



Final Report

DIGITAL SKILLS TO INCREASE QUALITY AND RESILIENCE OF THE HEALTH SYSTEM IN ITALY

REFORM/SC2022/047

Project funded by the European Union via the Technical Support Instrument, managed by the European Commission Directorate General for Structural Reform Support.

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Project Summary

The European project "DIGITAL SKILLS TO INCREASE QUALITY AND RESILIENCE OF THE HEALTH SYSTEM IN ITALY - REFORM/SC2022/047" started in October 2022 and had a duration of 18 months. It was financed by the Technical Support Instrument (TSI), and Deloitte Consulting s.r.l. S.B. won the public tender REFORM/2021/OP/0006 issued by the Directorate General for Structural Reform Support (DG REFORM).

The aim of the project was to support the digital transformation of the Italian National Health Service (NHS) through the creation of specific tools that, once implemented, will improve the ability of health professionals to work in the new digital health ecosystem. Specifically, the project has designed a comprehensive approach that includes a model to improve the overall digital skills of health professionals and operational guidelines to facilitate the adoption and use of the Electronic Health Record 2.0 (EHR 2.0).

The project was funded by the European Commission and the main beneficiary institutions were the following:

- Ministry of Health of Italy (Ministero della Salute);
- ProMIS (Programma mattone internazionale salute);
- the Department for the Digital Transition (Dipartimento per la trasformazione digitale).

The project also benefitted the following institutions:

- Age.na.s. (Agenzia nazionale per i servizi sanitari regionali);
- Regional Authorities and Autonomous Provinces;
- Local Healthcare Units (Aziende Sanitarie Locali – ASL).

The TSI Digital Skills Board was established in order to guarantee an adequate level of involvement of all the main beneficiaries listed above, in the activities carried out during the project.

The project was structured in three general streams i) EHR 2.0 Communication Stream; ii) EHR 2.0 Upskilling Stream; iii) Digital Health Literacy Stream, according to the guidelines set forth by the public tender. It also was articulated in six phases, for which specific deliverables have been provided by the executive team and approved by the TSI Digital Skills Board. The description of every phase and their respective outputs is provided below.

Phase 1: Inception

The goal of the Inception Phase was to consolidate the project approach, to refine the working methods, to delineate the main project objectives and finally to formulate the initial version of the project work plan. The first deliverable of the project is the Inception Report (formally named "Deliverable 1 - D01 - Inception report"), which contains a clear understanding of the initial conditions and the environment in which all the streams listed above started from. It also contains the project ambitions and the project organization, the project approach and its related workplan and also a stakeholder map, in order to determine the project boundaries and the actions needed to align the stakeholder's objective with those of the project.

This phase covered two significant events: i) the technical kick-off meeting with the TSI Digital Skills Board held on the 21st of October 2022, whose purpose was to discuss the project approach and the potential engagement of additional stakeholders, and ii) the kick-off meeting with the Steering Committee held on the 11th of January 2023, where the project was formally launched.

The Deliverable 1 - D01 - Inception report was formally approved by the Board on the 23rd of December 2022.

Phase 2: Situation analysis

The main goal of this phase were to collect and analyse data regarding initiatives and best practices at international, national and regional level concerning: i) the current offering on digital skills topics in the Italian CPD/LLL system, by analysing, classifying and clustering more than a thousand training events, related to the latest training processes and provided by Age.na.s; ii) the enhancement of generic and EHR-related digital skills; iii) communication strategies about EHR's relevance, functionalities and implementation stages.

Another purpose of this phase was to identify good practices in order to classify methods or techniques already tested and accepted and help the envisioning the contents of the project. All this information was gathered into the second Deliverable of the project, the Situation Analysis Report (formally named "Deliverable 2 - D02 - Situation Analysis Report").

Data collection involved workshops and interviews with representatives from various Regions, desk research and documents gathered from the project's key stakeholders. Data acquisition was followed by Data Mining and qualitative analyses.

The Deliverable 2 - D02 - Situation Analysis Report was formally approved by the Board on the 27th of March 2023.

Phase 3: EHR 2.0 Operational Lines Definition

The project is part of a wider process to reform the EHR. Thus, funds from the National Recovery and Resilience Plan (NRRP) have been intended to foster the renewal and to increase the adoption and use of the EHR by the Regions and the Autonomous Provinces. A series of interventions related to the evolution of the current EHR in the so called "EHR 2.0", have been defined. Italian Regions and Autonomous Provinces have already delivered to the national institutions their own "Regional operational plan" to be compliant with the EHR 2.0 legislation and planned actions. For this reason, the goal of this phase was to deliver operational guidelines to support the planning and implementation of EHR 2.0 both upskilling and communication initiatives at a regional level. These guidelines are detailed within the third project Deliverable that included the following documents:

- the EHR 2.0 Upskilling Operational Guidelines;
- the EHR 2.0 Communication Operational Guidelines.

A subset of Regions were consulted in order to draft these guidelines, and to gather additional insights on ongoing regional activities and future expectations regarding the content of the documents. In particular, seven interviews and a workshop were conducted with regional communication stakeholders to define the EHR 2.0 Communication Operational Guidelines contents. Furthermore, EHR 2.0 training regional experts were involved in another specific focus group for the EHR 2.0 Upskilling Operational Lines contents definition.

The deliverables of this phase are the following:

- **the Deliverable 03.1 - D03.1 - EHR 2.0 Communication Operational Lines formally approved by the Board on 7th of June 2023;**
- **the Deliverable 03.2 - D03.2 - EHR 2.0 Upskilling Operational Lines, formally approved by the Board on 30th of October 2023.**

Both documents were approved after a short public consultation period on the ParteciPa Platform.

Phase 4: Strategy design

The goal of this phase was to define a national governing framework in order to enhance and develop the digital skills of health professionals on a permanent basis. Hence, the Digital Upskilling Lifecycle Model was created, comprising six phases, in order to guide stakeholders in defining and updating digital skills, planning and executing training initiatives, and monitoring outcomes. The model ensures a comprehensive, adaptive, and outcome-focused approach to digital upskilling in the dynamic

healthcare landscape. This strategic framework was addressed on the fourth project Deliverable: the Digital Health Literacy Strategic Plan (formally named “Deliverable 04 - D04 - Digital Health Literacy Strategic Plan”).

Two workshops with a large group of Regions were held in order to define the content of the document: this allowed the collection of potential suggestions on the strategic framework and the acquisition of knowledge on the management and monitoring approaches of training and communication initiatives at the regional level. Moreover, two additional meetings with the Regions were held. The main objectives were to share, analyse and collect feedbacks on the theorised upskilling programs monitoring model and the comprehensive skill set for professionals to navigate amid digital transformation.

The TSI Digital Skills Board was directly involved in the content design process with various co-design meetings. Throughout the phase, the Department for the Digital Transition was supported in drafting the Briefing for the creation of the Technical Community whose objective was to facilitate the networking among technical EHR professionals.

The Deliverable 04 - D04 - Digital Health Literacy Strategic Plan was formally approved by the Board on the 30th of October 2023.

The document was approved after a short public consultation period on the ParteciPa Platform.

Phase 5: Recommendations on EHR 2.0 communication and upskilling actions

The goal of this phase was to provide methodological guidance on Change Management methodologies to support EHR 2.0 communication and training initiatives within Regions and resulted in the Recommendations on EHR 2.0 communication and upskilling actions document (formally named “Deliverable 05 - D05 - Recommendations on EHR 2.0 communication and upskilling actions”).

Within this phase the project team developed a framework, applicable to all organisational transformation processes with specific adaptations for the implementation of Operational Plans whose purpose was to enhance digital skills in healthcare.

In addition, the document provides a comprehensive overview of the objectives of the change management process, specific actions to engage healthcare professionals and initiatives to support them during the transition to EHR 2.0.

The Deliverable 05 - D05 - Recommendations on EHR 2.0 communication and upskilling actions implementation was formally approved by the Board on 22nd of December 2023.

Phase 6: Action plan

The goal of this phase was to define a checklist of actions for implementing the Digital Health Literacy Strategic Plan which outlines the sixth project Deliverable, namely the Action Plan (formally named “Deliverable 06 - D06 - Action Plan”). Alongside this document, two additional deliverables were realised: the Feasibility Study for a knowledge management e-platform and the Capacity Building Toolkit.

The scope of the feasibility study was to: i) define and represent digital business processes in a business process model; ii) define high-level requirements and functionalities to offer national authorities and regions; iii) identify specific recommendations for establishing a governance platform to support the Digital Health Upskilling Program. Moreover, the Capacity Building Toolkit was developed in order to guide stakeholders in the understanding of the documents underlying the Digital Health Upskilling Program.

Throughout this phase, a series of bilateral meetings with each member of the TSI Digital Skills Board were conducted to ensure the viability of the planned actions from a co-creative perspective. Similarly, the definition of the Feasibility Study was carried out through constant consultations with the Department for the Digital Transition.

The Deliverable 06 - D06 - Action Plan was formally approved by the Board on 09th of February 2024.

Other collateral activities for stakeholder involvement

- Bi-weekly Status Update meetings held with the main stakeholders of the project (DG REFORM, Ministry of Health, Department for the Digital Transition, ProMIS and Age.na.s.).
- Project presentation to the Training Coordination of Veneto Region and the IT Coordination for EHR of Piemonte Region on the 26th of January 2023, to discuss the contents and the involvement of the Regions on the activities of the project.
- Project presentation to the contact points of the Regions and Autonomous Provinces the 6th of March 2023.
- Project presentation to the National Federations of Orders for Health Professions on the 7th of March 2023.
- Project presentation to the newly appointed General Director of Health Professions and Human Resources of the National Health Service, Dr. Mariella Mainolfi on the 31st of May 2023.
- Project presentation to the new Department for the Digital Transition representative for EHR 2.0 Upskilling, Dr. Giuseppe Iacono.
- Digital Health Literacy Strategic Plan presentation to the National Federations of Orders for Health Professions, with particular focus on their responsibility in the implementation strategy, on the 2nd of April 2024.

Main institutional milestone

- Age.na.s.'s contribution to the TSI Digital Skill Board: Age.na.s brought to the attention of the National Commission for Continuing Education the importance of Digital Health in the CPD/LLL System. For this reason, the latter approved Resolution no. 5/2023 which identifies Digital Health as a matter of national interest. This Resolution leads to an increase in the attractiveness of training initiatives focused on Digital Health, since it provides the attribution of 0.3 additional credits per hour to all professionals who attended these training events.

Lessons learned, Success factors and Problems encountered

Lesson learned

The major takeaways of the project underline the importance of:

- the collaboration among key stakeholders (i.e., the Ministry of Health, the Department for the Digital Transition, Age.na.s., ProMIS and the Regional Authorities and Autonomous Provinces) and additional national stakeholder institutions with legitimate interest on the objectives of the project (i.e. the National Federations of Orders for Health Professions);
 - the introduction of the necessary project management actions that adequately mitigate potential delay on development activities and additional contingency, that may be caused by feedback, rework and support request from several project stakeholders;
 - the collection of project business requirements and a clear definition of stakeholders' expectations in order to address national and local emerging requests;
 - the engagement of the involved institutions' Director, from the beginning of the project on, in order to ensure political support, ownership and therefore the widespread sharing of project initiatives and future developments;
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- the analysis of the organizational models and/or operational methods that Regions already have in place, in order to contextualize the suggestions to the project through the production of tailored deliverables adaptable to the different territorial setting;
 - the engagement of the proper actors in the project (e.g., the right regional stakeholder) and setting up a co-creation process in order to actively and proactively involve the territorial institutions and also to create a feeling of shared responsibility to achieve the national project objectives;
 - the investigation of the reference context, collecting the available documentation and being flexible to adapt the work plan to external, project-related deadlines. This is essential to ensure that the implemented solution creates added value by integrating within the context of the institutional initiatives that are implemented at national level.

Success Factors

- in-depth knowledge of the healthcare sector and its dynamics;
- opportunity to communicate with a wide ecosystem of healthcare actors given our ability to create and maintain strong relationships;
- great flexibility in the original project timeline by all participants and DG REFORM;
- adoption of a co-creation approach for the development of key project deliverables;
- intense project management and stakeholder management activity;
- strong involvement, participation and response from leading institutions;
- existence of a strong and active network of regions managed by an institutional actor (ProMIS).

Challenges encountered

- the limited availability of organic information at European level represented a clear obstacle during the preliminary analysis and for this reason the evaluation of the international context in terms of EHR 2.0 training and communication initiatives included a small amount of data;
- the drafting of the EHR 2.0 Upskilling Operational Lines document has been delayed due to a change of the EHR 2.0 representative of the Department for the Digital Transition, thus requiring a revision of working methods. Additionally, the delay was caused by the request to align the contents with the strategy and activities of the Department for the Digital Transition. This involved the review of the schedule to ensure cross-referencing with additional documents and/or annexes produced by the Department itself;
- the overall engagement of the National Federations of Orders for Health Professions was lower than expected throughout the whole project implementation.
- the drafting of the Action Plan document has been delayed since it required scheduling meetings with the TSI Digital Skills Board in order to co-design its content and to allow the subsequent validation and approval of it.

Replication elements

The European initiative "DIGITAL SKILLS TO INCREASE QUALITY AND RESILIENCE OF THE HEALTH SYSTEM IN ITALY - REFORM/SC2022/047" has delivered tailored strategic and operational tools to the central government and to local entities that have an interest in: i) the Italian National Health Service (NHS); ii) upgrading healthcare workforce digital skills. These tools have been designed to be used across various territorial levels and customized to accommodate different regional specificities and requirements.

Although the governance systems may not seamlessly fit diverse local contexts across Europe, other tools offer the potential for reuse with minimal adjustment. In fact, these tools include general theoretical methodologies that are not directly tied to specific governance structures or national contexts. The list of elements with high potential for reuse with their related benefits is provided below:

EHR 2.0 Communication Operational Lines

- The **Implementation Strategy for the development of communication initiatives** (see **Chapter 3 of Deliverable 03.1 - D03.1 - EHR 2.0 Communication Operational Lines**) provides an adaptive framework in four points for the planning and implementation of any set of communication events;
- the **Communication Curve methodology** (see **paragraph 4.5 of Deliverable 03.1 - D03.1 - EHR 2.0 Communication Operational Lines**) provides a change management tool that ensures a gradual internalisation of the messages conveyed through any communication campaign;
- the **indications for communication channels utilisation** (see **paragraph 4.7 of Deliverable 03.1 - D03.1 - EHR 2.0 Communication Operational Lines**) detail various categories of functional communication types and all adoptable channels for the implementation of a communication initiative;
- the **monitoring system** that through **surveys, interviews and KPIs** allows to evaluate the effectiveness of communication initiatives and the achievement of objectives (see **Chapter 5 of Deliverable 03.1 - D03.1 - EHR 2.0 Communication Operational Lines**);
- the list of potential **resources for the implementation of a communication program** (see **Chapter 6 of Deliverable 03.1 - D03.1 - EHR 2.0 Communication Operational Lines**) provides a compendium of professional profiles and functional resources to add value to any communication program.

EHR 2.0 Upskilling Operational Lines

- The **Implementation Strategy for the development of upskilling initiatives** (see **Chapter 3 of Deliverable 03.2 - D03.2 - EHR 2.0 Upskilling Operational Lines**) provides an adaptive framework structured in five points for the planning and implementation of any set of upskilling events;
- the **indications for upskilling initiatives delivery** (see **paragraph 5.3 of Deliverable 03.2 - D03.2 - EHR 2.0 Upskilling Operational Lines**) detail training modalities with instructions on the correct use of each tool to support the implementation of an upskilling campaign;
- the list of potential **resources for the implementation of an upskilling program** (see **Chapter 7 of Deliverable 03.2 - D03.2 - EHR 2.0 Upskilling Operational Lines**) provides a compendium of professional profiles and functional resources to add value to any upskilling program.

Digital Health Literacy Strategic Plan

- The **National Digital Skills Portfolio** (see **Chapter 2 of Deliverable 04 - D04 - Digital Health Literacy Strategic Plan**) provides a set of digital competencies that healthcare professional should possess to be digitally fluent within their respective organisational context and roles. This tool is adaptable and modifiable to suit specific national requirements based on: i) existing or planned technological implementations; ii) national priorities and objectives regarding digital adoption in healthcare;
- the **Guidance Matrices** (see **paragraph 3.1 of Deliverable 04 - D04 - Digital Health Literacy Strategic Plan**) identifies type and level of digital skills that a healthcare professional should possess. These tools are developed from specific European frameworks (DigComp 2.2 and the

European Qualification Framework) and are adaptable and adjustable according to professional categories and career steps;

- the **computational model** provides an algorithm for the identification of **Digital Personas and the assignment of Digital Health Education Objectives** that are displayed with the **Professional Radars** (see **paragraphs 3.2 and 3.3 of Deliverable 04 - D04 - Digital Health Literacy Strategic Plan**);
- the **National Digital Health Education Catalogue** (see **sub-paragraph 4.1.2 of Deliverable 04 - D04 - Digital Health Literacy Strategic Plan**) provides a collection of all training initiatives on digital health scheduled across a country;
- the **Donald L. Kirkpatrick's model** provides a model used for evaluating the effectiveness of a training initiative (see **sub-paragraph 4.1.3 of Deliverable 04 - D04 - Digital Health Literacy Strategic Plan**).

Recommendations on EHR 2.0 communication and upskilling actions

The document contains a methodological framework that supports change processes. It is applicable to any sector, business or company transformation context.

Feasibility Study for a knowledge management e-platform

The document includes high-level requirements and functionalities and recommendations for establishing a governance platform to support the Digital Health Upskilling Program. This study could support the implementation of a comparable platform to manage any nationwide training program.

Follow-up report

The Action Plan document outlines the actions to initiate and pilot the Digital Upskilling Lifecycle Model, detailing their timing and mutual relationships, in order to ensure its proper and effective full-scale application.

ProMIS agreed to coordinate the actions and initiatives related to the active involvement of the Regions. It also required to include an activity called “TSI Digital Skills Project Product Implementation Support Laboratory” within the 2024 National Training Plan, already approved by the Ministry of Health and by the Regions. The objectives of this activity are: i) to inform the Regions about deliverables produced within the project; ii) to promote the implementation of the Digital Health Literacy Strategic Plan through dedicated laboratories.

The list of short-term actions, identified by the TSI Digital Skills Board to integrate the details, is reported below:

- a meeting with the National Federations of Orders for Health Professions and with the participation of Regions and Autonomous Provinces, has been organized. The discussion is focused on the responsibilities of the Federations in implementing the Digital Health Literacy Strategic Plan held on the 2nd of April 2024;
 - a project-related web page on the Italian Ministry of Health’s website will be created. This will contain: i) a summary of project activities; ii) links to documents of the project; iii) information about stakeholders who contributed to the project realization;
 - ProMIS will present the project at the 2024 European Health Management Conference;
 - ProMIS issued a call-to-action communication to the Regions to identify two or three Pilot Regions that will initiate the experimentation of the Digital Upskilling Lifecycle Model;
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- operational contact points within each National Federations of Orders for Health Professions are to be identified. They will be responsible for guiding and coordinating activities during the testing of the Model;

In order to define short-term indicators (see Chapter 6 of Deliverable 04 - D04 - Digital Health Literacy Strategic Plan) and to adapt them to the expectations and objectives set, the implementation of the pilot of the Model, as detailed inside the Action Plan (see WP 3, WP 4 and WP 5 of Deliverable 06 - D06 – Action Plan), requires the planning of the monitoring tools and guidelines previously outlined.

Annex

Deliverable 01 – D01 – Inception report

According to the contract services, this document describes what has been achieved and defined in cooperation with the Italian health authorities during the initial phase of the project “DIGITAL SKILLS TO INCREASE QUALITY AND RESILIENCE OF THE HEALTH SYSTEM IN ITALY - REFORM/SC2022/047”.

Specifically, it involves:

- the main goals of the project that are contextualized within: i) the current scenario of digital skills among healthcare professionals; ii) the ongoing nationwide digital transformation empowered by the Italian National Recovery and Resilience Plan (NRRP);
- the stakeholder management methodology which outlines the strategies to engage stakeholders and the related stakeholder matrix. This matrix collects project stakeholders into specific clusters, which define their roles and responsibilities, based on their respective level of interest in the project;
- the project approach, which details the initial version of the project plan and its breakdown into streams and phases (as previously outlined in the Project Summary);
- the project governance system and its scheme;
- the risk management strategy, which includes the definition of a risk matrix, a risk dispersion chart and a list of potential project risks and related mitigation actions.

Deliverable 02 - D02 – Situation analysis report

This deliverable provides a detailed overview on the evidence collected from the analysis performed on initiatives and best practices at international, national and regional scale. It concerns:

- the enhancement of generic and EHR 2.0-related digital skills;
- communication strategies about the functionalities and implementation stages of the EHR 2.0

From the analysis on the training initiatives of CPD/LLL System, it was observed that these courses did not fully cover the set of skills necessary for professionals to be "compliant" with the high demand for digital skills in the healthcare framework. Furthermore, it was possible to notice that those courses that stand out for attendance were mainly free of charge, carried out in residential mode and provided a high number of credits. From the analysis of non- CPD/LLL System training initiatives, instead, it was observed that at national level the most covered topics were mainly oriented towards the basic digital culture of health professionals.

The analysis performed on communication initiatives has shown that they have been mainly directed towards citizens, and only marginally towards healthcare professionals. In this context, the coordinators indicated that the lack of awareness of the benefits brought by the EHR 2.0 to the daily activities of professionals, was the main barrier to the adoption of this tool. Therefore, Regions needed

to receive more methodological and professional support to manage communication initiatives. Moreover, the analysis has shown that regional websites are the main communication channel on EHR-related topics towards professionals and citizens. The analysis also revealed that regional websites present several differences related to Brand and Visual Identity, Accessibility, Main Contents, and Key messages.

Deliverable 03.1 - D03.1 - EHR 2.0 Communication Operational Lines

The objective of this document was to provide Italian Regions with Operational Lines to support the planning, implementation and delivery of communication initiatives concerning EHR 2.0, in order to manage the observed evidence of a fragmented national communication approach.

A brief overview on the context of the project and its primary purpose is provided in the first paragraphs of the document, followed by a summary of the evidence that emerged from the analysis of the current situation regarding EHR communication activities.

The document then includes suggestions on the following areas:

- Governance: it proposes an organisational model to effectively manage and implement communication programs, ensuring coordination between national, regional and company level;
- Planning: it provides guidance on: i) the establishment of a robust governance and coordination model among national, regional and company levels; ii) the design and implementation of regional communication initiatives according to the Operational Plans;
- Contents: it provides recommendations on content development related to communication initiatives, tailored to specific target audiences;
- KPIs: it provides suggestions for the implementation of a comprehensive monitoring system, including qualitative and quantitative measures, to track the effectiveness of EHR 2.0 communication initiatives;
- Resources: it identifies and maps professional, technological, logistical resources for effective management and implementation of the initiatives.

Deliverable 03.2 - D03.2 EHR 2.0 Upskilling Operational Lines

This document provides Operational Lines to support the Regions in the implementation of the upskilling initiatives included within the Operational Plans, in order to contribute to the achievement of the EHR 2.0 objectives associated with the NRRP M6C2 1.3.1 sub-investment. The suggestions provided in this document consider a starting scenario with significant differences among the Italian regions regarding EHR 2.0 approach and level of implementation.

The document provides an overview on the initial framework of the initiatives and on the principles and objectives defined by the NRRP for the EHR 2.0 usage and adoption. It also includes suggestions on the following areas:

- Governance: it includes recommendations, suggestions and organisational models for the implementation and governance of training initiatives at regional and company level;
 - Training the Trainers: it provides an overview and specific suggestions on the delivery methods and contents in order to properly educate the trainers on the EHR 2.0;
 - Implementation Strategy: it provides specific guidance for planning, designing, implementing and delivering the initiatives in order to achieve the objectives of the Operational Plans. It contains the initial assessment of training needs, the prioritisation and construction of “Training Packages” and the executive design and final monitoring of the competence level achieved;
 - Contents: it provides methodological reference for the design of EHR 2.0 training contents;
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- KPIs: it provides suggestions to implement a comprehensive monitoring system, which tracks the effectiveness of EHR 2.0 upskilling initiatives through qualitative and quantitative measure;
 - Resources: it identifies and maps professional, technological, logistical resources for effective management and implementation of the initiatives.

Deliverable 04 - D04 - Digital Health Literacy Strategic Plan

The document defines the general strategy to support the development of the digital skills of healthcare professionals in the Italian National Health System (NHS), introducing the Program of Digital Health Education (DHE), based on the “Digital Upskilling Life Cycle Model”.

The goal of this model is to provide a conceptual and operational infrastructure that supports the development of the digital competencies of healthcare professionals. The model is divided into 6 phases:

1. Governance: it provides general indications, suggestions and recommendations on the governance model, in order to identify objectives and actors for each level of government (national, regional, local, individual);
 2. Design: it defines and updates the National Portfolio of Digital Skills of the healthcare professional that includes the set of competences and skills that they must possess in order to act in a digitally fluent and responsible manner in their regular working activities;
 3. Guidance: it develops personalised training paths through three educational tools: Guidance Matrices of Digital Competences, Digital Personas and proficiency levels based on the European Qualifications Framework (EQF). The Digital Personas (i.e., the ideal target of digital competences that the healthcare professionals need to reach in order to evolve their skills) are constructed on the basis of the three Guidance Matrices: Profession, Role and Age. Healthcare professionals can compare the reference Digital Personas with his/her own level of proficiency, which is identified through a self-assessment questionnaire, and is therefore able to acknowledge his/her own individual objectives;
 4. Planning: it plans and implements training initiatives on 3 levels:
 - a. national: it defines and updates the National digital health education Catalogue that collects every training initiative event related to Digital Healthcare created by Regions and local authorities. It also defines KPIs to monitor the effectiveness of the Digital Health Upskilling Program and the Triennial National DHE Plan;
 - b. regional: it realizes the triennial Regional DHE Plan, in order to incorporate all the methodological and policy indications contained in the National and Regional planning documents on training. The regional planning involves 4 phases (Preparation, Training, Follow-up, Evaluation);
 - c. local: it implements the Triennial Local DHE Plan to define local training initiatives that will integrate those planned at regional level. The local planning has the same 4 phases of the regional one.
 5. Execution: it guides different levels of government to periodically assess the level of progress and quality of implementation of the DHE Program, through the use of appropriate measures and metrics;
 6. Monitoring: it measures the impact produced by the DHE Program for professionals of the healthcare system at the different governance levels. The Kirkpatrick’s Model, a training evaluation technique, is implemented across all levels and for each DHE initiative and proposes an evaluation scheme on four levels (Reaction, Learning, Behaviour, Impact).
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The Digital Upskilling Life Cycle Model enables the construction of a structured pathway in order to develop digital skills for healthcare professionals, across all levels of government.

Deliverable 05 - Recommendations on EHR 2.0 communication and upskilling actions

This document provides methodological guidance on change management to support Regions for the EHR 2.0 communication and training initiatives. This is obtained through a change management framework and specific adaptations for the implementation of Operational Plans, to enhance digital skills of healthcare professionals.

In order to anticipate possible responses to change process in any organisation and to predict the most common emotional stages among the subjects involved, the main tool used is the Curve of Change. The tool is therefore able to identify the following phases:

- change announcement: the initial transition to the new situation;
- pre-transformation and transformation start: the progressive adaptation to the new situation;
- post-transformation: the full integration of concepts, contents and actions.

The proposed framework has been developed to support organisational transformation processes across three phases:

1. foundation for change: it identifies the aspects affected by the EHR 2.0 adoption, the healthcare professionals involved and their inclination toward change. It also displays the key figures that can sponsor regional training and upskilling initiatives regarding EHR 2.0 and provides suggestions for drafting and sharing the “Change Manifesto”;
2. manage change: it defines the role of the “change agents” and the activities they can carry out to actively promote the change process within their healthcare facility. It also provides suggestions on how to manage resistance during different stages of the Curve of Change;
3. support change: it provides insights for conducting a sentiment analysis to understand and monitor EHR 2.0 perception and adoption at the individual level. It also provides suggestions for the organisation of discussion and analysis sessions related to the change process.

Deliverable 06 - D06 - Action Plan

The main objective of the deliverable of Phase 6 (i.e., the Action Plan) is to make the Digital Health Literacy Strategic Plan deployable and sustainable, providing a set of actions and diagrams defining their causal and temporal interrelations.

Specifically, it envisages a central structure that includes 7 Work Packages (WP), each containing a checklist of actions to be taken to implement the Digital Health Literacy Strategic Plan. The overview of the content of each WP is provided below:

- WP 1 – Promotion, disclosure and engagement of key stakeholders: it provides actions to promote and spread goals and context of the Digital Health Literacy Strategic Plan and to define the engagement methods adopted by the National Federations of Orders for Health Professions;
 - WP 2 – Call to action to key stakeholders: it defines actions in order to issue a call to action towards Regions and National Federations of Orders for Health Professions;
 - WP 3 – Preparation for the experimentation: it describes the actions to form an Experimentation Committee and to create tools to support experimentation (Guidance Matrices, Digital Personas, National experimental digital health education Catalogue);
 - WP 4 – Experimentation: it provides actions to implement: i) the experimentation and the construction of the integrated governance model; ii) the onboarding and training activities for
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those involved in the experimentation; iii) the planning and execution phases of training activities; iv) the short-term monitoring activities; v) the analysis of the outcomes of the experimentation;

- WP 5 – Prototyping: it defines the actions to create a prototype of a governance platform to support the Digital Health Upskilling Program. This is obtained by comparing what it is described within the Feasibility Study for a knowledge management e-platform and what emerged from the experimentation;
- WP 6 – Institutionalisation: it provides actions for the realisation of the institutionalisation process of the Digital Upskilling Lifecycle Model;
- WP 7 – Needs definition: it defines actions to identify the sourcing strategy and to evaluate the amount of resources required.

The Action Plan is additionally enriched by the following three annexes:

- the Network Diagram, which describes the dependencies and logical connections between the actions of the Action Plan;
 - the Gantt chart, which describes the temporal duration dedicated to the implementation of each action over a 10 months' time span;
 - the Roadmap, which provides a wider visual representation, placing the actions related to Action Plan and those for the implementation of the first Digital Upskilling Lifecycle Model, within an overall temporal horizon of 22 months.
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