycle.

Digital Health in Europe: Opportunities and Challenges

The future of digital health in Europe is bright, but not without hurdles. Stakeholders from all sectors – civil society, industry, academia, and government – must work together to ensure a successful Multi-Year Action Plan.

Exciting Opportunities:

- **Common European Health Data Space:** When implemented, this initiative will unlock a wealth of information for research and development, boosting the digital health environment by enabling secure and standardised data sharing across borders.

- **EU Policy Focus:** Alignment with the European Union Innovation Agenda prioritises a user-centric approach and breaking down silos, fostering innovation.

- **Technological Advancements:** Developments like the Artificial Intelligence Act, Natural Language Processing advancements, and others will significantly influence the future of digital health.

Challenges to Address:

- **Public Trust:** Building and maintaining public trust in data privacy and security is paramount. Regulations need to be facilitators, not roadblocks.

- **Collaboration:** Policies fostering collaboration between academia, industry, and the public sector are crucial to drive innovation.

- **Upskilling the Workforce:** Continuous learning and upskilling will be essential to bridge the gap between technological advancements and real-world healthcare needs.

By acknowledging these factors and following a sound methodology, the Multi-Year Action Plan can effectively guide digital health innovation in Europe.

To access the full and detailed Multi-Year Action Plan Deliverable, please visit our website at:
echalliance.com/projects/connectinghealth

CONNECTINGHEALTH: Connecting the dots within digital health innovation ecosystems is a 2-year preparatory action funded by Horizon Europe. The project aims to foster interconnected inclusive innovation ecosystems across Europe and maximise the value of innovation in the sector of digital health.

For more information or to collaborate, please contact
Karolina Mackiewicz, Innovation Director at **ECHAlliance**: karolina@echalliance.com