H-PASS

Deliverable 3.1

H-PASS Training Plan

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D3.1 H-PASS Training Plan

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Table of abbreviations

Acronym	Description
GA	Grant Agreement
SC	Steering Committee
HWF	Health workforce
HRH	Human resources for health
LeO	Learning outcome
VR	Virtual Reality
TtT	Train the Trainer
CPD	Continuous professional development
C	Component
MB	Methodological block

Applicable and reference documents

The following documents contain requirements applicable to the generation of this document.

Reference	Document title
GA	Grant Agreement
CA	Consortium Agreement

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Introduction to the H-PASS project

Health workforce (HWF) education is a key component in HRH management and development to keep health professionals' knowledge, competences and skills fit to practice. The digital transformation resulted in new ways of care provision, modified care pathways and scopes of practice and altered professional-client or team relationships by the growing use of digital solutions. This acceleration of technology brings an inevitable opportunity to improve healthcare team competences, skill-mix, task shifting, upgrade qualifications and upscale HWF skills.

Responding to the “Call for proposals to provide training for health workforce, including digital skills” of the EU4Health Programme, the "Health Professionals' and the “DigitAl team” SkillS advancement" (H-PASS) project aims to support EU Member States in developing digital and transversal skills for health professionals to support team resilience and to adapt to the challenges of digital transformation.

The main objective of H-PASS is to design and pilot a training programme with thoroughly developed modules and appropriate synchronous and asynchronous activities, training materials and tools concerning transversal skills that ensure up-to-date and evolving knowledge and respond to skills gaps. H-PASS particularly develops digital skills of the clinical staff in an innovative environment. By targeting various health professions: medical doctors, nurses, and pharmacists as well as training the trainers for more effective change management and educating digital change agents, more advanced digital maturity, literacy, readiness and integration in healthcare can be realised. H-PASS performed pilot implementations in Cyprus, Greece, Hungary, Italy, Lithuania and Romania. Pilots tested and validated the new training programme and the innovative learning environment, and incorporated lessons from 6 EU MS. H-PASS dedicates a significant attention to stakeholder involvement and engagement at various levels (e.g. national, regional and EU), intends to monitor the synergies with other EU initiatives, and to enable maximising the uptake, impact and continuation of the H-PASS training in the EU.

Aim of the document

The D3.1 H-PASS Training Plan aims to provide a comprehensive framework for Task 3.3 Content creation and defining training course structure of the H-PASS project, which is dedicated to enhancing transversal and digital skills within the healthcare workforce. Coordinated by OKFŐ, with the participation of AGENAS, INHWE, EUC, LSMU, UO, CJFBH, UNICATT, ProMIS, SSSA, SS3D, UOC and SU the H-PASS Training Plan serves as an input and guidance for creating and adapting the H-PASS training in any training institution.

This deliverable provides an overview of the conceptual framework and modular structure of the H-PASS training and the Digital Change Agent training programme (Phase III. - Train the trainer courses for health professionals at country level (Train the trainer session II.) as defined in the Grant Agreement), as well as the main content, methods, assessment, and delivery requirements for implementing institutions. The four core modules—1) Leading digital transformation, 2) Communication, teams and culture in digital times, 3) Improving processes in the healthcare system and 4) Data in healthcare—along with the assigned learning outcomes (LeOs) and the suggested 40-hour training plan, aims to provide prospective

students with a basic, yet holistic understanding and skill set. These skills will assist health professionals in navigating the era of digitalised healthcare through a systematic and diverse methodological approach, including asynchronous interactive lexical content, online individual and group work, synchronous training activities, as well as a Virtual Reality (VR) environment.

The document describes the flexible approach applied in the H-PASS project that enables the training to be tailored to different needs. Therefore, it also serves as a basic guide for future adopters of the H-PASS training programme.

The H-PASS Training Plan represents only one element of the comprehensive H-PASS training package. Within the frame of the project, we created many documents and other outputs that are supporting the sustainability and uptake of the created training programme:

- H-PASS Training Plan (D3.1);
- H-PASS Training Materials (D4.3);
- H-PASS Online Learning Environment (D5.1);
- VR Learning Environment (D5.2);
- and Training Monitoring Report (D1.2).

We believe that with this extensive and purposeful documentation of the piloted training course and the project, we can truly contribute to the upskilling policies and practices of the HWF.

Component	Description	Role in the training programme
H-PASS Training Plan (D3.1)	Defines the conceptual framework, modular structure, learning outcomes, training methods, and implementation rules of the H-PASS programme.	Serves as the core reference document for designing and adapting the training.
H-PASS Training Materials (D4.3)	Includes the educational content developed for the modules and components (e-learning content, exercises, case studies, presentations, etc.).	Provides the practical content used during training delivery.
H-PASS Online Learning Environment (D5.1)	The digital platform used to deliver asynchronous learning elements, manage participants, and support interaction and feedback.	Enables the delivery of e-learning content and supports the learning process.
VR Environment (D5.2)	A virtual reality-based learning tool integrated into the training to support experiential learning.	Supports the synthesis and practical application of learning outcomes in the simulated scenario.

Training Monitoring Report (D1.2)	Documents the implementation of pilot trainings, including participant feedback, evaluation results, and lessons learned.	Provides evidence for training quality and supports future implementation and scaling.

Table 1. H-PASS training package overview

How was the H-PASS training plan developed?

The development of the H-PASS training plan was based on a structured, iterative process. The starting point was a needs assessment conducted during the proposal phase among the countries participating in the project, and its findings were carried forward into the subsequent development process. During the needs assessment an analysis was conducted of the skills acquired by professionals as part of their training, as well as of the topics on which they expressed a need for further knowledge. This was complemented by a literature review and an analysis of the needs and contextual factors in the pilot countries.

The development process was supported by a structured evidence-gathering phase conducted under WP3, which included a comprehensive review of academic and grey literature, as well as a mapping of existing training programmes and continuing professional development (CPD) opportunities across participating countries. In parallel, an in-depth qualitative mapping exercise and an initial skills screening were carried out to identify current and emerging competency needs related to the digital transformation of healthcare.

Based on these inputs, a common concept was established. This included a unified terminology, the definition of learning outcomes (LeOs), the modular structure of the training, and the main training methods. At this stage, a key decision was made regarding the level of adaptation. The consortium defined which elements of the training should remain standard across all countries and which elements could be adapted to local needs.

Training design was organized in a working-group based system where all piloting partners delegated members and contributed actively to the development of the specific modules. This included the main components', their contents based on the pre-designed learning outcomes, as well as the specific training materials and methods.

Stakeholder survey results and the Communication and Collaboration Guide were prepared by WP6. The outcomes and findings of these activities were shared with the consortium not only through the formal project deliverables and written documentation but were also discussed extensively during Steering Committee meetings. These exchanges contributed directly to the development of the Draft Training Plan and supported the integration of stakeholder perspectives into the training design process. As a result, the stakeholder involvement activities and the training design process evolved in parallel, continuously informing and complementing one another throughout the project implementation.

To further develop and pilot the concept, a first on-site Train the trainer (TtT) workshop was organised with the participation of the core trainers from the implementing partners, complemented by an additional online session. These activities aimed to test the functioning of synchronous online training, deepen the shared understanding of the concept, reach final consensus among partners, train the central trainer pool, and test the training exercises.

As the next step of this process, a prototype training was delivered with the participation of future H-PASS trainers. This consisted of the full H-PASS course in English, including synchronous online sessions. The prototype allowed the consortium to test the training structure, methods, materials and the assessment and evaluation framework in practice.
The Train the Trainer workshop and the English Prototype together constitute Phase I. - Training the central trainer pool of H-PASS (Train the trainer session I.) defined in the Grant Agreement.

Although the Prototype Training had already been implemented during the autumn of 2024, the close collaboration between the relevant work packages ensured that the insights gathered through the national stakeholder forums continued to feed into the further development and adaptation of the training programme. This created an opportunity for partners to incorporate additional local perspectives and contextual insights into the national adaptations of the training materials and the implementation of the country-specific pilot activities.

Following this, pilot trainings were implemented in the participating countries. Feedback from these pilot trainings was collected and discussed during a Pilot material evaluation workshop (D4.2). The results of this evaluation process were then incorporated into the final version of the training plan and the related H-PASS training materials.

The H-PASS training framework

Digital transformation is spreading rapidly in healthcare. New solutions appear year by year, and sometimes even day by day. Some developments are incremental improvements, while others can lead to major paradigm shifts. For example, when the H-PASS project was first conceived, large language models were not yet available to the general public. Since then, generative artificial intelligence and large language models have significantly changed how people search for information, learn, and work. Although the future cannot be predicted, the pace of digital transformation suggests that similar changes are likely to continue.

When designing a digital skills training programme for healthcare professionals, it is important to recognise that knowledge related to specific technologies can quickly become outdated. For this reason, the H-PASS training plan focuses on skills and contents that are expected to remain relevant over time. These skills help healthcare professionals adapt to new digital solutions as they emerge and support future digital developments in their organisations. In this sense, the H-PASS training programme also has a strong change management dimension. Several broader trends increase the importance of transversal skills in healthcare. These include digital transformation, the growing focus on prevention of non-communicable

diseases, the expansion of personalised medicine, changing patient expectations, and the need to respond to crises such as COVID-19. As a result, skills such as collaboration, responsiveness to patient needs, and critical decision-making are becoming increasingly important for healthcare professionals. However, many healthcare curricula still focus mainly on clinical competencies. Therefore, transversal skills are often developed within continuous professional development (CPD) programmes. The H-PASS training programme places particular emphasis on strengthening these skills, both in relation to digital competencies and in support of collaboration among healthcare professionals and between professionals and patients. These skills can only partly be developed through individual e-learning. Interaction with trainers and peers provides important additional learning opportunities.

The H-PASS consortium developed the training programme across several countries and for different healthcare professions. The main target groups include physicians, nurses and pharmacists. In some countries multidisciplinary groups have also been organised. Different professional groups have different learning needs, which may require adapting training materials to specific professional contexts or local priorities. In addition, partners in different countries use different training systems and e-learning platforms. This requires flexibility in implementation. The consortium treated this diversity as a resource. As a result, the H-PASS training philosophy and training plan were therefore designed to ensure the implementation of the programme's core elements while allowing adaptation to different needs.

The H-PASS training framework is built around four central principles:

1. Change management perspective
2. Emphasis on transversal skills
3. Synchronous training activities
4. Flexibility and adaptability

Change management perspective

The training programme does not only prepare participants to use specific digital tools. It also promotes a mindset that helps professionals understand and manage change, including changes that cannot yet be anticipated. The change management component is basically included in the pilot trainings. In addition, participants who completed the Digital Change Agent training programme received further tools to support change in their workplaces, professional communities and to engage fellow health professionals. The H-PASS approach is based on the idea that healthcare professionals themselves can become the engine of digital transformation.

Emphasis on transversal skills

Preparing healthcare professionals for teamwork in digital environments is a key objective of the H-PASS programme. Transversal skills that support collaboration, critical thinking and process improvement are integrated throughout the programme. Participants develop these skills not only through theoretical learning materials and e-learning exercises, but also through participating in the training activities themselves and through group exercises.

Synchronous activities

Modern learning platforms make self-paced online learning easier to organise. However, preparing professionals for digital transformation and collaboration requires interaction, peer learning and feedback. For this reason, synchronous training activities are an essential part of the H-PASS training plan. These sessions bring trainers and participants together at the same time, either on-site or online. Asynchronous learning materials provide a strong foundation for knowledge acquisition and individual learning. However, the full development of the intended learning outcomes requires the combination of asynchronous and synchronous activities. Synchronous sessions also allow participants to share experiences, build professional connections and further disseminate the training approach.

Flexibility and adaptability

The H-PASS training programme develops a broad set of competencies related to digital transformation that can be applied in many different contexts. The training framework and training plan were therefore designed to allow adaptation to different target groups, local needs, organisational conditions and learning platforms. The modular structure ensures that the core elements of the programme are maintained while allowing adjustments in emphasis and the integration of locally relevant content.

Synchronous training sessions can be organised either on-site or online. On-site sessions allow deeper engagement and stronger interaction through physical presence. Online sessions delivered through videoconferencing platforms also provide effective opportunities for interaction and discussion. In practice, on-site sessions were easier to organise for smaller geographical areas or more mobile participant groups, while online sessions worked better for nationwide programmes or for participants with more constrained work schedules.

During the H-PASS pilot trainings, the programme was tested in several organisational formats while maintaining the required core elements. This provided valuable experience for further implementation of the training and for its adaptation in other countries or settings.

Common understanding

Beyond these principles, we felt the need to establish a common terminology rooted in the Grant Agreement and in the partners' professional training backgrounds. We repeatedly observed that even when using the same terms, we sometimes referred to entirely different concepts, whether in educational methodology or in HWF-related terminology. To address this, we created a glossary to support a shared understanding of the training we set out to develop. You can find the glossary behind the present training plan and the H-PASS project in Annex 1.

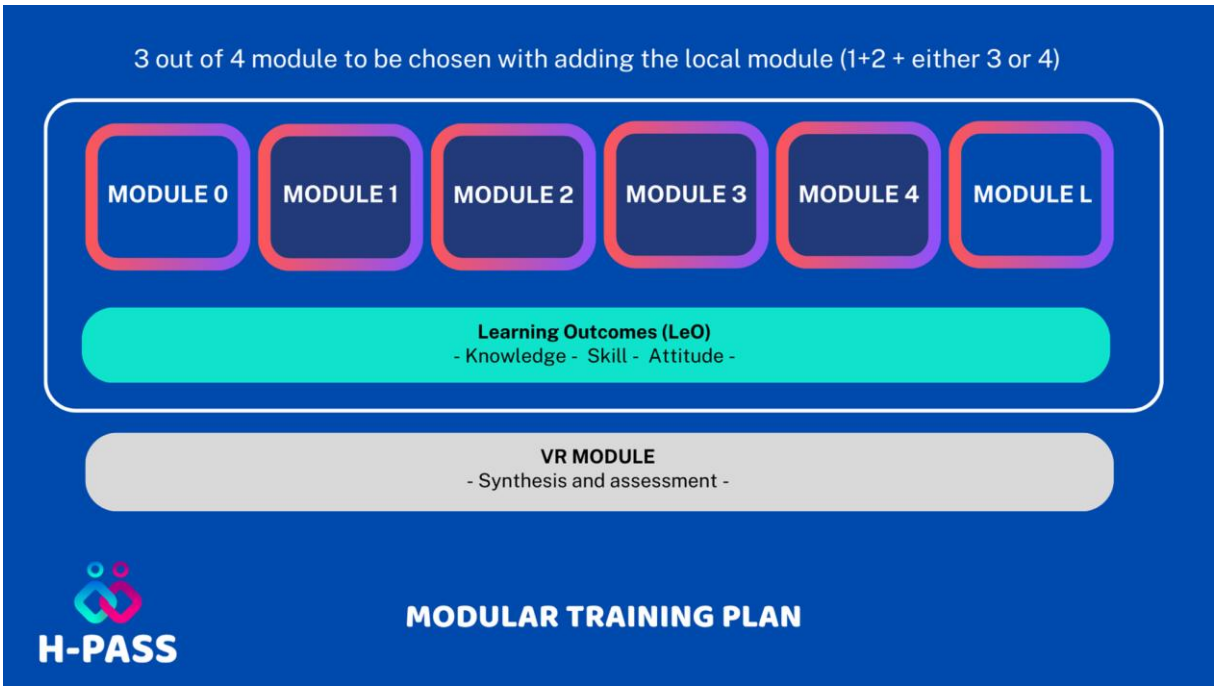


Figure 1. The modular H-PASS training structure

The modular training structure (Figure 1.) is built on expected learning outcomes derived from the initial needs assessment process, and is comprised of knowledge, skill and attitude elements. The learning outcomes are grouped into modules in order to deliver a comprehensive set of topics. The modules are divided further into components that are the main thematic and operative building blocks of the training.
Each module has to fulfil three dimensions: a digital, a transversal and an action dimension. This means that each module in itself has to be able to develop both digital and transversal competences and provide opportunities for learning and practicing these in action.
Components provide the structural level that allows for training outline planning. Each component has been allocated educational content, materials and methodological approaches based on the assigned learning outcomes.

Adaptability of the modular structure is supported by the inclusion of local content. Local content can be included into the components as a separate optional local module. Local content within the components can be core content (e.g. requested centrally to provide local training materials about national e-healthcare services) or optional (e.g. centrally planned training outline can be complemented).
The thematic components and the skills targeted for the core modules include:

1. Leading digital transformation
    a. Digital dimension: overview of digital trends in healthcare;
    Transversal dimension: adaptation to change, change management, leadership.
    b. C1: Digital technologies in healthcare, C2: Leading digital change
2. Communication, teams and culture in digital times

   a. Digital dimension: digital means of communication, collaboration tools; Transversal dimension: healthcare teams, organizational culture, interprofessional collaboration, conflict management.
   b. C3: Communication, C4: Teams, C5: Conflict, C6: Culture
3. Improving processes in the healthcare system
   a. Digital dimension: e-health solutions (e.g. e-prescription, e-referral, e-documentation, digital health records, hospital information systems); Transversal dimension: healthcare processes, project management, process development.
   b. C7: Healthcare system awareness, C8: Developing healthcare solutions, C9: Managing healthcare developments
4. Data in healthcare
   a. Digital dimension: data availability, data utilization, cybersecurity (at a basic level), data-driven solutions;
      Transversal dimension: decision-making, problem-solving, analytical and critical thinking
   b. C10: Data in the healthcare system, C11: Safety, C12: Working with Data

Modules 1 and 2 are mandatory elements for all the H-PASS training; furthermore, implementers can choose to include core module 3 or 4, or both. Implementers can create an additional optional module for addressing the local needs, but the structure of the optional modules should follow the above H-PASS principles. During the adaptation process, local needs (e.g. an ongoing reform on specific e-health solutions) can also be channelled into the core parts.
It is advised to include an additional onboarding introductory module (Module 0) that helps participants to familiarise themselves with the concept of the training, manage expectations, and self-reflect about the targeted competence areas.

The VR element of the H-PASS training serves as a tool for synthesis and formative assessment of the complete core training plan based on the targeted learning outcomes.

Learning Outcomes (LeOs)

No.	Item description	Type	Component	Module
m1i1	Knows trends in healthcare in connection with digital health in a specific professional field.	knowledge	Digital technologies in healthcare	Module 1
m1i2	Can identify needs and plan adequate responses related to digital health tools, services, is able to	skill	Digital technologies in healthcare	Module 1

	implement digital solutions and tools in his/her work.			
m1i3	Is ready to learn about and try new tools, applications.	attitude	Digital technologies in healthcare	Module 1
m1i4	Is familiar with leadership and management functions, basic concepts change management in connection with digitalization.	knowledge	Leading digital change	Module 1
m1i5	Can identify the need for change and plan the change process and manage change and engage stakeholders to attain strategic goals.	skill	Leading digital change	Module 1
m1i6	Is ready to change his/her own practices and be proactive in change processes.	attitude	Leading digital change	Module 1
m2i1	Knows the basic concepts of communication (e.g., assertive communication, feedback) and is familiar with different digital communication tools and services.	knowledge	Communication	Module 2
m2i2	Can communicate clearly and concisely with various stakeholders (internal and external) both in face-to-face and in online interactions.	skill	Communication	Module 2
m2i3	Is ready to adapt his/her communication style and strategies to stakeholder needs and backgrounds.	attitude	Communication	Module 2

m2i4	Knows the principles of teamwork in healthcare settings.	knowledge	Team	Module 2
m2i5	Can effectively collaborate in teams both in face-to-face and in online interactions.	skill	Team	Module 2
m2i6	Promotes collaboration among diverse healthcare professionals, technology specialists, researchers, and industry experts to exchange ideas and develop interdisciplinary solutions.	attitude	Team	Module 2
m2i7	Knows different types of conflicts that can arise in healthcare settings (e.g., interpersonal, interprofessional, role-associated, organizational).	knowledge	Conflict	Module 2
m2i8	Can recognise and resolve conflicts within a healthcare team to maintain a positive and collaborative work environment and a high-level patient care.	skill	Conflict	Module 2
m2i9	Is open to constructive resolution of conflicts.	attitude	Conflict	Module 2
m2i10	Knows the basic concepts of cultural backgrounds, traditions, and customs with focus on professional cultures and generational culture.	knowledge	Culture	Module 2

m2i11	Can adapt health processes and care plans to cultural preferences and beliefs.	skill	Culture	Module 2
m2i12	Demonstrates respect for cultural differences and avoiding cultural/generational stereotypes or biases in healthcare interactions.	attitude	Culture	Module 2
m3i1	Knows the structure and characteristics of the national healthcare system with its eHealth platforms and services.	knowledge	Healthcare system awareness	Module 3
m3i2	Can interpret the role of systems and strategies, and their effects on their personal work.	skill	Healthcare system awareness	Module 3
m3i3	Demonstrates a holistic view of the healthcare system.	attitude	Healthcare system awareness	Module 3
m3i4	Knows the basic concepts of process development and planning and (digital) tools to enhance efficiency/effectiveness.	knowledge	Developing healthcare solutions	Module 3
m3i5	Is able to analyse processes along efficiency and effectiveness, define suggestions for improvement, and consider the involvement of digital solutions.	skill	Developing healthcare solutions	Module 3
m3i6	Questions inefficient/ineffective routines and systems.	attitude	Developing healthcare solutions	Module 3

m3i7	Knows the basic concepts of project management and its digital or non-digital tools.	knowledge	Managing healthcare developments	Module 3
m3i8	Is able to plan and manage innovation projects.	skill	Managing healthcare developments	Module 3
m3i9	Has a systematic approach when working on improvements.	attitude	Managing healthcare developments	Module 3
m4i1	Is familiar with the healthcare data landscape, the key terms related to healthcare data and the most relevant healthcare data and information sources.	knowledge	Data in the healthcare system	Module 4
m4i2	Can browse, search and filter data, information and digital content on the web and in health information systems.	skill	Data in the healthcare system	Module 4
m4i3	Is conscious about choosing data/information sources.	attitude	Data in the healthcare system	Module 4
m4i4	Knows personal and organisational data protection regulations, measures and tools, as well as the guidelines on personal digital wellbeing.	knowledge	Safety	Module 4
m4i5	Can protect personal and other sensitive data.	skill	Safety	Module 4
m4i6	Demonstrates an ethical mindset in handling healthcare data and is conscious about online	attitude	Safety	Module 4

	threats and personal digital wellbeing.			
m4i7	Knows various sources of healthcare data, types and characteristics of data (incl. AI-generated) and tools to present data insights.	knowledge	Working with Data	Module 4
m4i8	Can manage, interpret, analyse and present healthcare data for (collaborative) decision-making with digital tools.	skill	Working with Data	Module 4
m4i9	Demonstrates critical thinking connected to data (e.g., biases, source, potential impact).	attitude	Working with Data	Module 4

Training methods

Module dimensions

All modules are comprised of thematic components that need to be delivered in order to support the predefined learning outcomes. Learning outcomes have been defined to develop both digital and transversal competences, while training methods support the aim to invite training participants to action, to engage with practical challenges. The latter represent the three dimensions that the modules have to cover: digital, transversal, and action.

Training framework

Along the design of the training programme, we have defined cornerstone approaches that support the overall methodological concept.

Blended learning: We propose the training programme to be made up of online asynchronous (e-learning) and onsite/online synchronous elements. On one hand, the e-learning element of the training can not only help participants develop their digital skills, but organising the training partly online also helps us to reach and enrol a greater number of health professionals, as they can progress in their own pace. H-PASS is an internationally adapted training programme, and the e-learning materials enable a certain level of standardisation throughout the programme, ensuring the fulfilment of the overall goals of the project. In parallel, it allows for customisation in a trackable manner. On the other hand, we believe that transversal competences are best developed in a face-to-face setting, in real-time human interaction. This is why we suggest synchronous learning activities within the programme, preferably onsite.

E-learning platform: The platform enables the delivery of the online asynchronous elements of the training, the support of the participants' learning path and in general the interaction with the participants. Consequently, the platform should support tracking of student progress, provide feedback opportunities from the trainers on the progress and submitted exercises, as well as enable the inclusion of interactive features, fostering the mastering of the content of the different thematic components, such as exercises, quizzes/tests, as well as the VR component of the training.

Methodological blocks: Based on the learning outcomes and cornerstones set for the training, we have established 6 main types of activities, which constitute the methodological building blocks (Figure 2.) that can support the fulfilment of the H-PASS training's purpose. In the figure you can see examples for the specific blocks that make up the training plan. The diversity of the different activities supports the development of the different competence elements (knowledge, skill, attitude) while providing a wider range of learning experiences, thus accommodating different learning styles of the participants.

Figure 2. Methodological building blocks of the H-PASS training

- Lexical (theoretical) content with supporting exercises: interactive content, integrating short lecture videos, slideshows, exercises and additional learning resources on the e-learning platform, that tracks student progress, is self-paced and doesn't require trainer support.
- Online asynchronous learning exercises: individual assignments that help trainees to deepen their lexical knowledge and that students have to submit on the e-learning platform; afterwards, the trainer provides feedback.
- Online asynchronous group work: group assignments that help to deepen the lexical knowledge and that students have to submit on the e-learning platform; afterwards, the trainer provides feedback.
- Onsite/online synchronous training: trainer-facilitated educational activity that focuses on skill development.
- VR: integrated into the e-learning platform and into the onsite training, VR elements help to synthetise and assess the learning objectives of the H-PASS training.
- Supporting elements: integrated into the e-learning platform (Module 0), it includes onboarding information, skill level self-evaluation and feedback surveys.

VR: VR can be considered as a separate and focal training method and as one of the distinctive features of the H-PASS training. The VR element of the training supports synthesis of the acquired knowledge and helps participants assess their acquired competences in a realistic critical problem-solving scenario.

Training plan of the H-PASS training

We have created a training plan that includes 40 learning hours broken down into modules, methodological blocks and tasks, with their titles and short descriptions. For some exercises, we have included alternatives indicated as "a" and "b" versions in the numbering.

	Timeframe	Module	Component	Task type	Title	Summary
M0					Onboarding session	Introduction to the H-PASS course
	1:00:00					
M1B1	1:30:00	Module 1	Digital technologies in healthcare	Lexical content with supporting exercises	Introduction to Digital Technology in Healthcare	Interactive slideshow with videos and other supporting elements on the following topics: Historical Context of Digitalisation; Artificial Intelligence (AI); Internet of Things (IoT); Robotics and 3D Printing; Virtual and Augmented Reality; Data Literacy; Horizon Scanning.
M1B2	0:30:00	Module 1	Digital technologies in healthcare	Individual learning exercise	Reflection: digital technology use in own practice	A concise reflection on the potential usage of the technologies they learned about: how they could leverage them in their everyday practice/current work environment given that all resources are available (guided by questions/ perspectives provided).
M1B2b	(1:00:00)	Module 1	Digital technologies in healthcare	Sync training activity	Reflection: digital technology use in own practice	Discussion on the guided questions.
M1B3a	1:30:00	Module 1	Digital technologies in healthcare	Individual learning exercise	Generative AI use exercise (patient-/professional perspective)	Written case (profession-specific) about a diagnostic or medication-related issue that the student has to explore with different generative AI tools, and reflect on the output (validity, etc) and the user experience.

M1B3b	(1:30:00)	Module 1	Digital technologies in healthcare	Individual learning exercise	Artificial intelligence in healthcare Patient Simulation: Online Investigation of a Health Problem Using AI and Non-AI Tools	Participants work with a written, profession-specific patient simulation focusing on a health complaint with potential diagnostic and medication implications. Using a combination of generative AI and non-AI online tools, participants explore possible diagnoses, associated risks, and recommended actions. Subsequently, they critically reflect on the outputs in terms of accuracy, reliability, and clinical relevance, as well as on the user experience, accessibility, and limitations of AI-supported health information in patient-oriented contexts.
M1B4	1:30:00	Module 1	Leading digital change	Lexical content with supporting exercises	Leading digital change	Materials with videos, texts and supporting interactive exercises, quizzes (change management with key messages building up the individual work, focus on digitalisation)
M1B5	1:00:00	Module 1	Leading digital change	Individual learning exercise	Exploring reactions to change (New teleconsultation service 1.)	Case analysis on digital organizational change. Exploring how people react to changes and major causes of resistance to change.
M1B6	1:00:00	Module 1	Leading digital change	Sync training activity	Case of an organisational change (New teleconsultation service 2.)	Case discussion where participants work together to analyse an organisational change scenario, identify organizational, attitudinal and social changes required for the implementation of a digital solution. Encourage brainstorming and discussion, define suggestions/strategies for overcoming barriers to change.

M1B7	1:00:00	Module 1	Leading digital change	Sync training activity	Digital ecosystems in healthcare	The lecturer introduces theoretical concepts, facilitates active participation through questions, and guides group work where participants populate a maturity model, discuss ideas, and collectively develop a final theoretical framework and a practical concept.
	8:00:00					
M2B1	1:00:00	Module 2	Communication	Lexical content with supporting exercises	Communication in Healthcare	Materials with videos, texts and supporting interactive exercises, quizzes, readings, on the following topics: general principles of communication, assertive communication, feedback, digital aspects and tools.
M2B2a	1:00:00	Module 2	Communication	Sync training activity	Case discussions on communication in health care	Discussion in small groups on specific communication-focused cases, followed by a plenary feedback.
M2B2b	(1:00:00)	Module 2	Communication	Sync training activity	Improving Patient Medication Adherence and Comprehensive Care	A role-playing exercise, where participants practice communicating clearly and concisely with internal and external partners. This can include scenarios such as providing feedback, instructions to colleagues or updates to patients and their families.
M2B3	1:00:00	Module 2	Team	Lexical content with supporting exercises	Teamwork in Healthcare	Materials with videos, texts and supporting interactive exercises, quizzes on the following topics: def. team, interprofessional teamwork, team roles (Belbin), team life cycle.

M2B4	1:00:00	Module 2	Conflict	Lexical content with supporting exercises	Conflict in Healthcare teams	Materials with videos, texts and supporting interactive exercises, quizzes on the following topics: definition of conflict, conflict sources, conflict types, conflict handling strategies.
M2B5	1:00:00	Module 2	Culture	Lexical content with supporting exercises	The effects of different cultures in healthcare	Materials with videos, texts and supporting interactive exercises, quizzes (cultural aspects and effects).
M2B6	0:30:00	Module 2	Culture	Individual learning exercise	Cultural sensibility survey (CSS)	The student fills out the CSS and reviews the results
M2B7	2:00:00	Module 2	Mixed / Summary	Online group work	Complex case study	Case study exercise in groups of 2-3 trainees, which have to cooperate by using online communication and collaboration platforms. Specific ways of working are required (editing documents together in the cloud, commenting, video call, etc.) + reflection on the group work based on the module's learnings.
M2B8	0:30:00	Module 2	Mixed / Summary	Individual learning exercise	Reflection on digital communication and collaboration	The student reflects on the online group work from the perspective of digital communication and collaboration, its benefits and barriers. Suggest ways for improvement.

M2B9	(1:00:00)	Module 2	Mixed / Summary (Culture)	Sync training activity	The Role and Impact of Community Facilitators and Digitalization in Improving Access to Healthcare Services for Vulnerable Migrant Populations	Participants work with a case study (written/video) that highlights a situation where cultural differences impact healthcare interactions. In small groups, or during plenary discussion, participants analyse the case study and discuss strategies for adapting processes and care plans to meet the cultural preferences and beliefs of the individuals involved.
M2B10	(1:00:00)	Module 2	Mixed / Summary (Communication, Conflict)	Sync training activity	Intergenerational Conflicts in Healthcare Setting	Participants work with a case study (written/video) that highlights a situation where cultural and generational differences impact healthcare interactions. In small groups, or during plenary discussion participants analyse the case study and discuss strategies for adapting processes and care plans to meet the cultural preferences and beliefs of the individuals involved.
M2B11	(1:00:00)	Module 2	Mixed / Summary (Culture, Conflict)	Sync training activity	Analysis and Resolution of Conflicts Impacting Pharmaceutical Practice Generated by Cultural Differences in Healthcare	Participants work with a series of short, practice-based scenarios that illustrate conflicts arising from cultural, linguistic, ethical, and value-based differences in pharmaceutical care. Through guided analysis and reflection, participants identify types of conflict, assess potential risks and consequences, and explore appropriate conflict-management strategies. The task encourages discussion on professional attitudes, patient-centred communication, and the use of digital tools to support inclusive, respectful, and effective healthcare interactions across diverse patient populations.

	12:00:00					
M3B1	1:00:00	Module 3	Health system awareness	Lexical content with supporting exercises	Health system awareness	Materials with videos, texts and supporting interactive exercises, quizzes on the following topics: types of Health system, differences among European Health systems, characteristics, pros & cons of private, public- and mixed H systems, digitalization and eHealth platforms and services.
M3B2	0:30:00	Module 3	Health system awareness	Individual learning exercise	Forum debate	Forum discussion on the online platform connected to the lexical content moderated by the trainers.
M3B3	1:00:00	Module 3	Developing Healthcare solutions	Lexical content with supporting exercises	Developing healthcare solutions	Materials with videos, texts and supporting interactive exercises, quizzes on the following topics: processes and process management; analysing, improving, and redesigning processes and associated obstacles.
M3B4	1:00:00	Module 3	Managing Healthcare developments	Lexical content with supporting exercises	Managing healthcare developments	Materials with videos, texts and supporting interactive exercises, quizzes on the following topics: definition of a project, project life cycle, project planning, project goals and objectives, stakeholder mapping, risk management.
M3B5	3:00:00	Module 3	Managing Healthcare developments	Online group work	Let's develop healthcare solutions!	In groups of 2-3, students are instructed to define one process from their own working environment (1 process/group) and analyse it, based on the theoretical framework provided in the e-learning material. They define a process improvement action that would help to make the process more efficient or effective. Then, they define a project for the process development idea from the previous exercise, along a template.

M3B6	0:30:00	Module 3	Managing Healthcare developments	Individual work	Let's provide feedback	Training participants evaluate allocated submission(s) of other groups
M3B7	3:00:00	Module 3	Developing Healthcare solutions	Sync training activity	Presenting the development projects	Participants (chosen groups) present the group work submissions at the onsite training event. The presentation is made "for the specific" stakeholder. The presentations are discussed.
M3B8	(1:00:00)	Module 3	Managing Healthcare developments	Sync training activity	Introduction of Electronic Medical Records (EMR) in a Big Hospital	Working in small groups, participants design a structured management plan for the introduction of an Electronic Medical Records system in a healthcare organization. Following a phased framework, they analyse the organizational context, identify key stakeholders and existing processes, define objectives and requirements, and develop an operational implementation plan addressing technological, regulatory, and risk-related aspects. The task concludes with defining verification methods and presenting the proposed EMR implementation strategy in a concise project-based presentation format.

M3B9	(1:30:00)	Module 4 OR Closing	Mixed / Summary (Modules 1-3)	Sync training activity	Final case study: Clinical scenario – AI and cardiac risk stratification	Participants work with a complex clinical case involving the use of an AI-based cardiac risk stratification tool in an acute care setting. Divided into small groups with different analytical perspectives, they examine professional conflicts, clinical decision-making processes, and organizational workflows arising from the introduction of AI into practice. The task guides participants to assess the impact of AI on autonomy, coordination, patient involvement, and equity, and to propose practical solutions, recommendations, and monitoring strategies for the responsible implementation of AI-supported decision-making in healthcare.
	10:00:00					
M4B1	1:30:00	Module 4	Data in the Health system	Lexical content with supporting exercises	Data in the Healthcare system	Materials with videos, texts and supporting interactive exercises, quizzes on the following topics: defining data, categorization of data typical in healthcare, different (national) data sources (EHR, research data banks, national statistics office data, EU data, smart devices, IoT, AI generated, etc.); where do we encounter them, how we find/browse them, how do we use them, our responsibilities, Digital Health Platforms, Big Data, Open Data.

M4B2	1:30:00	Module 4	Safety	Lexical content with supporting exercises	Cyber security and digital wellbeing	Materials with videos, texts and supporting interactive exercises, quizzes on the following topics: cyber threats, data protection guidelines and regulations on different levels (macro-policy, mezzo-organisation, micro-individual), digital wellbeing.
M4B3	0:30:00	Module 4	Safety	Individual learning exercise	Digital wellbeing checklist	Reflection on the different data protection and digital wellbeing practices learned (e.g. checklist about which measures they are already implementing in their lives) and creating a short action plan for improvement.
M4B4	1:00:00	Module 4	Safety	Individual learning exercise	AR-in-a-Box	Cyber security skills application exercise.
M4B5	1:30:00	Module 4	Working with Data	Lexical content with supporting exercises	Working with Data	Materials with videos, texts and supporting interactive exercises, quizzes on the following topics: technical types and characteristics data, data quality; reliability and validity of data; AI – how to be critical of data; health workers' responsibilities in data management.
M4B6	0:30:00	Module 4	Data in the Healthcare system	Sync training activity	Working with healthcare data: Which data type should we rely on?	Participants are asked to decide which data source they should use for specific professional or organisational decision-making purposes.

M4B7	0:30:00	Module 4	Data in the Healthcare system AND Working with Data	Sync training activity	Digital health and smart device-based patient follow up: A case study	Participants need to identify potential causes of different phenomena (e.g. missing data, triggered alerts), based on meticulous evaluation of two datasets derived from IoT e-health systems.
M4B8	0:30:00	Module 4	Safety	Sync training activity	Discussing digital wellbeing and cyber security	Participants approach certain topics connected to the lexical materials with the help of questions and online collaboration platforms (e.g. mentimeter/slido/etc.)
M4B9	0:30:00	Module 4	Working with Data	Sync training activity	Data Biases	Participants discuss certain data bias types and data presenting methods, based on specific data illustration examples.
	8:00:00					
V1	0:30:00	VR		Sync training activity / Individual exercise	VR case	Participants enroll in the VR exercise and solve the patient safety case posed.
V2	0:30:00	VR		Sync training activity / Individual exercise	Reflecting on the VR case study exercise	Participants reflect on the exercise with the help of questions posed in the LMS.
	1:00:00					

The VR exercise

The VR element of the H-PASS training is designed as a closing and integrative learning activity. Rather than introducing new content, it gives participants an opportunity to apply knowledge and skills developed during the training in a realistic, practice-oriented scenario.

In the VR experience, participants investigate a patient readmission incident in a wardroom environment. They collect available information, identify possible risks and contributing factors, and reflect on the underlying causes of the incident. This allows them to connect different competence areas addressed throughout the training, including digital awareness, teamwork, process thinking, communication, and patient safety-related reflection.

The VR activity is followed by a structured follow-up task in the learning management system. After completing the VR scenario, participants carry out a patient safety investigation by completing an incident report, identifying the types of incidents they believe occurred in the case, and providing a written analysis. The exercise is supported by additional learning materials.

Figure 3. Image from the H-PASS VR environment

Available options for training participants for completing the exercise: 1) onsite with the training institution's VR headset, 2) at home with their own VR headset through a browser link, 3) on their own computer through a browser link.
Further information about the VR environment and the exercise itself can be found in the D5.2 VR learning environment, while connected materials are available in the D5.1 H-PASS training materials.

Rules of implementation

Key requirements and general rules of the training implementation have been discussed and agreed on by the original piloting partners in order to provide a standardised common base for the H-PASS training that can orient future implementation.

Content level

- Key LeOs must be delivered, can be extended
- Certain content can -and needs to- be adapted for local context
- The original English language content should be translated (videos, reading, instructions and exercises on the e-learning platform)

Methodological block level

- Number and lengths of methodological blocks (MBs) can be modified within a module (LeOs need to be delivered)
- All types of MBs need to be kept in the adapted training version (no specific methodology can be omitted in order to keep one of the core added values of the H-PASS training)

Module level

- A local module can be added
- Module 3 or 4 can be left out of the course, with the training still remaining comprehensive and true to the H-PASS training's original concept
- All changes in the LeOs should be followed by changes in the content, methodologies and assessment and evaluation system

Structure level

- E-learning (lexical) elements should be delivered before training (onsite or online synchronous training events
- Sequentially of the course elements is flexible (e.g. the Team thematic component and Conflict thematic component can be switched)

Base requirements

min. 2 onsite training days OR min. 12 hours of online sync training

- 1 online synchronous onboarding meeting
- local adaptation of the course (based on adaptation rules)
- VR module implementation (based on the pre-defined delivery options)

Delivery options of the VR exercise

The VR exercise can be delivered in the following ways:

1. Onsite individually with bookable timeslots (ca. 30 mins) with technical/educational support

1a. Onsite as a group training exercise (1 player, rest of the group watching and discussing with trainer facilitation)

2. At home with own VR headset individually for convenience and sustainability
3. On PC at home individually

All students are required to complete the VR exercise; however, the delivering institution can choose freely from the delivery scenarios. Scenarios can be mixed and matched too and adjusted the scenarios to your resources (e.g. training room characteristics, headset availability, etc.).

Assessment and Evaluation

The training evaluation follows the approach of Kirkpatrick's four-level model: Level 1: Reaction – measures how participants react to the training (e.g. satisfaction); Level 2: Learning – analyses how well participants truly understood the training (e.g. increase in knowledge, skills or experience); Level 3: Behaviour – assesses whether participants are using what they learnt at work (e.g. change in behaviour); Level 4: Results – determines if the training had a positive impact on the business/ organisation.

Reaction and learning can be measured in parallel with the training, while evaluation of behaviour change and application requires a follow-up period. With regard to the concept of the H-PASS programme, evaluation at organisational or system level cannot be linked to the programme. The overall objective of training evaluation is to provide trainers and content developers information to assess the quality of their performance and to provide further guidance for improvements.

Assessment and evaluation in the prototype phase

The prototype of the training was delivered with the participation of the future trainers, other project members and some invited external testers. With the prototype, we tested not only the training, but the assessment and evaluation concept as well.

In the prototype version of the training, the evaluation of H-PASS training course took place in three phases:

1. Pre-course activities: A sociodemographic questionnaire and an individual self-assessment questionnaire were filled in before starting the training. Participants also completed a knowledge assessment questionnaire corresponding to each module's focus points, in order to map the pre-course knowledge level.
2. Evaluation linked to training components: Participant feedback questionnaires were circulated after finalising each training module. Questions dedicated to participant experience, perceived utilisation of knowledge, education methods and trainer performance were used to collect information.
3. Post-course evaluation: Post-course evaluation included an overall feedback questionnaire, enabling obtaining qualitative answers on the highlights and the shortcomings of the training, as well as a repeated self-assessment. Post-course knowledge assessment questions by module (with the same questions taken pre-course) were used to provide information on the degree of increase in knowledge achieved in the training period.

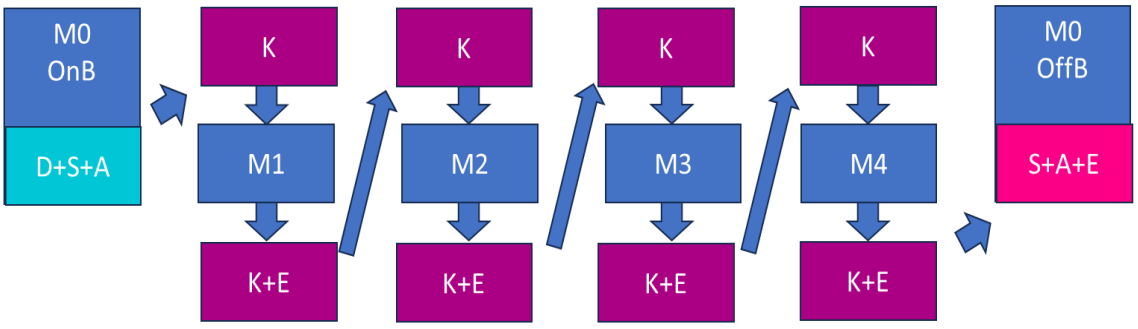
The purpose of the pre-post surveys was not to make the participation in the modules more targeted for training participants. Rather than designing differentiated learning pathways based on formal competence assessments, the project focused on creating training content that could provide added value for participants with varying levels of prior knowledge and experience.

This inclusive approach was reflected in several aspects of the training design described above. For example, the lexical and supporting materials include additional resources and recommendations for further learning, self-reflection exercises as well as collaborative group-work activities that facilitate peer learning between participants with different levels of

experience and competences. In some exercises, participants could work on their own real-life problems or processes, which also allowed to tailor the training to their needs.
The purpose of the pre- and post-module knowledge assessments was primarily to compare participants' knowledge before and after engaging with the content of the respective modules. The objective was to evaluate whether the modules effectively provided new knowledge to participants.
At the prototype stage, these assessments were therefore used mainly as a validation tool for the training content, supporting the consortium in evaluating the relevance and effectiveness of the modules. At a later stage, during the piloting activities, the same methodology also served as a knowledge assessment mechanism, enabling partners to identify to what extent participants had integrated and understood the knowledge and concepts introduced throughout the training programme.

Assessment and evaluation in the piloting phase

Through collaboration of all partners, a core assessment and evaluation framework and guidance was developed, based on the prototype experiences. This framework builds on the defined learning outcomes, as well as on the project indicators. Demographic data, skill and attitude pre- and post-assessment, as well as the module and training evaluation elements, were centrally designed and mandatory for the partners to follow. Partners could, however, organise the knowledge assessment of their training as per their own judgement, in line with their local accreditation requirements, while making sure that they assess the knowledge materials they delivered locally (taking changes in the training into consideration).
Through collaboration of all partners a core assessment and evaluation framework (Figure 4.) and guidance was developed. This framework builds on predefined learning outcomes, as well as on the project indicators. Demographic data, skill and attitude pre- and post-training assessment, as well as the module and training evaluation elements were centrally designed and mandatory by the partners to follow. Partners could, however, organize the knowledge assessment of their training as per their own judgement, in line with their local accreditation requirements, while making sure that they assess the knowledge materials they delivered locally (taking changes in the training into consideration).



OnB / OffB: On- and Offboarding

D: Demography questionnaire

K: Knowledge testing

S: Skill self-evaluation

A: Attitude self-evaluation

E: Module/Training evaluation

Figure 4. General structure of the training evaluation and assessment during the pilot phase

The general training concept (modules and components) based on the pre-defined learning outcomes had to be translated of course into assessment and evaluation considerations (Figure 5.) and adapted on the local level. Due to adapted local lexical materials or not implemented Modules, different requirements of knowledge-assessment, local assessment and evaluation was slightly different in all countries.

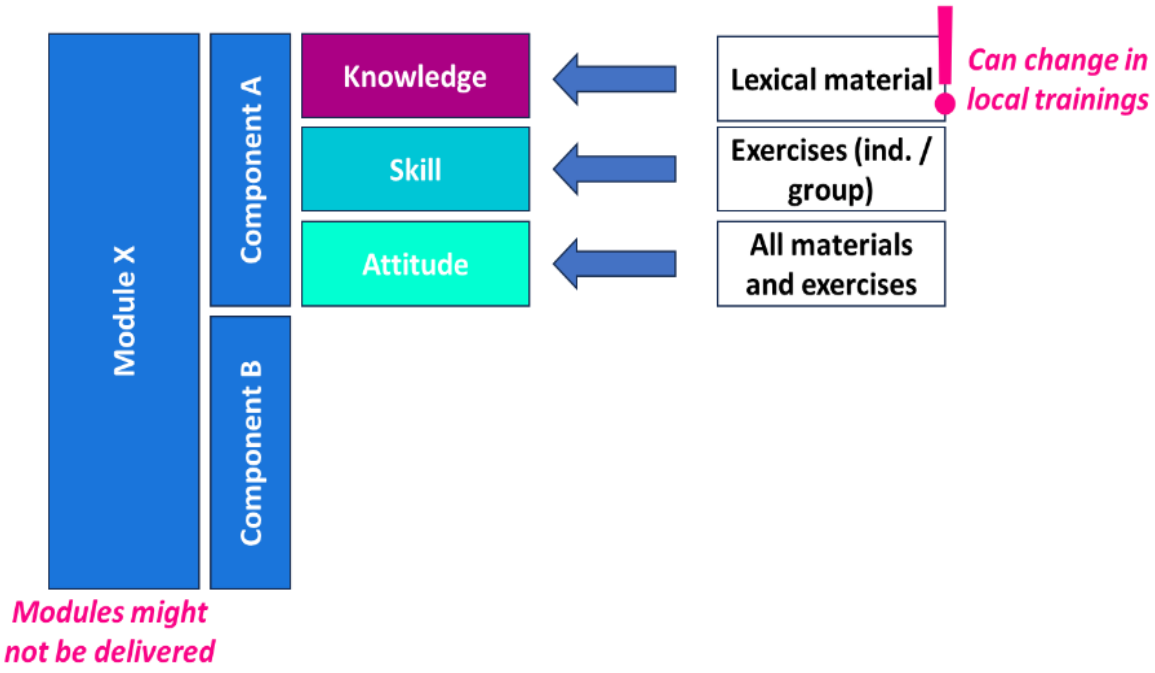


Figure 5. Assessment and evaluation considerations during adaptation on the local level

The assessment and evaluation concept included a follow-up phase as well. Participants of the primary H-PASS training courses, as well as those who also enrolled in the Digital Change Agent training, were also contacted via an additional survey 1-3 months after the training, to assess

how they can use the acquired skills at the workplace in line with Kirkpatrick model's level 4 assessment concept.
This common evaluation scheme is to be applied for every delivering institution and professional group in the programme, allowing for slight differences according to local specificities. As digital maturity and target group needs might be different, evaluation does not aim to compare training courses in different countries.

Surveys and data

Accordingly, pre- and post-training surveys and module evaluation surveys were centrally co-created with the piloting partners, and pre-post assessment questions were suggested and tested for assessing knowledge improvement; however, decisions about knowledge assessment techniques were delegated to the piloting partners. These surveys were shared for translation and guidance for adaptation was provided. Guidance stated that the original structure and content of the surveys can't be changed, only extended by locally relevant questions.
Data was collected in a way that data can be transferred into a data template, building the base of a common H-PASS database. A guidance for data preparation was also provided for the partners.

Connected documents (see in the D1.2 Training monitoring report):

- Welcome survey
- Module 1-4 evaluation surveys
- Closing survey
- Follow-up survey
- Assessment and evaluation guide
- H-PASS evaluation master template
- Data preparation guide

The Digital Change Agent "Module" – A tool for sustainability

Originally part of the train-the-trainer concept of the H-PASS project, based on the Grand Agreement, this additional Digital Change Agent (DCA) module aimed to support training participants who completed the H-PASS training to become Change Agents in healthcare. Its objective was to deepen knowledge on change management and innovation facilitation, while strengthening practical skills to support and guide digital transformation among peers and colleagues in workplace settings. The module also aimed to prepare participants to actively promote and facilitate the use of asynchronous H-PASS learning materials, disseminate information about the training, and contribute to building professional networks around digital health.
In addition, the module supports the effective use of social media to raise awareness of H-PASS and digital transformation initiatives and encourages a culture of continuous learning by fostering interest in actively seeking and sharing knowledge related to digital transformation in healthcare within and outside of the H-PASS alumni network.

Structure and content

As an additional opportunity for H-PASS alumni to further develop themselves and spur individual action, the DCA training is designed to be short and practical.

To this end, the training consists of two 2-hour-long online sessions (aggregate duration: 4 hours), focused on case-study-based group work. In particular, the sessions combine short introductory inputs with extensive case-based group work and guided reflection. These are delivered in a synchronous format and rely on experiential learning, peer exchange, and structured facilitation to support the translation of digital transformation concepts into concrete workplace actions. Partners also assemble locally relevant information and knowledge resources, coined as "repository" for the participants' further autonomous learning. The repository can also be understood as an alumni community platform, where the information and knowledge sharing can become interactive and remain active even after the project's end.

Session 1: Internal Networking and Capacity Building

The first session focuses on internal change facilitation, stakeholder engagement, and capacity building within healthcare organisations. Following a brief introduction outlining the objectives of the Digital Change Agent training and the session agenda, participants are introduced to a realistic case study set in a hospital orthopaedic department (the core English-language case study was modelled after a real-life digital innovation) facing operational pressures, workforce constraints, and opportunities arising from newly available digitalisation funding.

In the case study, working in small groups, participants analyse the case from multiple perspectives and engage in structured problem-solving tasks. These tasks address key elements of internal change management, including securing leadership commitment, identifying and involving key stakeholders, articulating the need for change, and developing a shared long-term vision. Participants are also guided to design internal communication strategies and to consider how digital innovations can be consolidated into everyday practice to ensure sustainability. The session concludes with a reflective exercise aimed at defining and strengthening participants' own professional identity as Digital Change Agents, linking the case learnings to their workplace realities.

Session 2: External Communication and Dissemination

The second session builds on the outcomes of the first by shifting the focus from internal preparation to external communication and dissemination. After an initial short lecture about external communication guidelines, using a continuation of the initial case study, participants explore how a successfully launched digital pilot can be communicated to external stakeholders, including patients, the public, and health and care professionals.

Participants work in groups to design communication strategies that build trust, raise awareness, and encourage engagement with digital health solutions. Particular emphasis is placed on patient-centred communication, the use of clear and accessible messaging, and the strategic selection of channels and platforms. The session also addresses dissemination towards professional audiences, highlighting the role of evidence, peer learning, and professional networks. Throughout the session, participants reflect on how digital change

agents can actively use communication tools, including social media, to amplify impact and support broader uptake of digital innovations.
After sharing the group work results and discussing possible further approaches, the participants are included about two further topics: how they plan their role as a DCA in their own work environment and how they imagine staying part of the H-PASS community, their preferences about staying in contact with the project and each other.

Training Plan of the DCA training

	Timeframe	Task type	Title	Summary
DCA1B1	1:30:00	Sync training activity	Case study 1	After providing a summary of the change management content from the H-PASS training, that aims to support the solving of the case, participants suggest change management tactics for the situation proposed in the case study in groups (engaging the manager, build a team, create a forum, strategise with IT, etc.). After the groupwork, teams present solutions and discuss results.
DCA1B2	0:30:00	Sync training activity	Defining the digital change agent identity	Based on the case study and on the participants' own understanding and ambitions, a definition of the role of the DCA and its tasks are discussed and defined together.
DCA2B1	1:00:00	Sync training activity	Case study 2	After providing a presentation about external communication guidelines, that aims to support the solving of the case, participants suggest external communication tactics about the digital innovation introduced in the case towards two external stakeholder groups. After the groupwork, teams present solutions and discuss results.
DCA2B2	0:30:00	Sync training activity	H-PASS club	The exercise supports H-PASS sustainability by posing the question: "How can H-PASS live further with your help?" It is a discussion about what kind of expectations participants have about the afterlife of the H-PASS course and the building of a

				potential network among themselves.
DCA2B3	0:30:00	Sync training activity	Communication Inside the Workplace	How to let people know if a digital change agent is available? Discussing possible tools and platforms based on the repository.

Repository

The repository is designed for supporting continuous learning and knowledge exchange related to digital transformation in healthcare. It can include a wide range of materials and resources, such as practical guides and templates, information from professional organisations (including conferences, newsletters, and professional updates), outputs from relevant EU projects, and curated webpages. In addition, the repository may feature links to social media accounts, courses, and digital learning opportunities, as well as recommended apps and software tools. It also serves as a platform to support networking among H-PASS participants, fostering ongoing collaboration and peer learning beyond the training period. The "repository" has a local relevance; accordingly, it needs to be designed locally fitting the DCAs preference, therefore, there is no set structure or format for the repository; it can be a document, a page or social platforms for the H-PASS DCA alumni.

Connected documents (see in the 4.2 Training materials deliverable)**:**

- DCA session outlines
- Case study 1
- Case study 2

Assessment

Assessment is based on the indicator requirements of the project, and changes in behaviour and organizational impact of training participation. The impact of the training is measured in three stages: 1) pre-training, 2) post training and 3) in a follow-up survey at least one month after the DCA training event. The corresponding surveys were created centrally and shared for translation with the piloting partners.

Connected documents (see in the D1.2 Monitoring report):

- Pre-survey
- Post-survey
- Follow-up survey

Annex 1 - Glossary of the H-PASS Project

How to use this document?

The aim of this glossary was to create a common understanding during the training programme planning process. Accordingly, the document was updated with new terms and existing terms were refined at relevant stages of the project. Now after the project closes, it can be used to ensure that the same concepts are understood under the same terminology; therefore, it supports the faithful implementation of the H-PASS training.

Glossary

allied health professional: Allied health professionals/practitioners are identified as possessing the key clinical skills and capability to bridge the service demand gap and act as the first point of contact within the patient's health care journey. In essence, to improve patient access to timely health care, new extended scope allied health roles are being trialled with clinicians accessing specialized training outside the traditional scope of their discipline. This may involve identified tasks traditionally undertaken by medical, nursing, physiotherapy, occupational therapy, speech pathology, or other health professionals (Saxon et al., 2014, p. 480).

assessment: The process through which the progress and achievements of a learner or learners is measured or judged in compliance with specific quality criteria. (UNESCO-IBE; 2013)

asynchronous e-learning: Asynchronous learning allows communication to occur over a period of time, rather than simultaneously. General advantages to asynchronous learning include access to information and resources regardless of time, collaboration amongst groups of individuals regardless of time zone, and sharing of collective knowledge. However, asynchronous learning requires one to be self-disciplined and tends to be less personal than synchronous learning. Examples of asynchronous learning include discussion boards, web blogs, email, streaming audio, streaming video, narrated slide shows, web-based training, databases, web books, surveys, shared calendars, and website links. (Motycka et al., 2013)

attitude: Attitudes are conceived as the motivators of performance, the basis for continued competent performance. They include values, aspirations and priorities (Vuorikari et al., 2022).

blended learning: Blended learning involves a combination of online and face-to-face learning experiences. Some examples of blended learning include the flipped classroom, online interaction followed by face-to-face teaching, online learning supplemented by a face-to-face practical. (Commonwealth of Learning, 2023)

change agents: "Anyone involved in initiating, implementing, and supporting change can be considered a change agent" (Armenakis et al., 1999, p. 8). Change agents can be considered on different levels related to their position within an organization. Global change agents might

be the head of the organization, the local change agents might be executives and other managers whereas horizontal change agents might be non-managerial organization members who interact socially on and off the job (Armenakis et al., 1999 in Gerwig, 2016). Within H-PASS we aim to create change agents in the TTT programmes.

change management: Change management is a systematic approach to dealing with the transition or transformation of an organization's goals, processes or technologies. The purpose of change management is to implement strategies for effecting change, controlling change and helping people to adapt to change.

competence(s): The competences are a combination of knowledge, skills and attitudes, in other words, they are composed of concepts and facts (i.e. knowledge), descriptions of skills (e.g. the ability to carry out processes) and attitudes (e.g. a disposition, a mindset to act) (Vuorikari et al., 2022).

Continuing Professional Development (CPD): A continuing process, outside formal undergraduate and postgraduate training, that allows individual doctors [and healthcare professionals] to maintain and improve standards of medical practice through the development of knowledge, skills, attitudes, and behaviour. CPD should also support specific changes in practice. (Academy of Medical Royal Colleges, 2010)

data literacy: Data literacy is an individual's ability to read, write, and communicate with data in context (Hart et al., 2022).

digital competence: "Digital competence involves the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), intellectual property related questions, problem solving and critical thinking." As of DigComp 2.2. Information and data literacy; Communication and collaboration; Digital content creation; Safety; and Problem solving are the main areas of digital competence. (Vuorikari et al., 2022).

digital communication: Digital communication refers to communication using digital technology. Various modes of communication exist, e.g. synchronous communication (real time communication, e.g. using skype or video chat or Bluetooth) and asynchronous ones (not concurrent communication, e.g. email, forum to send a message, sms) using for example, one to one, one to many, or many to many modes. (Vuorikari et al., 2022).

digital service: Digital service allows a user (citizen, consumer) to create, process, store or access data in digital form and to share or interact with data in digital form uploaded or created by the same or other users of that service (Directive (EU) 2019/770). (Vuorikari et al., 2022)

digital technology: Any product that can be used to create, view, distribute, modify, store, retrieve, transmit and receive information electronically in a digital form. For example,

personal computers and devices (e.g. a desktop, laptop, netbook, tablet computer, smart phones, PDA with mobile phone facilities, games consoles, media players, e-book read-ers, smart assistants, AR/VR headsets and other devices), digital television, robots. (Vuorikari et al., 2022)

digital tools: Digital technologies (see: digital technology) used for a given purpose or for carrying out a particular function of information processing, communication, content creation, safety or problem solving. (Vuorikari et al., 2022)

digital transformation of healthcare: Digital transformation refers to the digital technology changes used to benefit society and the healthcare industry. Healthcare systems need to use digital technology for innovative solutions to improve healthcare delivery and to achieve improvement in medical problems. The digital transformation of healthcare includes changes related to the internet, digital technologies, and their relation to new therapies and best practices for better health management procedures.

e-learning platform: An electronic learning platform is an integrated set of interactive online services that provide trainers, learners, and others involved in education with information, tools, and resources to support and enhance education delivery and management. Within H-PASS e-learning platform marks the space of the online training programme delivery.

education modality: The choice and configuration of digital education modality (eg., online learning and m-Learning) and its potential blending with in-person education. (Tudor Car et al., 2022)

healthcare team: Healthcare teams comprise professionals from various disciplines who enter a collaborative relationship with the patient to deliver coordinated, high-value, and patient-centered healthcare. Team-based care is well researched and associated with numerous benefits including improved patient outcomes and satisfaction, efficient use of staff time, improved staff satisfaction, and decreased monetary expenditure. Healthcare teams need to reflect on team processes, team member roles and scopes of practice, and adapt to new demands. (Martin et al., 2022, p. 765)

health professional: "Health professionals maintain health in humans through the application of the principles and procedures of evidence-based medicine and caring. Health professionals study, diagnose, treat and prevent human illness, injury and other physical and mental impairments in accordance with the needs of the populations they serve. They advise on or apply preventive and curative measures and promote health with the ultimate goal of meeting the health needs and expectations of individuals and populations, and improving population health outcomes. They also conduct research and improve or develop concepts, theories and operational methods to advance evidence-based health care. Their duties may include the supervision of other health workers." (World Health Organisation, 2013, p. 57). This project will refer to health professionals as those with formal education (physicians, nurses, midwives, pharmacists, physiotherapists) (as in Maier et al. 2022).

health worker: This project will refer to health workers as those with no or very limited formal health-related education (lay, informal, community-based or peer workers) in contrast with health professionals (as in Maier et al. 2022).

health workforce (HWF): Human resources for health – or the health and care workforce – are "all people engaged in actions whose primary intent is to enhance positive health outcomes" (Working together for health: the World Health Report 2006).

Internet of things (IoT): describes physical objects (or groups of such objects) that are embedded with sensors, processing ability, soft-ware, and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks. (Vuorikari et al., 2022)

interprofessional education (IPE): IPE occurs when two or more professions (students, residents and health workers) learn with, about, and from each other to enable effective collaboration and improve health outcomes (World Health Organisation, 2010).

knowledge: Knowledge means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study (Vuorikari et al., 2022).

learning outcome: Totality of information, knowledge, understanding, attitudes, values, skills, competencies or behaviours an individual is expected to master upon successful completion of an educational programme. (UNESCO-IBE, 2013)

micro-credentials: A micro-credential is the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes have been assessed against transparent and clearly defined standards. Courses leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be standalone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity. (European Commission, 2021)

media literacy: refers to skills, knowledge and understanding that allow citizens to use media effectively and safely. In order to enable citizens to access information and to use, critically assess and create media content responsibly and safely, citizens need to possess advanced media literacy-cy skills. Media literacy should not be limited to learning about tools and technologies but should aim to equip citizens with the critical thinking skills required to exercise judgment, analyse complex realities and recognise the difference between opinion and fact. Source: the EU's Audiovisual Media Services Directive (2018) (Vuorikari et al., 2022)

methodological block: Methodological blocks are building blocks of the training delivery with specific methodological foci, such as lexical e-learning content, individual learning exercises, online group work, onsite training, or VR.

MOOC (massive open online course): There is no such single entity as a MOOC, and multiple definitions of it are proliferating. MOOCs tend to be simpler and more impersonal than previous forms of online education. Characteristics can be: no teachers; no supervision; no fees nor entry requirements; the only equipment required being the computers purchased by the students; thousands of students in a single course; students teaching each other; students grading each other's work. A typical MOOC is made possible by outsourcing agreements between the educational sector and external providers of multimedia MOOC materials. Typical MOOC providers are Udacity, Coursera, EdX (Baggaley, 2013).

online digital education: Computer-assisted instruction using the internet or a local intranet as the means of delivery, also referred to as online, internet-based, or networked, includes multiple media formats (e.g., text, videos, and images and online discussion (e.g., via email, chat, or videoconferencing) and is designed to be primarily delivered on PCs (Tudor et al., 2022).

online knowledge repository: Online knowledge repositories are digital platforms or databases that store, organize, and provide access to a wide range of information, data, and knowledge resources. These repositories serve as centralized hubs where individuals or organizations can collect, manage, and share knowledge and information. They are valuable tools for information management, research, learning, and collaboration.

online learning environment: or digital learning environment or virtual learning environment, is a web-based platform or space where educational content, resources, and interactions take place over the internet. It is designed to facilitate and support the delivery of education and training through digital means.

problem solving: "an individual's capacity to engage in cognitive process-ing to understand and resolve problem situations where a method of solution is not immediately obvious. It includes the willingness to engage with such situations in order to achieve one's potential as a constructive and reflective citizen" (OECD, 2014, p. 30).

proficiency level: Proficiency levels refer to different stages or degrees of competence or mastery in a particular skill, area of knowledge, or task. They are used to describe a person's or group's capability or expertise in a structured and hierarchical way. Proficiency levels are often measured and defined to assess and communicate an individual's or entity's level of performance. For example, the National Institute of Health (NIH, US) differentiates healthcare professionals competence on the following scale: NA - Not Applicable; 1 - Fundamental Awareness (basic knowledge); 2 - Novice (limited experience); 3 - Intermediate (practical application). 4 - Advanced (applied theory); 5 - Expert (recognized authority).

skill: Skills are the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualifications Framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments) (Vuorikari et al., 2022).

synchronous e-learning: A synchronous learning environment is an environment where the teacher and the students meet online on a specific online platform for teaching and communicate about a lesson; synchronous learning is defined as simultaneous interaction between 2 or more participants. Examples of synchronous learning include online chat, instant messaging, white boarding, file sharing, audioconferencing, webconferencing, and videoconferencing. (Amiti, 2020; Motycka et al., 2013)

task shifting: Task shifting is the structural redistribution of tasks, usually including responsibilities and competencies between different professions. As such, task shifting is commonly focused on highly specialised and trained professionals who hand-over specific, standardised tasks to professionals with lower levels of education. It is expected that this type of task shifting will lead to efficiency and cost savings to healthcare organisations (van Tuyl et al., 2021).

traditional education: Education that uses nondigital educational material (eg, textbook or model) or in-person human interaction. (Tudor Car et al., 2022)

training components: Components are thematic units of a training module that cover focus competences of the project. Learning objectives, training outlines, education methods and training materials of the training components are elaborated in the training outlines.

training module: Modules are the building blocks of the training programme, that focus on a specific competence area or a specific set of skills. Training courses consist of different training components.

training evaluation: Is a systematic approach to assessing the effectiveness and impact of a training program. Evaluation happens on four levels: Reaction (=the degree to which participants find the training favourable, engaging, and relevant to their jobs), Learning (=the degree to which participants acquire the intended knowledge, skills, attitude, confidence, and commitment based on their participation in the training), Behaviour (=the degree to which participants apply what they learned during training when they are back on the job), and Result(=the degree to which targeted outcomes occur as a result of the training and the support and accountability package). (Kirkpatrick & Kirkpatrick, 2016)

training framework: The structural outline of the training programme describing the modules, main topics, levels, methodological characteristics and infrastructural requirements of the modules.

training outline: A document which outlines the aims, selection and sequence of contents to be covered, mode of delivery, materials to be used, learning tasks and activities, expected learning objectives or outcomes, and assessment/evaluation schemes of a specific course, unit of study or learning module (“Syllabus” in UNESCO-IBE, 2013).

training process structure: The structure of the modules and methodological blocks of the training that can differ in the implementing countries as a result of the local context.

train the trainers (TTT): TTT is an educational model where an organizing institution that houses content-area expertise identifies potential trainers with ties to the community targeted for training. These trainers are provided with education, instructional tools, and programmatic guidelines that enable them to, in turn, provide specific training to target audiences. TTT initially relies upon the resources of the organizing institution in the early stages of a program, it can subsequently be sustained on a long-term basis by trainers in the community. TTT allows for utilization and promotion of social capital in the community, which in turn maximizes the benefit of the training program. (Orfaly et al., 2005)

virtual reality (VR): The use of computer modeling and simulation that enables a person to interact with an artificial three-dimensional (3-D) visual or other sensory environment. VR applications immerse the user in a computer-generated environment that simulates reality through the use of interactive devices, which send and receive information and are worn as goggles, headsets, gloves, or body suits. (Lowood, 2023)

well-being: the term is related to the WHO definition of good health as a state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity. Social well-being refers to the sense of involvement with others and with the communities (e.g. access and use of social capital, social trust, social connectedness and social networks). (Vuorikari et al., 2022)

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