D7.1 XpanDH Dissemination, Communication, Outreach and Exploitation Plan

WP7 – Dissemination and Outreach

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What did this document aim to achieve?	The aim of this document is to present the strategy and action plan for the dissemination, communication, outreach and exploitation plan for the XpanDH project that addresses the needs of the diverse group of stakeholders.
Present the main methodological approaches in bullet point format	- Whole–of ecosystem approach - Outreach beyond the consortium - Creating the momentum and utilising it - Sustainability of the results
What were the main findings or take–away messages? What implications does it have for the XpanDH project?	This document drives the communication, dissemination, outreach and exploitation of the project. The project is a building stone in the EU's effort to develop and implement the EEHRxF. The right communication about the results will help create an ecosystem of change makers and doers that will result in uptake of the project results and sustainable exploitation.

Which project stakeholder group would benefit the most from the document and why?		
	Healthcare Professional	
	International Adherence Network/Initiative	
	Investors and Funding	
	Patient Organization	
	Patient/Caregiver	
	Pharma (Marketing & Sales / Medical Dept./ R&D)	
	Public Authority or Policymaker	
	Regulatory body	
	Standardization Body/ Open–Source Network Researcher/Academic	
	Statutory Health Insurance Company	
	Technology & Service Provider	
	Other	Yes

List any relevant organizations or social media accounts for wider visibility	All partners of the project, European Commission

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List of abbreviations

Acronym	Description
DCOEP	Dissemination, Communication, Outreach and Exploitation Plan
EEHRxF	European Electronic Health Records Exchange Format
XpanDH	Expanding Digital Health through a Pan-European EEHRxF Format
SDOs	Standards Developing Organisations
DCOE	Dissemination, Communication, Outreach, and Exploitation
RTOs	Research and Technology Organisations
EU	European Union
SMEs	Small-to-medium sized enterprises
HaDEA	European Health and Digital Executive Agency
TIEs	Thematic innovation ecosystems
EC	European Commission
IT	Information Technology
3Cs–3Ps	3Cs-3Ps community" - Co-creation Community (3Cs) of (3Ps) Patients, Professionals and Programmers (or other ISP developers)

Executive summary

The Dissemination, Communication, Outreach and Exploitation Plan (DCOEP) will guide the visibility, promotion, dissemination and exploitation activities of the XpanDH project during its implementation. This comprehensive document identifies target audiences, messages and dissemination channels and outlines the timeline and responsibilities of each project partner in this process.

The DCOEP provides an overview of the plans, resources and capabilities involved in DCOEP, as well as operational guidance for raising awareness on the project achievements with a view to achieve their sustainability after the end of the project. The Plan will be based on a multi-level and targeted stakeholder framework to ensure that the clear objective of the engagement is achieved. The dissemination aims to provide relevant and targeted information to identified stakeholders, opinion leaders and their networks who will disseminate the project results and key findings to a wider audience.

The implementation of the Plan will be monitored to recognise the positive trends and the issues that need to be improved. They will be captured in the report and recommendations published at the end of M12 (December 2023).

1 Introduction

1.1   Background

The XpanDH project aims at mobilizing and building capacity in individuals and organisations to create, adapt and explore purposeful use of interoperable digital health solutions based on a shared adoption of the European Electronic Health Records Exchange format (EEHRxF) across Europe.

To achieve this main goal, the project is considering the outputs and outcomes of past projects, such as X-eHealth, to develop the specifications to be used on the adoption domains, and further feasibility evaluation, implementation and testing among the project partners and stakeholders.

1.2   Scope and objectives of the deliverable

This document presents the Dissemination, Communication, Outreach and Exploitation Plan (DCOEP) of the XpanDH project. It identifies target audiences, messages and dissemination channels. The Plan also includes a detailed timeline and responsibilities of each partner to carry out appropriate and effective dissemination, communication, outreach and exploitation actions with the aim of maximising the impact of the XpanDH.

The plan is based on delivering key knowledge and information at the right time and in the most appropriate format to a variety of stakeholders, including the public.

To ensure a broad dissemination of the project and to increase its impact and scope, the XpanDH **DCOEP undertakes the following activities:**

- Developing and implementing communication and dissemination planning to ensure that all project results reach the appropriate audience and achieve the expected impacts.
- Monitoring the impact of dissemination and adapting strategies and methodologies as deemed necessary.
- Defining the roles and responsibilities of project partners to guarantee the smooth running of the dissemination activities in numerous areas.
- Coordinating with external stakeholders (healthcare-related organisations, payers, information technology (IT) developers and academia, and patient groups), as well as other related projects and institutions to ensure a high reach of communication activities.
- Developing the ecosystem of changemakers and doers through the outreach activities.
- Ensuring sustainable uptake of the project's results through exploitation activities,
- This document provides a comprehensive overview of the plans, resources and capabilities involved in DCOEP, as well as operational guidance for raising

awareness of XpanDH's achievements, with a view to achieve their sustainability after the end of the project. The strategy will be based on a multi-level and targeted stakeholder framework to ensure that the clear objective of the engagement is achieved.

- The dissemination aims to provide relevant and targeted information to identified stakeholders, opinion leaders and their networks who will disseminate XpanDH's results and key findings to a wider audience.

1.3 Introduction to the Dissemination, Communication, Outreach and Exploitation Plan

In line with the XpanDH ambitious core objectives to establish a scalable public infrastructure for digital health innovation; demonstrate real-life interoperable digital solutions for individuals, researchers, health services, and the workforce across borders; establish a Pan-European ecosystem of digital health and create and validate a framework for further exploitation of the public infrastructure for digital health innovation the **DCOEP will guide the XpanDH consortium in:**

- Supporting the project vision,
- Engaging with the full healthcare ecosystem,
- Gathering support from the full healthcare ecosystem,
- Widely communicating about and disseminating the progress and results of the project to a variety of audiences,
- Maximising uptake and impact of project results,
- Supporting the sustainability of the project.

Each of these objectives will be addressed through the implementation of a series of activities that will be tailored through the project's stages and degree of advancement. **In this context, the actions foreseen are:**

- **Introduce** the project to stakeholders, demonstrate its objectives, benefits and innovative approach;
- **Define,** maintain, and promote a consistent XpanDH identity;
- **Raise awareness** and maintain stable interactions with the project target audience;
- **Liaise** with other relevant national, European and international projects and initiatives;
- **Disseminate** the project achievements and progress made in terms of innovation;
- **Actively engage** the stakeholders in the activities of the project.

2 Methodological Approach

The DCOEP is being developed within the first six months of the project. During this crucial period, our primary objective is to effectively communicate XpanDH's objectives,

expertise, solutions and progress to a wide range of audiences through a series of mechanisms implemented over four stages. A detailed description of mechanisms is described in section 2:1.

The DCOEP encompasses four stages that strategically guide stakeholder engagement and participation:

1. **Awareness**: In this stage, our objective is to create awareness among stakeholders about the identified need that EEHRxF and XpanDH activities aim to address.
2. **Consideration**: Once stakeholders have become aware of the problem or need, they enter the consideration stage. Here, their focus shifts towards clearly defining their own requirements and determining whether XpanDH's solutions aligns with their needs.
3. **Decision**: At this critical stage, stakeholders have reached a point where they must make a decision regarding their level of engagement with the XpanDH project. We strategically emphasize the distinct value proposition of our solution, showcasing how it addresses their specific needs and challenges. By effectively communicating the tangible outcomes and potential impact of the project, we seek to inspire stakeholders to actively contribute and support its objectives. This may include encouraging uptake of project outputs or actively participating in the project's activities.
4. **Loyalty**: Once stakeholders have made the decision to engage with the XpanDH project, we aim to foster and maintain their loyalty. We understand that their continued involvement and dedication are key to the project's long-term success. To achieve this, we focus on continually delivering value to stakeholders, offering opportunities for ongoing learning, collaboration, and growth. By nurturing their relationship with the project, we aim to cultivate a community of engaged stakeholders who are invested in the project's success. These loyal stakeholders hold the potential to become advocates, actively promoting and endorsing the XpanDH project within their networks and spheres of influence.

By strategically navigating each of these stages, we can effectively engage stakeholders, drive their commitment and participation, and cultivate a strong and supportive community around the XpanDH project through the following **communication and dissemination mechanisms:**

1. Identification of key messages
2. Use of multi-channels
3. Leverage of XpanDH Partners Networks
4. Monitoring and evaluation
5. Events/workshops
6. Regional collaboration across European initiatives

The strength of the XpanDH mission also lies in the collaboration of its consortium, consisting of 28 partners representing a diverse range of organizations. Each partner brings their extensive expertise, networks, and stakeholder interactions to foster the

EEHRxF ecosystem and to ensure XpanDH's success. Leveraging their established communications platforms and channels, including websites, social media accounts, newsletters, and industry connections will support DCOE. These platforms will also serve as powerful tools for disseminating and communicating the results and key findings from XpanDH.

By harnessing the collective strength of our partners' communication resources, we aim to create significant awareness, drive engagement, and maximize the impact of XpanDH. Moreover, several partners are actively contributing to the development of the European Health Data Space, facilitating seamless connections with the technical and semantic subgroups of the eHealth Network. By harnessing the expertise, connections, and diverse backgrounds of our partners, we can help to drive impactful communications and make significant strides in the field of digital health.

Overall, the methodological approach presented for promoting the XpanDH project aims to ensure targeted, engaging, and measurable communication activities that effectively convey the project's goals, generate interest and support, and foster meaningful engagement with stakeholders. Based on the analysis and monitoring results, the DCOEP will be revised and updated accordingly to build upon learnings and deliver even greater impact.

2.1 General approach

Dissemination and communication are essential components of a comprehensive strategy to share project information and engage stakeholders. Dissemination involves sharing project findings and innovations to raise awareness and establish credibility, while communication focuses on creating meaningful connections and influencing stakeholders' perceptions and behaviours. Effective communication builds trust, facilitates collaboration, and ensures stakeholders understand the project's objectives and value proposition.

Outreach and exploitation complement dissemination and communication efforts by proactively engaging stakeholders and maximizing the impact of project outcomes. Outreach involves targeting specific audiences, understanding their needs, and tailoring engagement strategies to build relationships and mobilize support. It expands the project's reach and leverages external stakeholders' expertise and networks. Exploitation aims to maximize the value of XpanDH's objectives and mission.

By integrating dissemination, communication, outreach, and exploitation, organizations create a holistic approach that enhances XpanDH's visibility, credibility, and influence. This integration enables effective knowledge transfer, collaboration, and long-term sustainability. It leverages stakeholders' engagement and amplifies project impact. As XpanDH develops, the communication, dissemination and outreach activities will be aligned with the project's evolution.

The DCOEP's key focus is on effectively communicate the XpanDH's objectives, benefits, and progress to a wide range of audiences through a series of mechanisms implemented over four primary stages.

1. **Awareness Stage mechanisms include:**

- **Stakeholder identification:** Identification of key stakeholders who are most relevant to the mission, and objectives of the XpanDH project. Stakeholder identification is a crucial step in developing a strategic communications plan for the XpanDH project. By identifying key stakeholders, we can tailor our messaging and engagement strategies to effectively reach and connect with the individuals and organizations that have the greatest interest and influence in the project's outcomes. Regularly assessing and updating our stakeholder identification will be an integral part of the DCOEP. As the project progresses, new stakeholders may emerge, while the needs and interests of existing stakeholders may evolve. By continuously monitoring and adapting our stakeholder identification, we can ensure that our communication efforts remain targeted and effective throughout the lifecycle of the XpanDH project.

- **Identification of key messages:** Next, we established clear and consistent messaging that highlights the unique aspects and value proposition of the XpanDH project for each respective stakeholder (section 3.1). This messaging will be refined to ensure it resonates with our target stakeholders and effectively conveys the project's significance.

- **Leverage of XpanDH Partners:** The strength of the XpanDH mission also lies in the collaboration of its consortium, consisting of 28 esteemed partners representing a diverse range of organizations. Each partner brings their extensive expertise, networks, and stakeholder interactions to foster the EEHRxF ecosystem and ensure the XpanDH's success. Leveraging their established communications platforms and channels, including websites, social media accounts, newsletters, and industry connections will support stakeholder engagement. These platforms will serve as powerful tools for disseminating the results and updates of XpanDH, sharing key findings, and promoting activities to a wider audience. By harnessing the collective strength of our partners' communication resources, we aim to create significant awareness, drive engagement, and maximize the impact of XpanDH. Moreover, several partners are actively contributing to the development of the European Health Data Space, facilitating seamless connections with the technical and semantic subgroups of the eHealth Network. By harnessing the expertise, connections, and diverse backgrounds of our partners, we are well-positioned to drive impactful communications and make significant strides in the field of digital health.

2. **Consideration stage mechanisms include:**

- **Use of multi-channels:** In terms of channels and platforms, we will employ a multi-channel approach to reach our stakeholders. This will include a combination of digital platforms such as the XpanDH website, XpanDH's social media channels,

and audiovisual products such as videos and podcasts. We will also leverage networks with our partner organisations to amplify the reach of XpanDH. We will actively encourage two-way communication by providing opportunities for feedback, questions, and discussion. This will be facilitated through webinars focused on the latest developments in EEHRxF to foster meaningful engagement.

3. **Decision stage mechanisms include:**

- **Events/workshops:** To facilitate the DCOEP, we will organize workshops/sessions and a final conference, leveraging our project partner the ECHAlliance's (European Connected Health Alliance) work on Health Data and Digital Health Society. These events will enable XpanDH partners to engage with key stakeholders and gather feedback to refine the strategy for experimentation bubbles and inform the sustainability plan.

- **Regional collaboration across European initiatives**: The DCOEP will also help to activate XpanDH's X-Nets in collaboration with the ten X-Net agitators. This collaborative effort is aimed at maximizing the impact of our project and fostering stronger connections within the wider European community or opportunities for collaboration within relevant European initiatives in XpanDH's thematic area. This will help to amplify XpanDH's influence and contribute to a collective and impactful approach towards our shared goals.

4. **Loyalty stage mechanisms include:**

- **Monitoring and evaluation:** Periodic monitoring and evaluation of our communications efforts will be undertaken to assess the effectiveness of our DCOEP methodology and adjust them as needed. We will track metrics such as engagement rates and website visits to gauge the impact of our messages and make data-driven decisions for continuous improvement. This feedback loop will enable us to make informed decisions on refining and improving our approach, ensuring that our communications resonate with stakeholders and drive the desired outcomes.

2.2   Allocation of responsibilities

For the reasons above, the XpanDH consortium deems it important to define and clearly allocate DCOE core activities and corresponding responsibilities across all the partners involved in WP7 Dissemination and Outreach accordingly the Table 1:

Table 1: DCOE core activities and responsibilities

Activity	Responsible partner(s)
Dissemination, communication and stakeholder's engagement planning and	ECHAlliance

reporting. Production of corresponding deliverables	
Website design, update and maintenance	ECHAlliance with support of ISCTE
Design and production of the XpanDH visual identity and dissemination materials (flyer, poster, roll up, banners, visuals and infographics)	ECHAlliance with support of Tech4Life
XpanDH social media management	ECHAlliance
Newsletter design, content curation and subscription database management	ECHAlliance with support of Tech4Life
Press releases: 1) Writing and editing in English 2) Translation and adaptation in national language 3) Posting in relevant national press outlets	1) ECHAlliance 2) All partners 3) All partners
News: Collection from partners, English revision and publication on the project website	ECHAlliance
Publications: 1) Writing, editing and manuscript submission 2) Coordination and compliance with the rules settled in the XpanDH Grant Agreement and Consortium Agreement 3) Writing of publishable summaries suitable for general public communications to be uploaded on the	1) Partners involved in the related WPs, tasks and activities 2) ISCTE 3) ECHAlliance

website and production related social media posts	
Publication of non-indexed articles, grey literature pieces, interviews, and commentaries on magazines, websites of relevant associations and networks: 1) Identification of the topic, the suitable channel for the publication and writing in English 2) Review, editing, if necessary, check of formal communication requirements (logos, colour palette, style, format, etc.)	1) Partners involved in the relevant WPs, tasks or activities 2) ECHAlliance
Organisation of project's internal events: 1) Concept, agenda, content and speakers 2) Logistic and technical support	1) Partners involved in the relevant WPs, tasks or activities 2) Partner responsible for the organisation if live events or ECHAlliance if online

3 Stakeholder identification and mapping

The XpanDH project encompasses a diverse and interdisciplinary group of individuals and organizations with a shared interest in digital health, interoperability, and the European Electronic Health Record Exchange Format (EEHRxF). It encompasses non-profit organisations, small-to-medium sized enterprises (SMEs), public bodies, Higher Education Establishments, and research organizations who are enthusiastic about demonstrating real-life interoperable digital solutions.

In this report, we have undertaken the task of identifying potential stakeholders and interest groups associated with XpanDH. To gain a comprehensive understanding and effectively plan their involvement in XpanDH's activities, we have classified these stakeholders in two categories: primary and secondary stakeholders broadly based on their affiliations and interests.

These stakeholders include:

1. **Policy makers**, for example, European Commission regulators, Member States, Regional Governments, and Health Authorities;

2. **Healthcare–related organisations**, for example, hospitals, management, professionals and associations, public health organisations, healthcare service providers, patient and caregiver organisations and healthcare workforce unions;
3. **Payers**, for example, insurance companies, public insurance funds and funding organisations;
4. **Technology providers**, for example, tech companies, start–ups, spin–off and RTOs, large tech and pharmaceutical industry, privacy, security and legal agencies;
5. **Academia**, for example, academic communities and researchers;
6. **Society as a whole**, for example, patient organisations, patients, informal healthcare providers, citizens and non–specialised media.

3.1 Primary stakeholders

Primary stakeholders refer to the individuals, groups, and organizations that hold a significant interest and influence on the XpanDH project. These stakeholders are considered vital because they have a prominent role in the success or outcomes of the project and play a crucial role in shaping its direction, decision–making, and overall success.

Effectively engaging and communicating with primary stakeholders is essential for ensuring their support, involvement, and alignment with XpanDH's goals and objectives.

The separation of stakeholders into primary and secondary groups based on project stages helps us focus our communication efforts effectively without diminishing the importance of any group, ensuring targeted messaging and avoiding generalized approaches. This approach allows flexibility to engage with the secondary category when needed.

In this Dissemination, Communication, Outreach and Exploitation plan for the XpanDH project, we have conducted a thorough stakeholder analysis and identified 6 key stakeholders. For each stakeholder group, we have carefully assessed their interests and anticipated impact on the project.

To ensure effective communication and engagement, we have developed tailored key messages from XpanDH specifically designed to resonate with each stakeholder group. These key messages highlight the value, benefits, and potential impact of the project in addressing their specific needs and priorities.

To disseminate these key messages and engage stakeholders, we have devised a range of targeted dissemination activities as described on Table 2.

Table 2: Primary stakeholders' groups, their interests, expected impact and key messages towards them

Stakeholder group	Their interest	Expected impact	Key messages from XpanDH towards stakeholders	Dissemination activities
Policymakers, for example, European Commission regulators, Member States, Regional Governments, and Health Authorities;	Their increased understanding of the policy and practical implementation of EEHRxF will be crucial for future success of the EHDS.	XpanDH will inform policy makers and the eHealth Network about the EEHRxF and how it can be extended to other use cases. This will be done through the Policy Board, which will work with partners and liaise with decision makers. By leveraging XpanDH's insights, policymakers gain a deeper understanding of the benefits, challenges, and implications of expanding the EEHRxF framework.	XpanDH's aim is to ensure safe and secure data sharing, in compliance with GDPR regulations, fostering innovation and generating employment opportunities. Our project is fully aligned with the proposed European Health Data Space regulation, contributing to the advancement of healthcare through responsible and impactful data utilization.	**Policy briefs:** Supporting the dissemination of concise and informative policy briefs that highlight the objectives, progress and potential impact of the XpanDH health project. **Communication of key messages from the XpanDH policy board** via the website and social media **Webinars, events, XpanDH Forum:** Facilitate discussions and disseminate key messages to provide updates on potential policy implications in the EEHRxF domain. **Dissemination materials through social media, newsletter, publications and audio-visual products:** Disseminate topics, events, articles and resources emphasizing the impact of policy development on EEHRxF.
Healthcare-related organisations, for example, hospitals, management, professionals and	1. Health systems' organisations and professionals will ultimately be users of the EEHRxF on a daily basis, and will	XpanDH will support diverse target populations. including healthcare professionals and	The aim of XpanDH is to empower healthcare-related organizations, including hospitals, management professionals,	**Webinars, events, XpanDH Forum:** Facilitate discussions and disseminate key messages to provide updates on potential

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Stakeholder group	Their interest	Expected impact	Key messages from XpanDH towards stakeholders	Dissemination activities
associations, public health organisations, healthcare service providers, patient and caregiver organisations and healthcare workforce unions	benefit from improved data interoperability for the efficiency of prevention, diagnostics and treatments. 2. Reducing clinician burden in relation to recording patient health data 3. Compliance with new and emerging rules (legislation/policies). 4. Integrating digital health tools within the Electronic Health Records system. 5. Stakeholders in EU healthcare are eagerly awaiting agreements on common definitions, reference implementations and interoperability assets to enable flexible and European-wide healthcare solutions that support the Digital Single Market and EU citizen mobility. 6. Care to patients will be better informed by access to more completed EHRs and care decisions will be	individuals with training materials, specialized tools, guidelines, mentorship programs, and collaboration initiatives.	public health organizations, healthcare service providers, patient and caregiver organizations, and healthcare workforce unions, by facilitating their access to valuable health data. XpanDH recognizes the importance of data-driven decision-making and the transformative potential of health data in driving improvements across the healthcare sector. By enabling these organizations to securely access and utilize health data, XpanDH seeks to foster collaboration, innovation, and evidence-based practices that can enhance patient care, optimize healthcare delivery, and contribute to the overall advancement of the healthcare ecosystem.	implications in the healthcare sector. **Dissemination materials through social media, website, newsletter, publications and audio-visual products:** Disseminate topics, events, articles and resources emphasizing the impact of policy or legislation development on EEHRxF for healthcare related organisations.

Stakeholder group	Their interest	Expected impact	Key messages from XpanDH towards stakeholders	Dissemination activities
	better supported by smart applications taking advantage of interoperability and real-time value from structured and coded information that has already been captured.			
Payers, for example, insurance companies, public insurance funds and funding organisations.	Regional and national healthcare financing organizations are interested in the XpanDH project due to its potential to improve data interoperability and drive the widespread adoption of the EEHRxF. Their engagement in the project, active participation in capacity building, and understanding of the opportunities offered by enhanced data interoperability can generate support for the EEHRxF and expedite its implementation.	By 2028, XpanDH aims to achieve several outcomes, including the contribution to improved and interoperable cross-border digital health solutions, enhanced accessibility and control of health data, evidence-based healthcare practices, lower costs of standards adoption, improved datasets for the academic community, better-informed policy and decision makers, more engaged and empowered citizens, and support for capacity building efforts.	By leveraging innovative strategies and approaches, XpanDH aims to address the evolving needs of users and drive positive impacts in population health and care management. XpanDH will create and validate a framework for further exploitation of the public infrastructure for digital health innovation.	**Webinars, events, XpanDH Forum:** Facilitate discussions and disseminate key messages to provide updates relevant to payers (stakeholder group) **Dissemination materials through social media, website, newsletter, publications and audio-visual products:** Disseminate topics, events, articles and resources emphasizing the impact of policy or legislation development on EEHRxF

Stakeholder group	Their interest	Expected impact	Key messages from XpanDH towards stakeholders	Dissemination activities
Technology providers, for example, tech companies, start-ups, spin-off and RTOs, large tech and pharmaceutical industry, privacy, security and legal agencies;	1. Well-defined interoperable services supported by harmonized asset can support the reduction in the cost of adopting standards. 2. Organizations engaged in technology innovation, research, and business activities in the healthcare value chain, as well as technology providers, are highly interested in the application of digital health technologies. They actively seek resources and collaborate to create joint services based on the EEHRxF.	XpanDH aims to engage key stakeholders in scaling up and achieving pan-European impact, while enhancing capacity and readiness in the application of digital health technologies. These stakeholders will actively contribute to the co-definition of X-Bundle readiness models for utilizing the EEHRxF and play a vital role in the maturation of the project's ecosystem activities in WP5.	XpanDH aims to improve cross-border digital health solutions in the EU by developing technical resources and promoting the use of standardized technical specifications for specific use cases.	**Webinars, events, XpanDH Forum:** Facilitate discussions and disseminate key messages to provide updates relevant to payers (stakeholder group) **Dissemination materials through social media, website, newsletter, publications and audio-visual products:** Disseminate topics, events, articles and resources emphasizing the impact of policy or legislation development on EEHRxF
Academia, for example, academic communities and researchers.	Academia is interested in the XpanDH project due to its potential for research collaboration, access to improved datasets, and contributions to advancements in digital health and data interoperability.	Organisations involved in research contributions are highly relevant to the application of digital health technologies in the healthcare value chain and in finding resources and creating joint services based on the EEHRxF.	With MetabERN, XpanDH will develop new use cases where cross-border health data donation and data altruism can be used for multisite research.	**Webinars, events, XpanDH Forum:** Facilitate discussions and disseminate key messages to provide updates relevant to payers (stakeholder group) **Dissemination materials through social media, website, newsletter, publications and audio-visual products:** Disseminate topics, events, articles and resources emphasizing the

Stakeholder group	Their interest	Expected impact	Key messages from XpanDH towards stakeholders	Dissemination activities
				impact of policy or legislation development on EEHRxF
Society as a whole, for example, patient organisations, patients, informal healthcare providers, citizens and non-specialised media.	How can society as a whole address the inequity in access to healthcare and ensure that people receive better and more personalized healthcare services.	XpanDH aims to have one million exchanges using the European Electronic Health Record exchange format (EEHRxF) through 300 organizations by 2028, benefiting citizens, patients, healthcare professionals, and researchers with personalized actions.	XpanDH aims to foster a common understanding among the general public and patients about the benefits of EEHRxF, data interoperability, data access, control, and sharing for improved health outcomes. XpanDH aims to empower individuals to become informal ambassadors for EEHRxF, spreading awareness and advocating for the adoption of interoperable health data standards.	**Webinars, events, XpanDH Forum:** Facilitate discussions and disseminate key messages to provide updates relevant to payers (stakeholder group) **Dissemination materials through social media, website, newsletter, publications and audio-visual products:** Disseminate topics, events, articles and resources emphasizing the impact of policy or legislation development on EEHRxF

3.2 Secondary stakeholders

The role of secondary stakeholders in the DCOE is to serve as influencers, amplifiers, and supporters of the project. They help disseminate key messages, raise awareness, and advocate for the importance of data interoperability and digital health solutions. Their engagement is vital in reaching a broader audience, including policymakers who can drive policy changes and allocate resources to support XpanDH's objectives.

Secondary stakeholders also provide valuable insights, expertise, and feedback that can enhance the project's development and implementation. Through their participation in consultations, advisory groups, and collaborative initiatives, they contribute to shaping XpanDH's strategies and ensuring alignment with industry needs and regulatory frameworks.

Moreover, secondary stakeholders can facilitate partnerships and collaborations with their networks, connecting the project to relevant industry players, research institutions, and funding opportunities. Their involvement helps create a supportive ecosystem for the

project's activities and fosters a collaborative environment for knowledge sharing and innovation.

Overall, Table 3 presents the secondary stakeholders serve as key allies in communicating the XpanDH's goals, benefits, and achievements. Their engagement strengthens XpanDH's credibility, expands its reach, and facilitates the necessary collaborations and resources for successful implementation.

Table 3: Secondary stakeholders' groups, their interests, expected impact and key messages towards them

Secondary Stakeholder group	Their interest	Expected impact	Key messages from XpanDH towards stakeholders	Dissemination activities
Standards Developing Organizations (SDOs)	SDOs demonstrate why standards need financial investment to improve productivity and quality, and how they can provide better support to standards adopters.	SDOs will have greater clarity in how to work better together and produce better harmonised standards.	Standards play a vital role in enhancing productivity and quality, and as their usage expands, it becomes increasingly important to invest in them. Through demonstrating the value of financial investment, SDOs aim to provide improved support to standards adopters and meet the growing need for a broader range of standards	There will be a SDO and Industry Board Network 'X–Net' including Digital Health Industry players and relevant SDOs, social media, website, podcast episodes, infographics.
Industry Board Network of Digital Health Industry players (companies, and associations)	The Industry Board Network of Digital Health Industry players, comprising companies and associations, would be interested in the XpanDH project due to the opportunity it presents for contributing to standardized technical specifications and showcasing their expertise in	The desired outcome is an increase in the maturity level of organizations benefiting from the X–Bundle Readiness guides, reflected by the number of organizations that have improved their level of EEHRxF maturity and the percentage of improvement in	XpanDH project aims to enhance the maturity level of organizations through the implementation of an EEHRxF Readiness Model and X–Bundle Readiness guides. By providing workshops and resources tailored to developers, healthcare professionals, and patients, the project facilitates growth,	**Webinars, events, XpanDH Forum:** Facilitate discussions and disseminate key messages to provide updates relevant to payers (stakeholder group) **Dissemination materials through social media, website, newsletter, publications and audio–visual products**

	the digital health field. By participating in the project, they can stay at the forefront of digital health advancements, enhance their reputation, and collaborate with other stakeholders in driving interoperability and innovation.	maturity level.	collaboration, and improved outcomes in the digital health domain.	

4 Dissemination action and tools

Having identified the main objectives for building a sound DCOEP and the community of stakeholders who are more prominent to the project's results adoption, implementation and value, this section presents a more detailed plan of actions, techniques, and channels to be used for achieving the goals, considering both traditional communications methods as well as novel digital marketing techniques.

4.1   Planning

The planning started at the kick-off meeting online in January 2023, the first consortium meeting in Lisbon in February 2023 and the workshop on the key messages for stakeholders organised online in February 2023. The key contact person of the partner was addressed with the requests to e.g., fill in the communication coordination form (providing logo, social media details, short description) and other calls to action regarding the development and promotion of the website.

4.2   Compulsory elements to be included in all Horizon Europe projects

In line with the Horizonte Europe, all communication activities and products (articles, project, websites, presentations, flyers, press releases, social media, videos etc.) must include all the following elements:

- A formal acknowledgement of Horizon Europe support: The project is funded by the European Union (Grant Agreement No. 101095594)
- Figure 1 & Figure 2 presents the EU logo of minimum 1 cm

Horizontal alignment   Vertical alignment

Figure 1: EU funding logo, horizontal alignment   *Figure 2: EU funding logo, vertical alignment*

The emblem must remain distinct and separate and cannot be modified by adding other visual marks, brands or text. Apart from the emblem, no other visual identity or logo may be used to highlight the EU support. When displayed in association with other logos (e.g., of beneficiaries or sponsors), the emblem must be displayed at least as prominently and visibly as the other logos.

- A disclaimer: "Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or HaDEA. Neither the European Union nor the granting authority can be held responsible for them."

4.3   Communication and dissemination plan

The communication and dissemination plan can be described on the Table 4.

Table 4: Primary stages of communication and dissemination journey for stakeholders

4 PRIMARY STAGES OF COMMUNICATION AND DISSEMINATION JOURNEY FOR AFOREMENTIONED STAKEHOLDERS – APPROACH: Description (incl. KPIs, if relevant)
I – Awareness Stakeholders realise there is a problem or need and are open to a solution (the EEHRxF, and the XpanDH activities). At the start of the project, we will perform research and search queries to increase our understanding and further definition.

BRANDING: Conceptualise and develop the project's visual identity that would serve to present the tenets of the project to the public whilst promoting first-touch contact with potential stakeholders.

WEBSITE: Create the leading resource to promote project activities and outputs to all target audiences. First version will be ready by M3-4 and will undergo regular maintenance/updates. It will showcase the project's main characteristics and will integrate Google Analytics tracking for performance monitoring purposes.

BLOG POSTS: Streamlined content strategy that includes blog titbits (monthly)—e.g. SME Highlight of The Week—and topic-focused blog posts (every 2 months)—e.g. Top 3 Challenges in Health Interoperability

SOCIAL MEDIA: Build and expand online presence (Twitter and LinkedIn) with targeted growth by approximately 15% per year; will leverage consortium social media reach (e.g., University of Oslo (28.9K followers), ECHAlliance (5.9K followers) and European Health Management Association (4.4K followers).

PRESS RELEASE: Launched once a year (and additional, if necessary) to announce major project advances. Maximise use of partners' in-house communications channels to share press releases.

WIKIPEDIA: Publish and update the XpanDH Wikipedia page.

II Consideration Stakeholders have now clearly defined their need and are deciding whether to commit and engage with the solution. They are determining whether this solution will most likely fulfil their needs.

WEBINARS & PODCASTS: quarterly webinar recordings (via YouTube) that invite 3 expert panellists to discuss and present on a topic related to interoperability (content will vary according to the targeted stakeholder's perspective and needs). Webinars discussions will be released as Podcasts (made available on Spotify and project website) ex: *How would interoperability feed into addressing patients' needs?*

INFOGRAPHICS: Prepare 1 eye-catching infographic per year to highlight either outputs or challenges being addressed.

OUTREACH WORKSHOP: Organise a workshop/session during an international event to enable a direct line of communication between the Consortium members and the relevant stakeholders.

PARTICIPATION IN THEMATIC INNOVATION ECOSYSTEMS: Coordinate with ECHA to involve XpanDH in thematic innovation ecosystems (TIEs) held monthly and virtually for a global audience. These TIEs promote strong cross-border, multi-stakeholder collaborations on a specific topic, e.g., TIE on Health Data.

III Decision Stakeholders have reached a point at which they will choose to engage and are grasping the unique value proposition to justify and support their decision to contribute to the project (e.g. even uptake outputs).

EVENTS: Participate and disseminate outputs at pre-selected strategic events (≥4 per year) including Digital Health Society, Digital Health Observatory, Medical Informatics Europe Conference, HL7 Connectathons, IHE Europe Connection, HIMSS events, EuroScience Open Forum (ESOF).

WORKSHOPS: Organise a second (Outreach) workshop during a relevant international event to enable a direct communication between the XpanDH partners and the relevant stakeholders

COLLABORATION WITH PROJECTS /INITIATIVES - that are relevant or have similar pursuits, including IMI-funded Gravitate Health, X-eHealth, Smart4Health, DARWIN, InteropEHRate, Procure4Health, EHDEN, EUCanImagine, INTERVENE, Thematic Innovation Ecosystems; etc.

EVANGELICAL EMAIL CAMPAIGNS: Share specific outputs to targeted stakeholders in synopsis format that drive how such results provide a competitive advantage.

SCIENTIFIC PUBLICATIONS: will follow FAIR and Open-access best practices to disseminate scientific publications in peer-reviewed journals and "grey" (non-indexed) alliteration.

QR CODE: to direct users to the website with relevant information, easily accessible by a mobile device

POLICY BRIEFS: prepared with concise information summaries to inform and support decision-making.

IV Loyalty Stakeholders have made their decision to engage with XpanDH, are interested in continually gaining more value from the project and hold the potential to become advocates.

AMBASSADORS: Identify and select high-value stakeholders in the first year that would promote uptake of project outputs through actions such as guest blogging on pre-chosen websites/platforms.

FINAL CONFERENCE: Final hybrid conference to expand possibility of wider outreach.

4.4 Digital communication

With a strategic selection of digital communication channels, tactics, and Key Performance Indicators (KPIs), XpanDH aims to engage the most relevant audiences and monitor the performance of their communication efforts. By continuously evaluating and refining their approaches, XpanDH can adapt to challenges and capitalize on opportunities for even greater success.

Additionally, the Plan includes proactive coordination with external stakeholders, such as regulatory bodies and policymakers, as well as collaboration with other projects, initiatives, and events, to leverage synergies and enhance engagement and outreach. This comprehensive approach ensures that the project's digital communication efforts are well-coordinated, impactful, and capable of maximizing resources and knowledge for future advancements in digital health.

4.4.1 Content production

A clear process is established for news content production to be published on the project's website and diffused on social media.

Each partner who wishes to produce and publish relevant content is requested to:

- Alert ECHAlliance as Communication Manager via email, message on Teamwork or during one of the consortium meetings,
- Fill in the XpanDH news template and provide a draft for content, rationale for publication and alignment with the ongoing project activities.
- Support further the content dissemination via its own social media and communication channels (i.e., own website, newsletters, etc.).

The template for news production and collection, including relevant instructions to make the process smooth and ensure that communication is homogeneous and complies with the Horizon Europe programme requirements, is placed in the Teams collaborative working space of the project.

4.4.2 XpanDH Website

Just after the project start the WP7 Dissemination and Outreach, leaders, European Connected Health Alliance (ECHAlliance) worked together with XpanDH's Project Coordinator (ISCTE) to conceptualise and develop the project's website, as the main communication platform about the project to the external world.

The WP leader intentionally created the XpanDH website (Figure 3) as a page that will be developed over time, as the project activities progress. At this point in time (M6, June 2023) the XpanDH website includes essential elements to communicate about the project (About the project, News – blogs – events, Meet the team, Partners, Contact us). This structure covers the essential needs of the project; however, some additional sections might need to be added later during the project development, e.g. based on the WP5 – Growing the Digital Health Ecosystems and WP6 Sustainability and Future Action.

Figure 3: XpanDH Website: https://xpandh-project.iscte-iul.pt/ (as of June 2023)

After the launch of the website, it has been communicated widely through XpanDH's social media, as well as partners' social media and other channels. The information will also be included in the relevant partners' newsletters. networks and audiences.

4.4.3 XpanDH Social media channels

Social media channels play a crucial role in generating interest among audiences for the XpanDH project, maximizing audience and stakeholder outreach.

At the outset, dedicated Twitter (Figure 4) and LinkedIn (Figure 5) accounts were established for the XpanDH project, along with tailored banners and images for effective social media campaigns that align with the project's brand identity. Through these channels, the project will share concise and engaging updates, announcements, and developments, optimized for each platform to cater to diverse target audiences across various social media platforms.

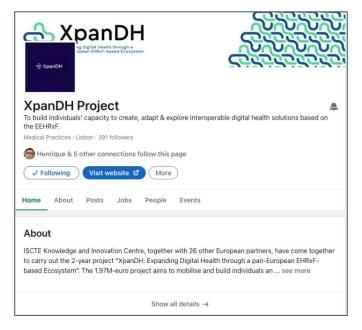*Figure 4: XpanDH's Twitter profile (As of June 2023)*

Figure 5: XpanDH's LinkedIn profile (As of June 2023)

At the outset, Twitter and LinkedIn accounts were established for XpanDH, along with custom banners and images for social media campaigns that align with the project's brand identity. These channels effectively communicate XpanDH's developments through concise messages tailored for a wide range of audiences and stakeholders.

Furthermore, these channels serve as platforms to share news and articles from the project website, providing a preview and directing the audience to the full publication on the website.

In addition to disseminating information, the social media channels encourage stakeholders to actively engage with the project, fostering an open dialogue on the progress and impacts stemming from XpanDH's activities.

As outlined in the upcoming section, regular activity is planned and will be maintained on these channels, with special campaigns designed for relevant events, milestones, and policy developments throughout the project's lifespan.

Apart from special occasions, the XpanDH online communication strategy foresees the publication of 4 posts per month on Twitter and LinkedIn, featuring:

- Relevant results, ongoing activities, workshops conducted by the project partners, especially in relation to digital health, interoperability, health innovation and EEHRxF.
- Presentation of the project at external conferences and events,
- Publication of relevant reports from European political institutions and agencies,
- Activities carried out by those projects and initiatives with which XpanDH is liaising and collaborating, e.g. Events, presentations, and seminars.
- Relevant publications, initiatives, news and events promoted by the European Commission.

In addition to the XpanDH project's official hashtag **#XpanDH**, a series of relevant hashtags have been identified:

#XpanDH, #eHealth, #EEHRxF, #interopability #electronichealthrecords, #digitalhealth, #healthdata, #healthcaretechnology.

4.4.4 Social Media Strategy

The social media plan is a **living document** to be continuously updated along the project's duration. The table below provides an illustrative example of some social media campaigns planned during the next near months can be seen on Table 5.

However, it is worth noticing that the XpanDH social media communication will be flexible and adapted to the specificities of each of the project's activities lines.

Specifically, the project's activities can be aggregated in three main macro areas:

1. Creating cross-border solutions;
2. Providing stakeholder groups with training materials, specialized tools, guidelines, mentorship programs, and collaboration initiatives;
3. Promote standardised technical specifications for specific use cases related to EEHRxF.

Table 5: XpanDH Social Media Plan

Title of the campaign	Content	Time
XpanDH webinar series on interoperability/EEHRxF	4 social media posts per webinar on Twitter and LinkedIn promoting the webinar and speakers	April 2023 – December 2023
XpanDH webinar recordings	1-2 social media posts per month on Twitter and LinkedIn promoting webinar recordings on YouTube	April 2023 – December 2023
XpanDH new Associated Partners	Engaging infographic(s) announcing new associated partners to the XpanDH project including partners bio with logo and website	August – September 2023
Meet the Partners campaign	Engaging infographic(s) announcing XpanDH Partners	April 2023 – December 2023
XpanDH 2023 EEHRxF Forum	Promotional campaign to engage registrants, participants and attendees	November – December 2023
XpanDH podcast	Engaging infographic(s) and/or soundbites and/or GIFs announcing XpanDH Podcast episodes	September 2023 – December 2024
XpanDH participation in 2023 IHE Europe – Connectathon	1-3 posts leading up to the event announcing XpanDH participation in the 2023 IHE Europe Connectathon with an infographic	September 2023

4.5   Audio-visual materials

The project will create audio-visual materials to support its dissemination activities. These materials will have the form of short videos and/or sound-bites, created by all partners and edited by ECHAlliance. Audio-visual materials will be uploaded and available through the project's coordinator organization's (ISCTE) YouTube channel.

4.6   Communication materials for printed and digital distribution

The Figure 6 & Figure 7 presents the XpanDH flyer was developed to present an overview of the project to the general audience.

Figure 6: XpanDH Project Flyer 2023 (front)

Figure 7: XpanDH Project Flyer 2023 (verse)

4.7 Events

4.7.1 Events arranged by XpanDH and its partners

During the duration of the project, multiple events, workshops and webinars will be arranged to engage the stakeholders in the process of facilitating knowledge sharing, collaboration, and stakeholder engagement. These events will serve as platforms for showcasing the expertise of XpanDH and updates within the domain of EEHRxF and interoperability. The aim is to raise awareness and generate interest among key stakeholders, including policymakers, healthcare professionals, researchers, industry experts, and patient advocacy groups.

The events will be strategically timed and targeted to maximize impact and reach the intended audience, ensuring effective dissemination of project outcomes and promoting the value of cross-border collaboration in improving healthcare delivery and outcomes.

The events will include conferences, workshops, and seminars, providing opportunities for interactive discussions, presentations of research findings, and demonstrations of cross-

border digital health solutions. By organizing these events, XpanDH aims to foster a vibrant community of stakeholders, encourage dialogue, and build partnerships that drive the future development and adoption of interoperable digital health solutions. The events will be strategically timed and targeted to maximize impact and reach the intended audience, ensuring effective dissemination of project outcomes and promoting the value of cross-border collaboration in improving healthcare delivery and outcomes. These events include:

1. **XpanDH Quarterly Webinars:** XpanDH will host quarterly webinar series focused on the topic of interoperability and is designed to offer valuable insights to a diverse range of stakeholders. Each webinar features three expert panellists who bring their unique perspectives and expertise to the discussion. The webinars are recorded on Zoom and will be released as podcasts, providing a valuable resource for anyone seeking to stay informed about the latest developments in interoperability. The first webinar took place in May 2023, another one on June 2023, with other webinars following on 28 June 2023 and then September and November 2023.

2. **XpanDH – EEHRxF Forum 2023:** XpanDH intends to host a forum in the fourth quarter of 2023, in collaboration with the XpanDH project and the European Commission (EC). Its purpose is to facilitate discussions and provide material for drafting workshop invitations, agendas, and engaging various stakeholders, including projects, initiatives, and demand and supply side players, in preparatory consultations leading up to the event. The forum will be a hybrid event, combining both physical and virtual components, with the physical meeting taking place in Brussels during Nov-Dec (exact dates to be determined). The event is expected to span one and a half days, allowing ample time for productive discussions and knowledge sharing. Through this forum, the XpanDH project aims to foster collaboration, define key actions for effective communication and reuse of outcomes, and enhance the understanding and support for the European EEHRxF. By bringing together a diverse range of stakeholders and facilitating meaningful discussions, the event will contribute to the advancement of interoperable digital health solutions and drive the transformation of healthcare systems across Europe.

3. **Other stakeholder events:** The XpanDH project aims to participate and disseminates its outputs at various strategically chosen events throughout the year. These events include well-known conferences and gatherings such as the Digital Health Society, Digital Health Observatory, Medical Informatics Europe Conference, HL7 Connectathons, IHE Europe Connectathon and HIMSS events. By participating in these events, XpanDH ensures broad exposure and engagement with relevant stakeholders in the digital health field, allowing for the effective dissemination of XpanDH's outcomes and fostering collaboration and knowledge exchange with experts and peers in the industry.

4.7.2 Conferences and congresses featuring XpanDH

An essential part of the project's dissemination and communication strategy will be the participation of XpanDH consortium members in the relevant European, regional and national events to spread the project's value and interact directly with the stakeholders. Although those events will be selected continuously according to the focus and stage of the project, a preliminary list of the events is presented below. To keep the Dissemination Lead (ECHAlliance) informed and aware about the partners commitments to the events, the special reporting form will be provided to the consortium.

The partners are encouraged to fill it in as soon as the opportunity appears. After a submission, the Dissemination Leads will promote the XpanDH engagement through the project's communication channels.

Table 6: Conferences and congresses featuring XpanDH

Event	Location	Date	Link
HIMSS 2023	Lisbon, Portugal	7–9 June 2023	https://www.himss.org/
Medical Informatics Europe 2023	Gothenburg, Sweden	22–25 May 2023	https://www.mie2023.org/
IHE Europe 2023 Connectathon	Rennes, France	25–29 September 2023	https://connectathon.ihe-europe.net/
Digital Health Society Summit 2023	Online/virtual	14–15 November 2023	https://echalliance.com/digital-health-society-summit-2023/

4.8 Featuring XpanDH through Horizon Europe communication and dissemination tools

The XpanDH project is committed to leveraging all available communication and dissemination tools provided by Horizon Europe to effectively promote its activities and showcase its impactful results.

By utilizing these tools, such as the Horizon Europe website, social media platforms, newsletters, and project databases, the project aims to reach a wider audience and maximize its impact.

The use of appropriate hashtags related to Horizon Europe, such as #HorizonEurope, #EUResearch, and #EUInnovation, will be integrated into the project's communication strategy to enhance visibility and ensure alignment with the broader European research and innovation community.

This strategic use of hashtags will facilitate the discovery of XpanDH's activities and outcomes by stakeholders, policymakers, researchers, and innovators who are interested in the advancements and contributions of Horizon Europe-funded projects.

4.9   Networking with relevant projects and initiatives

Networking and cooperation between research and implementation projects and initiatives in the same field has a positive impact on the visibility, uptake of the results and sustainability of the project. Thus, XpanDH will engage in the cooperation with related EU projects and initiatives with the aim to:

- Generate synergies between networks, communities and stakeholders at European level,
- Accelerate the information flow and exchange of experience of the ongoing and future projects,
- Identify and address mutual drivers and barriers in the field,
- Accelerate adoption of the EEHRxF

The collaboration with some projects has been already initialised. They are:

- Gravitate Health
- UNICOM
- Lable2Enable

This collaboration will also be extended to some projects that are foreseen to initiate their activities on the 2nd semesters, such the 'Extended EHR@EU Data Space for Primary Use – Xt-HER (JA-09)'.

4.10   Monitoring and reporting

A tool for monitoring and reporting of dissemination and communication activities will be provided to all partners in the format of a spreadsheet shared in the SharePoint.

All partners are requested to collect and report information, links and supporting documents related to the communication and dissemination activities they have carried out every six months. Such information is processed, analysed and reported by ECHAlliance in the reporting due to the EC as from the project's Grant Agreement.

Based on the results of the reporting as well as the analysis of the performance of the website and social media channels, feedback from the Coordinator, partners and stakeholders, as well as priorities of the project, the Dissemination, Communication, Outreach and Exploitation Plan will be reviewed in December 2023, in order to provide the value to the project in the upcoming year.

5 Autonomous outreach of XpanDH

The **XpanDH vision entails a true and participatory involvement from all relevant end-users**, such as patients, caregivers and professionals, in the EEHRxF implementation,

adoption and dissemination. In this vision, patients, caregivers, citizens and health care professionals are NOT JUST recipients of digital services, or users of digital services for the betterment of their health/healthcare service, NOR JUST requirement holders to be consulted in a unidirectional way. In the **XpanDH** vision, these key stakeholders ARE ALL THIS, AND they can and should be empowered and given access to health data and co-create the **AEIOU (A**ccessible, **E**ngaging, **I**nteroperable, **O**perational and **U**seful) **digital health tools of the future**, that are being proposed by XpanDH. This **Participatory design approach** will have 2 main implications: 1) all key stakeholders will be actively involved in the co-creation of the EEHRxF ecosystem and actively and critically involved in different project phases, from the very beginning, and 2) the consortium will ensure the necessary flexibility and openness to manage potential changes and needs that arise from the co-creation process, to ensure real acceptance".

5.1   Rationale and methodology

To reach scale and pan-European impact, XpanDH has established XpanDH X-Nets – networks of stakeholders (EU or MS organisations) that form the existing pan European (Digital) Health space and can potentially use or benefit from the widest adoption of the EEHRxF. Table 7 presents the X-Net members are composed of networks themselves: e.g., for being member-based organisations. Members act on EU, national or regional level. Work Package and task leaders representing the respective stakeholder group moderate the X-Nets as "Agitators". The consortium established following ten XpanDH X-Nets in the proposal stage and currently focusses on expanding them:

Table 7: List of XpanDH X-Nets and assigned X-Net agitators.

X-Net Name	X-Net description	Agitator(s)/ Moderator(s)
Patient association	Network of patients and patient associations, particularly supported by WP1 and engage particularly with WP3/4/5	ECPC/Iscte/EDHA
SDOs & Industry Board	Network of all digital health industry players (companies, and associations) as well as all relevant SDOs (e.g. SNOMED Int, HL7)	IHE
Hospitals-on-FHIR X-Net	Network of organisations affiliated with the HL7 Europe Hospital-on-FHIR Initiative and interested parties	HL7

X-Net Name	X-Net description	Agitator(s)/ Moderator(s)
BioMedical Research	Network of researchers and research collaboration initiatives around the life sciences and biomedical	IH-D
Professionals Associations	Network of Health professionals' chambers, associations and unions national and European	CHUP
Citizens and Society	Network of citizen associations, consumer groups, and other representatives of civil society, including media	EMP/ISCTE
Health Mgt & Regulators	Network of health management professionals and associations, as well as healthcare regulators and financers	EHMA
Innovation Hubs	Network of partners of the innovation cycle (e.g. venture capital and innovation funds, incubators, innovation hubs)	Tech4Health
ERNs and PerMed	Network of all EU ERNs established and projects/initiatives in personalised medicine (eg. ICPerMed)	UCN
Health Regional Authorities	Network of all health regional authorities responsible for healthcare provision or oversight/planning healthcare	ARIA

Partners from the stakeholders' sector who will engage and activate the organisations of the X-Net in the relevant XpanDH activities.

To ensure an effective and standardised engagement, partners empirica and ISCTE are developing an **internal X-Net/ stakeholder engagement guide**, to be circulated end of July 2023. Although not foreseen in the original deliverable list, it guides consortium partners towards a stakeholder engagement that connects to the specific project objectives. It has clear objectives:

- facilitate the recruitment of new X-Net members;
- centralise engagement methodologies and goals;
- demonstrate added value for stakeholders to engage with X-Nets

To this aim, the guide sets the scope and methods for X-Net engagement in two ways, as detailed below.

1. **Concerning X-Net community structures**

The X-Net group spans diverse stakeholders across the digital health spectrum. These groups have diverse expertise, experiences and expectations regarding health data exchanges. Thus, guide customises the X-Net outreach strategy for each stakeholder group, observing the following points:

- Concrete benefits from XpanDH/ the EEHRxF: Describing what is the added value stakeholders can expect from engaging with XpanDH
- Type of institutions involved: Describing what are typical types of institutions, physical and legal persons that compose this stakeholder group.
- Influence and impact: Describing the stakeholder group's ability to influence and impact decisions.
- Stratification: Breaking down this stakeholder group into specific sub-groups.
- Engagement with own community: Describing ways in which the X-Net engages with its own member networks, both in terms of channels and type or content.
- Barriers to engagement: Describing what could hinder the specific stakeholder group to engage with XpanDH.
- Specific engagement methods for X-Net: Describe the type of engagement method with the X-Net, the rationale behind it and the way it is carried out.
- *Relations to other X-Nets:* Describing how the stakeholder groups relates to stakeholders in other X-Nets.
- (Potential) Members: Listing current and envisioned members.

2. **Concerning project structures:**

XpanDH project scope covers a wide range of aspects of the EHRxF – regarding technicalities (X-Bundles), organisational aspects (Readiness Model) and implementation aspects (X-Bubbles). Linking the stakeholder engagement to specific part of the project structure ensures that the X-Nets reflect this broad exchange format coverage. Thus, the guide will describe:

- Workplan connections: Describing the work packages and tasks that most relate to the stakeholder.
- Links to adoption domains: Describing how the X-Net is positioned in between the different adoption domains. This is crucial since the adoption domains consist of describing a stakeholder-to-stakeholder exchange of health data from the EHRxF priority data categories.

The X-Net engagement structure also builds the basis for two other engagement clusters under T5.1: the healthcare providers network, the multi-stakeholder focus group.

5.2   Implementation – 3C-3Ps community

WP5 Growing the Digital Health Ecosystems is also implementing a "3Cs-3Ps community" – Co-creation Community (3Cs) of (3Ps) Patients, Professionals and Programmers (or other ISP developers), to approach these three (usually separated) stakeholders" groups of digital health.

This task also involves the creation of a doers' governance community, also building on communities within the open-source domain and in low-median income countries.

The community will most closely work around data priority categories of laboratory results and hospital discharge letters. Focus will be to work on the use cases, involving the users, creating a shared vocabulary between users and doers and making demonstrations.

5.3   Brief plan of activities for M7-M24

Table 8 presents a brief view about the activities plan for the M7-M24 (July 2023-Deceber 2024).

Table 8: Brief plan of activities for M7-M24

Date	Planned Activity
28 June 2023	3C-3P community participation in multi-work package workshop on how to support the experimentation bubble
End July 2023	Finalisation of X-Net Engagement Guide (not public, internal to consortium)
July/September 2023	Face to face meeting in Greece (3C-3C community)
September 2023	IHE Connectathon in Rennes, satellite event with local community in France
November 2023	Contribution to EHRxF Forum
2024	Organisation of xPanDH Hackathon
November 2024	XpanDH Ecosystem Report (D5.1)
January 2025	X-Bundle open source community (D5.3)

6 XpanDH Exploitation Plan

6.1 Introduction

The exploitation of the XpanDH project results is primarily anchored in WP6 Sustainability and Future Actions.

The most substantial project results that need to be sustained, maintained and actively promoted are the XpanDH Asset Bundles and the process for creating, maintaining and updated them.

Another important and high impact project output will be the XpanDH recommendations to Member States and the European Commission, regarding how to scale up interoperability for the project implemented adoption domains and how to foster the development of asset bundles for new adoption domains.

 The third result category is a methodology for developing new adoption domains including some examples that will be worked up to some extent within the project, in WP6 Sustainability and Future Actions. The elaboration and exploitation of each of these results is in development within WP6 Sustainability and Future Actions, and the early plans are outlined below.

6.2 Exploiting the Asset bundles

XpanDH is developing worked examples of interoperability adoption domains. These will be specified in terms of the data and data flows, and the relevant standards and profiles, leveraging the EEHRxF (including clarifying which elements of the EEHRxF are needed for each). WP5 Growing the Digital Health Ecosystems and WP6 Sustainability and Future Actions will in parallel consider the potential health systems impact of greater interoperability, within health systems and at a European level. This will include the fit with other major European initiatives including the eHDSI, ERNs, the EHDS, DARWIN EU etc.

For each of the adoption domains pursued in XpanDH, WP6 Sustainability and Future Actions will track the assets used or adapted or created by the different WPs, and collate its total asset bundle.

It is anticipated that each asset bundle will at minimum comprise:

- a formalised description of one or more adoption domains that scopes the bundle
- a formalised use case description that specifies the information content and information flows that are needed to deliver interoperability for the adoption domains
- the standards, profiles and any other relevant specifications that define precisely how the interoperability is to be achieved, including how these fit together to deliver the interoperability needed

- any technical assets that are openly available and can assist implementers with delivering the relevant interoperability, including how to obtain any required licences or agreements
- the available product/service testing and certification mechanisms that is demonstrate conformance
- an ethical and data protection impact assessment blueprint, if relevant
- adoption guidance if this has been generated from the WP4 piloting environment, including procurement and organisational change guidance if relevant
- the stakeholder specific case for adoption, including the health systems and business value of this interoperability
- links to externally held or published resources referred to in the above points
- metadata about the asset bundle, including version management information about the individual assets and the bundle as a whole.

The asset bundles must be well governed and maintained to be trusted and adopted at scale, including justification for ICT vendor investments, in the procurement of new or updated ICT product versions that have that interoperability, investing in the education of healthcare professionals and patients to make trusted use of imported (interoperable) data.

The important exploitation objectives will be:

- promoting the importance of the interoperability delivered by each adoption domain: its health systems value, patient outcomes impact, and potentially health economic value
- explaining the content of the asset bundle, convincing each impacted stakeholder of the actions that they may need to take to enable adoption and benefits realisation
- convincing each adopting stakeholder of the ease of adoption, including the internal consistency within the bundle of the different assets i.e. how they can be used together without friction.

Some of the success factors for achieving interoperability in each adoption domain will be beyond the scope of the stakeholders directly involved, but need actions and enablers through other stakeholders. These will be addressed through recommendations.

6.3 Recommendations to Member States and the European Commission

The recommendations that WP6 Sustainability and Future Actions will develop, iteratively through the project, will primarily focus on:

- Calls to action to stakeholders that need to act in order to take up the use of the asset bundles already developed in XpanDH

- Recommendations to high level stakeholders regarding legislative, financial, organisational change, educational and cross-border enablers to permit, incentivise and accelerate uptake of the existing asset bundles
- Recommendations to high level stakeholders about how they can expand the scope of adoption domains for which there need to be new asset bundles ready to use
- Recommendations to decision makers so that they act to ensure that the results of XpanDH and the future work it encourages will strongly contribute to the success of the EHDS.

The exploitation of recommendations can probably best be described as impact. WP6 Sustainability and Future Actions will work closely with WP7 Dissemination and Outreach, to ensure early versions of recommendations can be consulted on with key stakeholder representatives and socialised, so that the process of inducing change can begin during the project rather than only afterwards.

6.4 Developing new adoption domains

Task 6.2 EEHRxF new adoption domains: consumer use cases for remote visit, telehealth, and telemonitoring will focus on developing new adoption domains for consumer (patient) use cases for remote visits, telehealth, and telemonitoring. Its outputs will be a worked-up case for each of these adoption domains, the business drivers for why each should be invested in and widely adopted, and outline proposals for the asset bundles that will be required to deliver its interoperability needs.

Exploitation in this context can probably best described as uptake. It will be important that relevant bodies agreed to fund the development of the asset bundles corresponding to these adoption domains and the same or other funders are willing to continue the momentum to develop further adoption domains. WP6 Sustainability and Future Actions will identify the most relevant funding agencies to target, and work with WP7 Dissemination and Outreach, on communications resources and channels that are most appropriate to reach them.

7 Conclusion and next steps

In conclusion, the DCOEP plays a pivotal role in fulfilling the ambitious core objectives of XpanDH. By establishing a scalable public infrastructure for digital health innovation, demonstrating interoperable solutions, and fostering a Pan-European ecosystem, the DCOEP guides the XpanDH consortium towards success.

The DCOEP encompasses a range of activities designed to support the project vision, engage with the healthcare ecosystem, gather widespread support, communicate progress to diverse audiences, maximize the impact of project results, and ensure project

sustainability. These objectives will be addressed throughout the project's stages and tailored according to its degree of advancement.

To achieve these goals, the DCOEP will introduce the project to stakeholders, emphasizing its objectives, benefits, and innovative approach. It will also define, maintain, and promote a consistent XpanDH identity. The plan includes raising awareness and fostering stable interactions with the project's target audience, liaising with other relevant national, European, and international initiatives, disseminating project achievements and innovative progress, and actively engaging stakeholders in project activities.

Through these strategic actions, the DCOEP will ensure that XpanDH remains on track to establish a transformative digital health infrastructure, facilitate collaboration across borders, and pave the way for further exploitation of the public infrastructure for digital health innovation. The DCOEP is a crucial component of XpanDH's comprehensive approach to revolutionizing healthcare through digital advancements.