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Digital Public Health
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DiPH

Developing and Assessing Digital Public Health Interventions: A Comprehensive Framework

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We welcome feedback. Please contact us: framework@lsc-digital-public-health.de

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About this framework

Purpose and scope of the framework

Public Health aims to promote and enhance the health status of individuals and communities through collective societal efforts. Recently, several digital technologies have emerged, pursuing the same goal, developing a novel concept: Digital Public Health. Given the rapidly increasing number of health-related digital technologies, a systematic framework is necessary to assess their values from a public health perspective.

The present framework aims to assist developers, evaluators, policymakers and researchers in the systematic development and evaluation of digital public health interventions in public health by providing a comprehensive overview of criteria to assess digital public health interventions.

The framework comprises a set of criteria framed as open-ended questions clustered within domains that will lead interested parties through a broad spectrum of crucial elements when developing and evaluating digital public health interventions.

In total, it consists of 210 questions, structured by 13 domains: 1) Health Conditions and Current Public Health Interventions, 2) Functionality of the Health Technologies, 3) Software Properties, 4) Human-Computer Interaction, 5) Infrastructure and Organization, 6) Implementation 7) Health-related Effects, 8) Social, Cultural and Gender Aspects, 9) Cost and Economics, 10) Legal and Regulatory, 11) Ethics, 12) Data Security and Data Protection, and 13) Sustainability.

Added value of this framework

Currently, there are frameworks that systematically assess the use of health-related technologies such as the Health Technology Assessment Core Model (Lampe et al. 2009, EUnetHTA 2016), frameworks on digital health (without considering specifically public health) and frameworks on public health. Given the rapidly increasing digital technologies designed for public health interventions, a framework for digital public health interventions is deemed necessary. The current framework aims to be comprehensive; therefore, users need not draw on multiple frameworks for their assessments. Among others it considers technical aspects as well as e.g. issues around implementation, ethics or data security.

How to use this framework

Each criterion in the framework is framed as a question. Users are encouraged to apply these questions to the digital public health intervention they want to develop and assess. Not all questions will be equally important or pertinent for all interventions, and some may not be applicable. There may not be any robust evidence available to answer the question or no available information at all.

The framework does not provide methodologies related to the questions. For some questions, it might be enough to use common sense; for others, specialist expertise may be necessary.

For an intervention under development, a first orientation might be enough to understand if it is worth continuing along the determined path or if adjustments might be necessary.

In summary, the application of the framework is primarily user-led. At a minimum, it can serve as a checklist that helps avoid overlooking key issues with relevance to the performance of the intervention.

How this framework was developed

The proposed framework is the result of a three-step process. First, a scoping review was conducted to identify existing Public Health and Digital Health frameworks for developing and evaluating health interventions in primary prevention and health promotion and their assessment criteria (OSF scoping review protocol registration: https://osf.io/ku38m/). Second, all assessment criteria collected from the scoping review were analysed and mapped into domains based on the structure of the Health Technology Assessment (HTA) Core Model (Lampe et al. 2009; EUnetHTA, 2016). Finally, multidisciplinary Digital Public Health experts from the LSC were invited to a scientific consensus meeting to discuss and validate each framework domain.

The information sources for the scoping review included articles published in scientific journals. Journal articles were identified using the electronic literature search function of international bibliographic databases alongside the manual search of relevant reviews' reference lists. The electronic bibliographic databases used for the literature search were MEDLINE (via PubMed), Scopus, IEEE, CINAHL (via EBSCO) and PsycINFO (via Ovid). The search syntax in the bibliographic databases included the following basic keywords, specific search fields, and Boolean operators: ("Public Health" [Title/Abstract] OR "Digital Health" [Title/Abstract]) AND Evaluation [Title] AND Framework [Title]. The search syntax included synonyms and the most relevant subject terms of our primary keywords in each concept. A truncated term with the wildcard character was used when appropriate to maximize sensitivity while striving for reasonable precision. The final search was executed on the 12th of April 2022 with no language or publication date limitations.

The inclusion criteria included English-written journal articles, reports or thesis that depicted a descriptive framework. The aim of the frameworks had to be to develop, monitor, validate, evaluate, or implement interventions related to public health or digital health, focusing on primary prevention or health promotion at a population level. A total of 9,011 articles were identified after searching in the databases. After deduplication, 4,830 titles and abstracts were screened by two researchers independently. Following, 433 full texts were assessed by two independent researchers for potential extraction. Disagreements between the two researchers at both stages were discussed among them. If no agreement was achieved, a third researcher was involved in making a conclusive decision. After the full-text screening, 68 articles were included for data extraction.

Data from all 68 articles were extracted, specifically including the framework criteria and sub-criteria. These were inductively analysed as a first step into clustered domains suggested by the EUnetHTA Health Technology Assessment (HTA) Core Model (Lampe et al. 2009, EUnetHTA 2016). The multidisciplinary experts from the Leibniz Science Campus (LSC) were assigned to domains to which they conferred and restructured according to specific characteristics of digital public health interventions. Where necessary additional literature was consulted.

A first version of the framework was sent to a multidisciplinary expert panel consisting of 105 members of the LSC. They were invited to give written feedback and to participate in an online scientific consensus meeting to discuss and validate each domain of the framework. A total of 25 members participated in the meeting on the 19th of July 2022.

Current status of this framework and outlook

As the field of Digital Public Health is rapidly evolving, the framework has been designed as a living framework. In the coming months, it will be applied and tested on a heterogeneous set of digital public health interventions. As this occurs, additional literature will be integrated, and experts beyond the LSC will be consulted.

How you can participate

If you find items missing, questions difficult to understand or operationalize or if you have applied the framework and would like to share your experiences, we are very keen to hear from you. Also, if you are interested in participating as an expert in the external consensus meeting, contact us with your expertise and a brief overview of your area of interest.

In these cases, or if there is other relevant feedback, please send an e-mail to: framework@lsc-digital-public-health.de

Overview of the Framework

Health Conditions and Current Public Health Interventions

This domain involves background information for the digital public health intervention describing the population, the conditions and the observance of health inequities. Furthermore, this domain addresses current public health interventions and common alternatives.

Health Conditions and Current Public Health Interventions	
Population	Who is the target population of the digital public health intervention?
	How many people are affected by the target disease, health conditions or health behavior?
	What are the health-related needs and priorities of the target population?
	What are the relevant settings for the population?
	What are the properties of the target population regarding digital literacy?
Conditions	What conditions (disease, health conditions or health behavior) are addressed in the digital public health intervention (basic epidemiological assessment)?
	What are the relevant determinants of health for the conditions?
	What strength of association rating (at least in order) between the determinant(s) and health conditions are there, and what is the quality of the evidence?
	What is the impact of the health conditions on society?

Health Inequities	Are disadvantaged groups identified (e.g., according to PROGRESS-Plus)?
	How are health inequities quantified or otherwise described?
Current Public Health Interventions	What is the current management of the health conditions in this setting?
	What are common alternative public health interventions?
	Is there effectiveness evidence from alternative public health interventions?

Functionality of the Health Technologies

The health technology or a sequence of health technologies in the digital public health intervention (i.e., digital tools applied in the intervention, e.g., health app, wearable device, or social media platform) can be assessed from different perspectives in three closely related domains, i.e., the functionality of the health technologies, the software properties, and the human-computer interaction. In the "Functionality of the Health Technologies" domain we describe the health technology features and the applied intervention design within the digital public health intervention. Additionally, this domain includes the intervention evidence bases for primary prevention and health promotion that should be addressed during the development and evaluation.

The functionality of the Health Technologies	
Features	What is this health technology (or technologies)?
	What is the claimed benefit of using this health technology (or technologies)?
	What are the functions offered by this health technology (or technologies)?
Intervention Design	Who is the subject of the digital public health intervention?
	Who administers the health technologies in the digital public health intervention?
	What is the goal of the digital public health intervention?
	What is the control or comparison intervention (e.g., active control: a different type of health technology for the intervention; passive control: standard care) to this digital public health intervention?

	Does this health technology's functions support reaching the goal of the intervention?
	What are the components of the digital public health intervention (e.g., behavior change techniques, consultation, education, supervision, reminders, and regulations) and execution of intervention (timing and duration, dose and intensity)?

Software Properties

The health technology or a sequence of health technologies in the digital public health intervention (i.e., digital tools applied in the intervention, e.g., health app, wearable device, or social media platform) can be assessed from different perspectives in three closely related domains, i.e., the functionality of the health technologies, the software properties, and the human-computer interaction. In the "Software Properties" domain, we focus on the software properties for health technologies used in digital public health intervention.

Software Properties	
Launch	When was it developed and introduced?
	What is the phase of development and implementation of the software?
Update	When was the last update?
	What is the oldest supported version?
Rating	How is the software rated (e.g., on the Apple store/ Google play store)?
Provider	Who is the provider of this software? (e.g. government, for-profit company, not-for-profit-company, trusted healthcare institution, academic institution)

Interoperability	To what extent is the software interoperable and standardized?
	How is interoperability considered in the development and implementation process?
	To what extent do users have the ability to move across different platforms (mobile and desktop) while maintaining profile preferences and information?
Data Integration	Does the software share data with other apps, networks, and medical record systems?
	Does the software integrate data from other sources such as medical record systems?
Open Source	Is this software open source?
	Which range of different open sources does the software support?
Stability	How often does the software crash?
Internet Connectivity	Does the software require an internet connection, or is there an offline/native platform?
	If the internet is required, is broadband internet needed, or are there options for slow connections?
	To what extent does the software require data usage?
	Does the software describe steps taken to minimize data usage burden for users (e.g., offline mode, limiting video/images)?

Human-Computer Interaction

The health technology or a sequence of health technologies in the digital public health intervention (i.e., digital tools applied in the intervention, e.g., health app, wearable device, or social media platform) can be assessed from different perspectives in three closely related domains, i.e., the functionality of the health technologies, the software properties, and the human-computer interaction. In the "Human-Computer Interaction" domain, we investigate the user's perspective, quality attribute of the design, and human-computer interaction of the health technologies applied in the digital public health intervention for prevention and health promotion.

Human-Computer Interaction	
Accessibility	How accessible is the health technology (e.g., technically/economically/in terms of literacy)?
	How many and which accessibility features (such as adjusting text size, text to voice, or color-blind color scheme adjuster) are provided?
Languages	Are the health technology and digital public health intervention available in relevant languages?
	Do the health technology and intervention provide easy language (for literacy) or an option for people who can´t read?
User-friendliness	How is user-friendliness considered in the development and implementation process (e.g., Nielson's 10 heuristic guidelines)?
	How does the health technology respond to users´ needs?
	How can the health technology be tailored according to users´ needs?

	How can the health technologies be adapted to suit local, cultural, or social needs?
Usability	How is usability considered in the development and implementation process (e.g., Nielson's 10 heuristic guidelines)?
	Was the usability and user experience of the current design assessed (e.g., with SUS, MeCUE, UMUX)?
	How easy is it for users to accomplish basic tasks the first time they encounter the design?
	Once users have learned the design, how quickly can they perform tasks?
	How many errors do users make, how severe are these errors, and how easily can they recover from the errors?
	How pleasant is it to use the design?
Co-creation and Empowerment	To what extent and how are potential end users involved in developing the digital public health intervention?
	To what extent and how are different stakeholders involved in developing the digital public health intervention?
	How does the health technology support users´ empowerment?
Credibility & Trustfulness	How are the data security and claimed benefits of the health technology being addressed and communicated to the users?

Feasibility	Can the health technology be tested under real conditions (e.g., during a pilot study)?
Design Quality	Does the technology meet common design requirements (e.g., verified by design tests)?

Infrastructure and Organization

This domain considers the structure of the setting in which the digital public health intervention is developed and implemented as well as the stakeholders that are involved in the development and implementation.

Infrastructure and Organization	
Structure of the Setting	Which are the barriers and facilitators of the setting where the digital public health intervention is implemented (i.e., political structure, distribution of power, budget allocation, health system structure, digital health strategy, market situation)?
	Which aspects of the setting interact with the development and implementation of the digital public health intervention?
	Is the digital public health intervention flexible to suit local, cultural, or social needs?
Infrastructure	Which physical infrastructures are necessary for implementing the digital public health intervention (e.g., table, rooms, office material)?
	Which digital infrastructures are necessary for implementing the digital public health intervention (e.g., hardware, computer, mobile phones, Wi-Fi)?
	Which human resources are necessary for implementing the digital public health intervention?
Inter-organizational Relationship	Which stakeholders are involved in the development, monitoring, implementation, validation and evaluation of the digital public health intervention?
	Which capabilities (e.g., funds, human resources or skills) are required among stakeholders (e.g., governments, professionals, local agencies, local communities, health professionals, health providers) to develop and implement the digital public health intervention in this setting?

	What is the nature of the relationship between stakeholders (e.g., dependency, power structure, intensity of connection)?
	How is the communication between stakeholders (e.g., regularity, intensity, mechanisms for conflict management)?
	What are the established mechanisms for conflict management and resolution among stakeholders?
	How is the training provided among stakeholders for the appropriate use of technology?
	Which is the degree of alignment between stakeholders (e.g., shared vision, common goals, mutual acceptance)?
Health System Interaction	How is the willingness to learn at the health facility ensured?
	How does the digital public health intervention impact the management and organization of the health system?
	How does the digital public health intervention impact the efficiency of the health system?
	How does the digital public health intervention impact the user's utilization of the health system?

Implementation

This domain signifies each element of the intervention implementation (i.e., implementation theory, implementation structure, implementation process, implementation outcome, and implementation difficulties) of the digital public health intervention in primary prevention and health promotion.

Implementation	
Implementation Theory	Which theoretical underpinning guides the implementation?
	How does this theory interact with the setting and the context?
	How does this theory interact with the digital public health intervention?
Implementation Structure	What kind of relevant material investments are needed to implement the intervention?
	What kind of premises are needed to implement the intervention?
	What kind of equipment and supplies are needed to implement the intervention?
	What kind of data, records, or registry is needed to monitor the implement the intervention?
	What kind of requirements in terms of qualification and quality assurance processes are needed for the implementation and maintenance of the intervention?
	What kinds of skills, training characteristics and information are needed for the personnel to implement the intervention?

	What kind of training resources and information should be provided to the intervention subject or their family?
	What information about the intervention should be provided to other subjects outside the target group and to the general public?
Implementation Process	Which stages of the implementation process are passed through during implementation?
	How does the implementation process interact with the setting and the context?
	How does the implementation process interact with the digital public health intervention?
Implementation Strategy	Which implementation strategies are employed during implementation?
	How do these implementation strategies interact with the setting and the context?
	How do these implementation strategies interact with the digital public health intervention?
Implementation Agent	Which implementation agents are involved in the implementation effort?
	How do these implementation agents interact with the setting and the context?
	How do these implementation agents interact with the digital public health intervention?
Implementation Outcome	Which implementation outcomes are reported?
	How do these implementation outcomes interact with the intervention outcomes?

Complexity (Practical Implementation Difficulties)	How complex are the implementation difficulties (e.g., duration, scope, disruptivity, centrality, complexity, and the number of steps required)?

Health-related Effects

This domain considers the **positive and negative intended and unintended consequences** of the digital public health intervention on **physical, mental, and social health, quality of life, well-being, and the knowledge, beliefs, and behavior** of individuals and the population in the short, intermediate and long term.

Health-related Effects	
Mortality	To what extent does the digital public health intervention impact mortality?
Effects on Health	To what extent does the digital public health intervention impact the physical, mental, and social health of the individual and the population?
Function	To what extent does the digital public health intervention impact functioning (e.g., ability to work, daily life activities, autonomy)?
Quality of Life and Well-being	To what extent does the digital public health intervention impact the general quality of life?
	To what extent does the digital public health intervention impact the specific quality of life?
	To what extent does the digital public health intervention impact the physical, mental, and social well-being?

Knowledge and Behavior Change	Which theory or behavioral framework was used for intervention development?
	How does the digital public health intervention affect knowledge?
	How does the digital public health intervention affect beliefs (e.g., outcome expectancies)?
	How does the digital public health intervention affect attitude(s)?
	How does the digital public health intervention affect skills or competencies?
	How does the digital public health intervention affect capabilities?
	How does the digital public health intervention affect motivation?
	How does the digital public health intervention affect opportunities?
	How does the digital public health intervention affect behavior?

Social, Cultural and Gender Aspects

This domain analyses the social, cultural, and gender aspects related to societies, communities, and groups of people, e.g., ethnic groups, demographic groups, people sharing the same neighbourhood, interests, or a specific physical or mental condition.

Social, Cultural and Gender Aspects	
Context/Setting	In which context/which type of setting is the digital public health intervention supposed to be employed?
Social and Societal Impact	How will the digital public health intervention affect societal and cultural values, attitudes, norms and perspectives?
Impact on Societal Groups	How will the digital public health intervention affect different societal groups and their relationships with each other?
Impact Related to Gender	How will the digital public health intervention impact on different gender?
Socio-cultural Acceptability	How is the digital public health intervention in accordance with societal and cultural values, attitudes, norms and perspectives of the intended population?
Social Sustainability	How does the digital public health intervention support social cohesion?
	How is the digital public health intervention building social capital?
	How is the digital public health intervention and its effects socially sustainable?

Community Capacity	Which factors in the society/community are relevant for the digital public health intervention implementation?
	Who are the potential stakeholders that will be involved?
	Is there a political will for the development/implementation of the digital public health intervention?
Community Participation	How is the society/are communities involved in the development and implementation of the digital public health intervention?

Cost and Economics

This domain assesses digital public health interventions with regard to the question of whether they can be considered a rational use of scarce resources.

Cost and Economics	
Prior to the Economic Assessment	Which relevant costs and effects can be identified?
	For which payer are these costs and effects relevant? (e.g., private individuals, health care reimbursement agencies, or public entities with other/additional considerations than health)
	What are the payer's decision criteria and corresponding requirements for health economic evaluation? (e.g., individuals might acquire the intervention for aesthetic reasons or other personal considerations; health care reimbursement agencies are typically interested in health gains; other public policymakers may consider other/further aspects such as education or community building)
Economic Evaluation Methods Potentially Relevant	What is the cost of the targeted disease (cost of illness analysis)?
	How cost-effective is the digital public health intervention in relation to: ▪ individual considerations of added value (no formal evaluation necessary but individual evaluation of costs vs. willingness to pay)

	▪ specific health endpoints (cost-effectiveness analysis, of particular relevance if different interventions with similar clinical outcomes are compared) ▪ generic health endpoints (cost-utility analysis, of particular relevance if the digital public health interventions are assessed against other uses of scarce healthcare and public health resources) ▪ social willingness to pay (cost-benefit-analysis, of particular relevance if various benefits are relevant and acquisition of the digital public health intervention can or should not be left to private decisions and budgets)?
	What is the total cost of implementing the digital public health intervention over time (budget impact analysis)?

Legal and Regulatory

This domain generates awareness about which areas of law have to be taken into account when developing or evaluating digital public health interventions. It is *not* the purpose of the domain to pose every specific legal question that has to be answered in order to develop or evaluate digital public health interventions. Since laws differ from country to country, the domain helps to detect fields of law and typical problems in these fields that could be relevant for developers and evaluators. The applicable law and its requirements depend on the country.

Legal and Regulatory	
Data Protection	What are the requirements of international or national data protection law?
	What do international or national laws require for the information of users in regard to data processing?
	What do international or national laws require for consenting to data processing?
	Are international or national laws imposing specific safeguards for processing sensitive health data?
	Is data transferred to other countries or/and third parties and what are the requirements for this?
	Is there international or national regulation on specific user rights (e.g., erasure of personal data)?
	Which international or national requirements exist for automatic decisions (e.g., AI)?
Data Security	Are there national or international requirements (e.g., appropriate technical and organizational measures or provisions for risk management) for data security?

Consumer Protection	Are there special information duties of national or international consumer law?
Medical (Device)	What are the requirements of national or international medical device regulation?
	Is there an international or national regulation that the intervention has to comply with in order to access the market (e.g., medical device regulation and CE marking)?
	What do international or national medical laws require for medical information duties?
Health System Financing	Is there a national law to reimburse digital public health interventions in a country and what are the requirements?

Ethics

This domain addresses the threats, risks and dangers to ethical values that may result from the use of digital public health intervention. The following categorization of ethical principles is based on the influential 'Principles of Biomedical Ethics' by Tom L. Beauchamp and James F. Childress.

Ethical Analysis	
Autonomy	Does the digital public health intervention have a positive or negative impact on freedom of choice?
	Does the digital public health intervention promote health literacy in the target population?
	Does the digital public health intervention adequately respect the privacy of the target population?
	Are there alternatives to the digital public health intervention that the target population can choose?
	Does public access to information about the digital public health intervention promote informed decision-making and transparency about the intervention?
	Are the transparency and explainability regarding technologies used for decision-making ensured?
	Is there an institution to which target subjects or groups of the digital public health intervention can turn with concerns?
	Can individuals drop out of the digital public health intervention, or is coercion being applied?

	Is there a way for individuals to opt out of participating in the digital public health intervention?
Harm/non-maleficence	Is the digital public health intervention harmful to the target population?
	Is the digital public health intervention featured by functionality, safety, and low error susceptibility?
	Is the digital public health intervention characterized by sufficient data security measures?
	Can accountability be assigned in cases of harm?
	Are third parties outside the target population potentially affected/harmed by the digital public health intervention?
	Is the digital public health intervention harmful to the environment?
	Is research being conducted to replace the digital public health intervention with lower harms and risks?
Beneficence	Is the digital public health intervention beneficial for the target population?
	Does the measured beneficence align with the goals of the digital public health intervention?
	What is the proportion between the benefits and the potential harms and risks?

Justice	Does the digital public health intervention help address local, regional, and global health inequities?
	Are the benefits, harms and risks of the digital public health intervention equitably distributed in the target population?
	Does the digital public health intervention discriminate against particular segments of the target population?
	Is non-discriminatory access to digital public health intervention available?
	Are vulnerable groups protected to a distinctive measure?
	How is the impact on future generations considered?
	Did a fair and legitimate decision-making process precede the digital public health intervention?

Data Security and Data Protection

This domain provides information relating to data security and data protection. Data security focuses on the technological protection of data and therefore combines the aspects of data confidentiality, data integrity, data authenticity, data availability and data controllability. Data protection relates to the question of whether it is allowed to process personal data.

Data Security and Data Protection	
Data Confidentiality	Are stored or transmitted data protected from unauthorized access (e.g., through encryption)?
	Are user authentication and identification complemented in combination with authorization for access?
	Who has access rights?
	Is there a classification of documents in combination with rules for handling documents from a class, (e.g., classification of all documents into classes i.e., “Internal use only", "Confidential", "Secret" and "Top Secret")?
Data Integrity	Have cryptographic measures been taken (e.g., message authentication code, digital signature)?
	Is remote downloading of programs done from a secure system (e.g., a specially secured secure server)?
	Are there access controls assigned to computers, data carriers and data lines? Is there assignment of rights?
Data Authenticity	Is there a digital signature as proof of the authenticity of a document and its unambiguous assignment to the signatory by means of a digital certificate?

	Do measures exist for the authentication of computers, programs, users and data?
Data Availability	Do measures exist for physical data protection?
	Do measures exist for error detection and correction?
	Do redundant systems or system components exist?
	Are security copies made for the fast recovery of destroyed data (backup)?
	Is there protection against automated attacks by botnets?
Data Controllability	Is there a logging process?
	Is compliance technically ensured?
	Are there standards or certifications for IT security that could be fulfilled?
Data Protection	Is data processed lawfully, fairly and in a transparent manner in relation to the data subject?
	Is data collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes (purpose limitation)?
	Is data processing limited to what is necessary in relation to the purposes of data processing (data minimisation)?
	Is data kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed (storage limitation)?

	How is informed consent regarding data processing guaranteed (consider specifically minors and vulnerable groups)?
	Is there appropriate information for the users regarding data processing?
	Are there specific safeguards for processing sensitive health data?
	Are there specific measures to protect users against biased automatic decisions (e.g., decisions based on AI)?
	Is data transferred to third parties and does this data processing take place lawfully?
	Is data transferred to other countries and does this data processing take place lawfully?
	Are there specific rights for users regarding data processing that have to be implemented such as the erasure of personal data?

Sustainability

This domain accounts for long-term impacts of digital public health interventions on an environmental, social and economic level.

Sustainability	
Environmental Sustainability	Which are the resources needed to develop and maintain the digital public health intervention?
	Which are the strategies for the CO2 impact reduction or mitigation used in the digital public health intervention?
	What are the strategies for guaranteeing the enhancement of the environment throughout the digital public health intervention?
Social Sustainability	How is the principle of social justice respected along the different phases of the digital public health intervention (e.g., development, monitoring, validation, implementation and evaluation)?
	How is the satisfaction of the different stakeholders involved in the digital public health intervention measured (e.g., the continuity of the intervention can be better assured when stakeholders are satisfied with the intervention and its outcomes)?
	How is the digital public health intervention building human and social capital in the long-term perspective (e.g., knowledge, education, culture, etc.)?
	Which are the unintended social impacts of the digital public health intervention?

Economic Sustainability	How and by whom is the financing of the digital public health intervention continuity assured?
	What are the cost-benefit effects of the digital public health intervention for future generations (e.g., is the intervention financially burdening the upcoming generations)?

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