

Blueprint

  
Digital Health  
Uptake



# Adoption Blueprint for digital health uptake and scale-up

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## INTENDED USE

### Target audience

Digital health developers and innovators from the supply-side that develop digital technologies and who are looking for methods and tools to accelerate the uptake and scale up of digital health tools.

Health and care providers, professionals and managers that are interested in analysing the readiness and maturity of their organisations to adopt digital health solutions and scale them up.

Policy makers and other enablers of digital health that aim to overcome barriers to adoption and generate facilitating context for digital health innovation.

### Objectives of this blueprint

This Blueprint is a practical guide to select and utilize methods and tools throughout the digital health solution lifecycle, from initial uptake to large-scale deployment. The purpose of this Adoption Blueprint is to provide digital health implementers with a practical, structured guide for accelerating the uptake and scaling of digital health solutions within healthcare systems. It is addressed to a wide audience of stakeholders stemming from implementers from the supply side (developers), demand side (healthcare providers and users), and enablers (Standard Development Organizations or policymakers) that might be involved in the implementation of digital health solutions at different stages.

It is based on the DHU framework of methods and tools for digital health implementation that is described in chapter 3 below and composed of 10 categories and 40 methods and tools designed to address implementation challenges and accelerate uptake and scale-up.

Focusing on the critical stages of adoption and scale-up, the blueprint leverages a comprehensive framework of tools and methods to address common implementation challenges, from regulatory compliance and stakeholder engagement to capacity building and value assessment.

### Usage

This blueprint specifies a guideline to identify methods and tools for the uptake and scale-up of digital health solutions based on the situation of the innovator along the implementation process, from end-user uptake to large-scale deployment.

### Further reading

- D4.2 Tools to support digital health solutions implementation and uptake v2:  
[https://digitalhealthuptake.eu/resources/?e-filter-92b9410-resource\\_type=resource-working-paper](https://digitalhealthuptake.eu/resources/?e-filter-92b9410-resource_type=resource-working-paper)

## Understanding digital health implementation phases

Digital health implementation is the process after a digital health product or service has been ideated, prototyped and piloted. The implementation of digital health solutions follows a structured pathway, beginning with **Uptake** and advancing to **Scale-up** and eventually Large-Scale Deployment. Each phase and subphases addresses specific challenges and requires tailored tools and methods to support a smooth transition from initial adoption to widespread use.

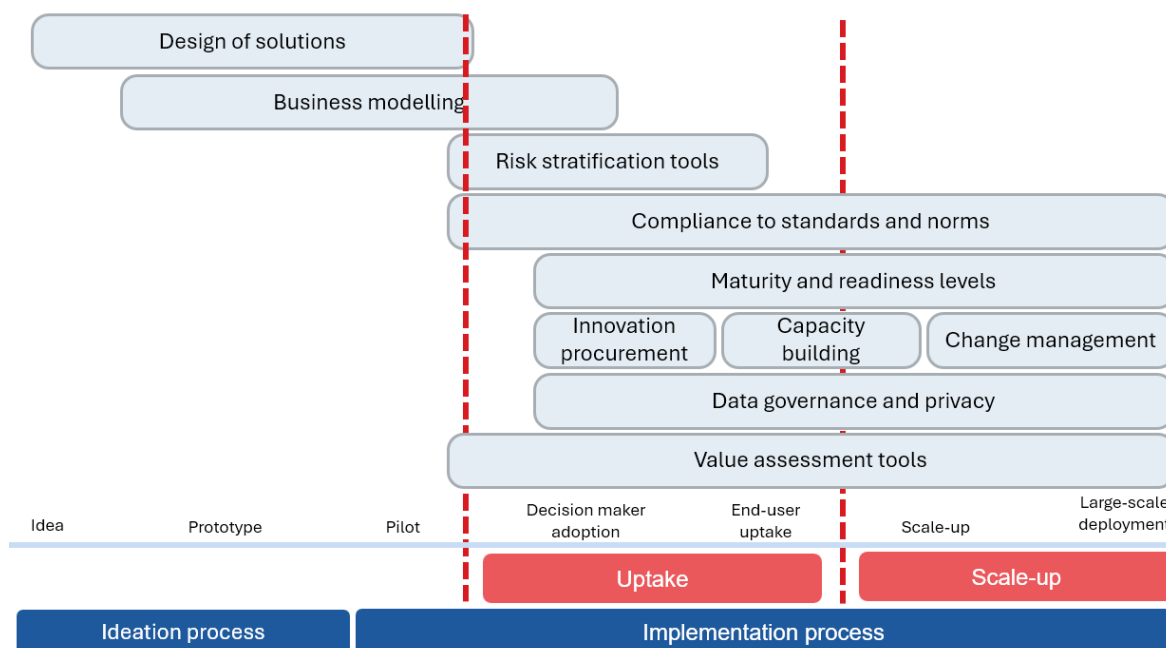
*Phases of the digital health implementation process*

Phases	Subphases	Description
Uptake	<b>Decision maker adoption</b>	Adoption is understood as encompassing the well-designed integration of a digital health practice into an organisation or a regional/national health system as “routine practice” (e.g., integration into clinical workflows). This requires an organisational or system level approval by decision-makers and is influenced by various dimensions such as the regulatory, political, or sociocultural environment, organisational and staff capacities, readiness for change, value propositions, etc.
	<b>End-user uptake</b>	End-user uptake refers to the process of adoption and real-life implementation of a digital health practice across countries, regions or, functionally, by different sectors of care. Uptake of a practice follows a process chain of equally important steps, which, depending on the readiness, can concern knowledge exchange and training of end-users up to partial or full adoption / integration of a solution or a service.
Scale-up	<b>Initial scale-up</b>	Initial scale-up refers to quantitative/horizontal scaling up in terms of extending the reach of a successful digital health practice through expansion and replication. This also requires tackling barriers to large scale implementation, such as stabilising a sustainable funding base for the digital health practice.
	<b>Large-scale deployment</b>	Large-scale deployment is the last phase of the implementation process and consists of expanding the digital health innovation across the entire organization or health system, making the solution available to all potential users.

## DHU framework categories and tool selection

To support the successful implementation and scaling of digital health solutions, the DHU framework offers a structured classification of methods and tools categorized to address key aspects of the uptake and scale-up process. Each category aligns with specific phases and challenges in the implementation journey, providing targeted solutions for developers, healthcare providers, policymakers, and other stakeholders.

*DHU framework of methods and tools for digital health implementation (second version)*



The figure above presents the ten categories in the DHU framework – ranging from design and business modelling to compliance and change management. By navigating these categories, implementers can identify the right tools to facilitate initial adoption, promote end-user engagement, and ensure sustainable expansion of digital health solutions. This structured approach not only simplifies tool selection but also ensures that digital health innovations are deployed efficiently, meeting regulatory standards, aligning with user needs, and contributing to an integrated healthcare ecosystem.

## Guideline for identifying methods and tools for uptaking and scaling-up digital health solutions

This section provides a comprehensive, step-by-step guideline to support digital health implementers throughout the Uptake and Scale-Up phases. Designed to facilitate the journey from initial adoption to broad deployment, this guideline integrates practical methods and tools from the DHU framework, enabling implementers to address common challenges and accelerate the successful integration of digital health solutions.

<b>1</b> <b>Is your solution designed user-centric?</b>  Methodologies and tools used for developing the concept and prototype of a digital health solution taking into consideration end-users needs.	<b>Design thinking</b> <a href="https://designthinking.ideo.com/">https://designthinking.ideo.com/</a>
	<b>User-centred design</b> <a href="https://uxmastery.com/resources/techniques/">https://uxmastery.com/resources/techniques/</a>
	<b>Blueprint Personas</b> <a href="https://blueprint-personas.eu/resources/">https://blueprint-personas.eu/resources/</a>

<b>2</b> <b>Do you have a business model?</b>  A business model describes how an organisation creates, delivers, and captures value, in economic, social, cultural or other contexts. Business modelling is the process of defining or modifying an existing business model.	<b>Business Model Canvas</b> <a href="https://www.strategyzer.com/canvas/business-model-canvas">https://www.strategyzer.com/canvas/business-model-canvas</a>
	<b>Platform Design Tool</b> <a href="https://www.boundaryless.io/pdt-toolkit/">https://www.boundaryless.io/pdt-toolkit/</a>
	<b>Rulebook for a fair data economy</b> <a href="https://www.sitra.fi/en/publications/rulebook-for-a-fair-data-economy/#publication-content">https://www.sitra.fi/en/publications/rulebook-for-a-fair-data-economy/#publication-content</a>
	<b>Value Proposition Canvas</b> <a href="https://www.strategyzer.com/library/the-value-proposition-canvas">https://www.strategyzer.com/library/the-value-proposition-canvas</a>

### 3

#### Have you stratified your population?

Risk stratification tools use data to assign risk levels to patients. Healthcare providers can systematically use patient risk stratification to make care management decisions, such as providing greater access and resources to patients in higher risk levels or deploy digital health solutions targeting a specific patient group.

##### Adjusted Clinical Groups

<https://www.hopkinsacg.org/about-the-acg-system/>

##### Adjusted Morbidity Groups

[https://ics.gencat.cat/ca/detall/noticia/cc\\_gma.html](https://ics.gencat.cat/ca/detall/noticia/cc_gma.html)

##### Adaptive Case Management for digital health transformation

<https://www.healthcircuit.es/>

See DHU video: <https://digitalhealthuptake.eu/trainings/health-circuit-an-adaptive-case-management-approach-for-digital-health-transformation/>

### 4

#### Does your solution comply with standards and norms

Methods and tools to assess and assure the level of conformity with international, European or national standards or regulations such as the Medical Device Regulation or the Artificial Intelligence Act. Risk assessment tools also comprise in this category.

##### mHealth assessment framework

<https://mhealth-hub.org/assessment-frameworks>

##### Digital health assessment technology

<https://orchahealth.com/our-products/digital-health-assessment-technology/>

##### ISO 13485 SaMD

<https://digitalhealthuptake.eu/trainings/preparing-your-company-for-manufacturing-software-as-a-medical-device-samd/>

##### European App Quality Label

<https://label2enable.eu/>

##### EU AI Act Compliance Checker

<https://artificialintelligenceact.eu/assessment/eu-ai-act-compliance-checker/>

##### Assessment List Trustworthy AI

<https://altai.insight-centre.org/Identity/Account/Register>

### 5

#### Have you measured maturity / readiness levels?

Maturity models and readiness levels are tools that organisations use to measure how well their

##### Technology Readiness Levels

[https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014\\_2015/annexes/h2020-wp1415-annex-g-trl\\_en.pdf](https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-g-trl_en.pdf)

##### Service and Business Readiness Levels

<https://www.mdpi.com/1660-4601/18/23/12575>

##### Scirocco Maturity Assessment Tool

<https://www.sciroccoexchange.com/>

business or project are in respect to a sorted gradient of maturity.

**Momentum Telemedicine**  
<http://telemedicine-momentum.eu/>

**IN-4-AHA Scale-up Model**  
<https://innovation4ageing.tehropol.ee/scale-up-model/>

**Telemedicine Community Readiness Level**  
[http://care4saxony.de/?page\\_id=3840](http://care4saxony.de/?page_id=3840)

**HIMSS Maturity Models**  
<https://www.himss.org/what-we-do-solutions/digital-health-transformation/maturity-models>

**Integrated Business Readiness Assessment Framework**  
<https://digitalhealthuptake.eu/radar-repository/nsb-ibr-nsb-integrated-business-readiness-assessment-framework/>

**Innovation Readiness Framework**  
<https://digitalhealthuptake.eu/radar-repository/a-innovation-readiness-framework-that-helps-projects-baseline-and-understand-the-activities-and-journey-to-scale/>

**Innovation Profile of Health Organisation**  
<https://digitalhealthuptake.eu/trainings/inpho-assessment-of-innovation-profile-of-a-health-organization-and-strategic-planning-for-digital-health-adoption/>

**Open Digital Maturity Assessment**  
<https://european-digital-innovation-hubs.ec.europa.eu/open-dma>

**INFRAM**  
<https://www.himss.org/maturity-models/infram/>

**THCS Transferability and Implementation Framework**  
<https://www.thcspartnership.eu/thcs/pillars-and-work-packages.kl>

## 6

**Is procurement of your digital health solution secured?**

Methods and tools designed to support the sourcing, selection, and acquisition of innovative digital health technologies.

**Procure4Health**  
<https://procure4health.eu/resources/>

## 7

**Are your end-users skilled for adoption?**

Strategies and programs aimed at strengthening organizational and workforce capabilities to support digital health initiatives. This includes building knowledge infrastructure, enhancing knowledge and skills, and fostering resilience to manage and sustain digital health innovations effectively.

**BeWell Skills Monitor**  
<https://bewell-project.eu/trainings/>

8

**Do you have a change management plan?**

Methods and tools designed to facilitate smooth transitions during the implementation of digital health solutions. Includes frameworks and strategies that address resistance, engage stakeholders, and promote sustainable adoption of new technologies and processes in healthcare settings.

**Framework of factor for Digital Therapeutics**

<https://digitalhealthuptake.eu/radar-repository/framework-of-factors-that-affect-the-uptake-of-digital-therapeutics-within-health-systems/>

**4-Wheel Framework for adoption of Person-centred technology in integrated care**

<https://digitalhealthuptake.eu/radar-repository/the-4-wheel-framework-model-towards-a-model-for-the-adoption-of-person-centred-technology-in-integrated-care/>

**Crisis communication applied to digitalisation**

<https://digitalhealthuptake.eu/trainings/crisis-communication-applied-to-digitalization-basic-concepts-and-implementation/>

**ItFits Toolkit**

<https://global.itfits-toolkit.com/>

9

**Do you collect patient-generated health data?**

Frameworks and tools focused on the secure and ethical management of patient data within digital health solutions.

**Patient-generated health data trust canvas**

<https://trustedhealthdata.web.app/canvas>

10

**Have you assessed the value of the digital health intervention?**

Methodologies to evaluate and compare the costs and consequences of two or more alternatives of care. Consequences include measures of effectiveness, utility or benefit.

**MAFEIP**

<https://tool.mafeip.eu/overview/>

**ASSIST**

<https://assist.empirica.de/toolkit/>

**MAST**

<https://joinup.ec.europa.eu/sites/default/files/document/2014-12/The%20Model%20for%20Assessment%20of%20Telemedicine%20%28MAST%29%20Manual.pdf>

**ASSESS DHT and EDIHTA**

<https://assess-dht.eu/> ; <https://edihta-project.eu/>

By following this guideline, implementers can navigate each stage, leveraging targeted methods and tools to enhance effectiveness, monitor progress, and respond to evolving needs within healthcare environments.

The successful implementation and scale-up of digital health solutions requires a structured, phased approach and careful consideration of the diverse needs and challenges that arise along the way. This Adoption Blueprint, supported by the DHU framework of methods and tools, provides implementers with a detailed guideline to facilitate both the Uptake and Scale-Up phases, ensuring that solutions are not only adopted but also integrated sustainably and effectively across healthcare settings. By leveraging category-specific tools and tailoring strategies to local contexts, digital health implementers can enhance user acceptance, achieve regulatory compliance, and optimize resource allocation—key elements that contribute to the long-term success of digital health solutions.

Looking ahead, the DHU framework remains a living resource, adaptable to emerging digital health innovations and evolving policy landscapes. As healthcare systems continue to prioritize digital transformation, implementers are encouraged to stay engaged with new developments in the DHU Radar and knowledge-sharing initiatives. Continued monitoring, iterative feedback, and collaboration across stakeholders will be essential to address new challenges, refine deployment strategies, and ensure that digital health solutions deliver impactful, sustainable benefits to patients, providers, and health systems alike.