# D2.5

# Report on the first Programme Level Cooperation meeting

## APRE – AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA

## (VERSION 2.0, 22/09/2021)

| | |
|---|---|
| **Project acronym:** | **IDIH** |
| Project title | International Digital Health Cooperation for Preventive, Integrated, Independent and Inclusive Living |
| Thematic priority | SC1-HCC-03-2018 |
| Type of action | Coordination and Support Action (CSA) |
| Deliverable number and title: | D2.5 - Report on the first Programme Level Cooperation meeting |
| Due date: | 30/06/2021 |
| Submission date: | 30/06/2021 |
| Start date of project: | 01/05/2019 |
| Duration of project (end date): | 36 months (30/04/2022) |
| Organisation responsible of deliverable: | APRE – Agenzia per la Promozione della Ricerca Europea |
| Version: | 2.0 |
| Status: | Final |
| Author name(s): | Mathilde De Bonis, Martina De Sole (APRE) |
| Reviewer(s): | Kristin Dallinger (S2i) |
| Type: | ☒ R – Report<br>☐ O - Other<br>☐ E – Ethics |
| Dissemination level: | ☒ PU – Public<br>☐ CO – Confidential, only for members of the consortium (including the Commission) |

| Revision History | | | |
|---|---|---|---|
| **Version** | **Date** | **Modified by** | **Comments** |
| 0.1 | 04/05/2021 | APRE | Table of Contents (ToC) drafted and discussed with Consortium |
| 0.2 | 06/05/2021 | S2i | Comments to ToC integrated |
| 1.0 | 31/05/2021<br>30/06/2021 | APRE, S2i | Output of 1st PLC & background information included, final review and finalization. |

| 1.1 | 20/09/2021 | Internal/External experts | Contents validation finalized: internal (Steering Committee) and external (Chairs of the Experts Groups and 1st PLC attendees). |
|-----|-----------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 2.0 | 22/09/2021 | APRE, S2i | Final editing |

## Abstract

As a first exploratory meeting among policy makers in IDIH, the 1st PLC (Programme Level Cooperation) meeting – held online on May 27, 2021 – has gathered the most relevant Funding Agencies in the field of Digital Health for Active and Healthy Ageing (AHA) in the EU and in the IDIH Strategic Countries. An international policy dialogue has started, thus, around the priorities identified as suitable for international cooperation by the IDIH Experts and presented by the Experts Groups Chairs in the opening session of the meeting. Policy makers provided, then, their feedback and exchanged on the current national/regional policies for Digital Health & Ageing, also pointed out their fields of interest, towards the future enhancement of international cooperation in these domains.

## Keywords

Digital Health, Active and Healthy Ageing, Policy, International Cooperation, Funding

## Disclaimer

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 826092.

3

# Contents

# List of Figures

# Abbreviations and Acronyms

| Abbreviation, Acronym | Description |
| --- | --- |
| ADRC | Alzheimer's Disease Research Centers (NIH/NIA – USA) |
| AHA | Active and Healthy Ageing |
| AI | Artificial Intelligence |
| APRE | Agenzia per la Promozione della Ricerca Europea (project partner) |
| ATC | Athens Technology Center S.A. (project partner) |
| CIHR | Canadian Institutes of Health Research (project partner) |
| DG | Directorate General (European Commission) |
| EC | European Commission |
| EEAS | European External Action Service |
| EG | Expert Group |
| EU | European Union |
| GSBC | Global SMEs Business Council (project partner) |
| Catalyst | Catalyst @ Health 2.0 (project partner) |
| G.A.C. | G.A.C Group (project partner) |
| HCP | Health Care Professionals |
| ICT | Information, Communication and Technology |
| IDIH | International Digital Health Cooperation for Preventive, Integrated, Independent and Inclusive Living (full project title) |
| IoT | Internet of Things |
| NGI | Next Generation Internet |
| NIA | National Institute on Aging (USA) |
| NIH | National Institutes of Health (USA) |
| PLC | Programme Level Cooperation |
| SAWARABI | Sawarabi Group (project partner) |
| SPS | School of Pharmaceutical Science Tsinghua University (project partner) |
| S2i | Steinbeis 2i GmbH (project partner) |
| UCG | Users Consultation Group |
| WP | Work Package (of a project) |

# Executive Summary

This document summarises the **1st meeting of the Programme Level Cooperation (PLC) held online on May 27, 2021 as part of IDIH** - International Digital Health Cooperation for Preventive, Integrated, Independent and Inclusive Living – a project funded under the European Union Horizon 2020 Research and Innovation Programme.

IDIH's objective is to foster collaboration in the field of digital health for Active and Healthy Ageing (AHA) between the European Union and five Strategic Partner Countries (USA, Canada, China, Japan, and South Korea). To do so, it focuses on four key areas that embrace common priorities of all countries/regions involved: *Preventive care, Integrated care, Independent and Connected living, and Inclusive living.*

By establishing a Digital Health Transformation Forum, an expert-driven and long-lasting umbrella mechanism to support the IDIH objective in these fields, **the project incorporates society, technology and industry with policy frameworks to support the development of joint activities in digital transformation of health and care for older people**.

This first PLC meeting, as an exploratory meeting amongst the policy makers engaged within the project so far[1], has started **an international policy dialogue around digital health for Active and Healthy Aging (AHA)**, based on the priorities identified as suitable for international cooperation in these domains by the IDIH Expert Forum.

The aim and role of PLC in the project, as well as its implementation methodology, are part of the first part of this document, as **background information** for this Report. The **proceedings** of the PLC meeting, then, are included in the second part, reporting on the participants and their interventions, as part of the three main sessions of the meeting:

- Session 1: Presentation by the Rapporteurs of the IDIH Experts Groups
- Session 2: Q&A with the IDIH Experts
- Session 3: Open Discussion

The Report ends with **conclusions**, based on the meeting's discussions as well as feedback from the attending policy makers, that outline next steps for the further engagement of policy makers , towards IDIH's goal of enhancing international cooperation in digital health for AHA.

---

[1] The IDIH project has reached and engaged four Funding Agencies dealing with digital health for AHA, coming from four different strategic countries/regions: EU, Canada, USA, Japan. Furthermore, contacts have been established during the project also with relevant policy makers from China and South Korea. Only representatives from the Japanese Agencies didn't attend the 1st PLC meeting due to unexpected events. To know more about the participants in the 1st PLC meeting, consult section 2.3.

# 1 Background Information

## 1.1 Rationale of the Programme Level Cooperation meeting

The purpose of the IDIH project is to **promote and increase international cooperation to advance digital health in the EU and five Strategic Partner Countries (USA, Canada, China, Japan, South Korea)** to support active and healthy aging through innovation. To this purpose, IDIH identifies shared priorities and sets up a Digital Health Transformation Forum as a long-lasting and expert-driven catalyst to foster collaboration between the EU and the Strategic Partner Countries.

The role of **policy makers** in this project framework is, therefore, crucial, both as primary beneficiaries of the outcomes produced by IDIH (a Roadmap - *Towards an international collaboration in digital health*), and as fundamental participants in the priority setting exercise performed by the IDIH Forum of Experts. For this reason, a **Programme Level Cooperation** was developed**,** built to engage the policy makers and facilitate the international policy dialogue around Digital Health for AHA.

PLC key steps and main features within IDIH are further described in 1.2.

## 1.2 Engagement Process of Policy Makers

**WHY |** Through its multi-stakeholder engagement action, the IDIH Consortium intends to build relationships - that could be sustainable into the future – amongst the policy makers and funding agencies in the field of Digital Health and AHA in the EU and in the five Strategic Partner Countries.

Two reasons underpin this effort:

- To ensure that the contents of IDIH deliverables and disseminated materials provide correct and up-to-date information on policies and funding programmes.
- To create the conditions to start and/or strengthen the dialogue among these funding agencies, aimed at fostering international cooperation.

**HOW |** This is made possible through a continuous flow of information, animated by virtual meetings and informal exchanges with policy makers, to update them – where possible – about the project and its progress, as well as through two Programme Level Cooperation Meetings, to be held back-to-back with 2nd and 3rd EG meetings (M26, M35).

As a first step, APRE – as the IDIH partner responsible for policy engagement – set the Terms of Reference of such engagement in the project, through the related **Information Sheet on IDIH policy engagement** that includes the following sections:

| | |
|---|---|
| 1. Invitation | 6. How will I benefit from taking part in the study? |
| 2. What is IDIH all about? | 7. Is my participation voluntary? |
| 3. Why have I been invited to take part in IDIH? | 8. How will you handle my data? |
| 4. What will my participation involve? | 9. Will I receive feedback? |
| 5. Are there any risks involved? | 10. Who can I contact in case of questions, problems or concerns? |

This document is eight pages long, including the *Informed Consent Form* which is presented to the reader to confirm that he/she has read and understood the Information Sheet.

In order to identify the Funding Agencies that are relevant in the framework of the IDIH project, APRE utilized its European network of contacts engaged in policy work – as well as conducted outreach through the EU Liaison Office in Brussels and with the EU Delegations abroad (see EEAS - European External Action Service). Further identification was made possible through the preparatory studies previously undertaken within the IDIH project, with a focus on the deliverables about policies and funding programmes supporting digital health for AHA (WP1; WP2/Task 2.1).

Moreover, as a key preliminary step to better target PLC at the international level, APRE and the IDIH Coordinator consulted with Mr. Marco Marsella, EC, the Directorate-General for Communications Networks, Content and Technology, Deputy Director-General in charge of Directorates A-C-E-H, Digital Society, Trust and Cybersecurity, eHealth, Well-Being and Ageing (CNECT.H.3).

*The exchange with the Head of Unit Mr. Marco Marsella allowed the IDIH Consortium to further refine the international policy dialogue on digital solutions as applied to a comprehensive notion of **AHA based on Wellness and Wellbeing**, following the recommendations of the Green Paper on Ageing.*

After collecting the signed Informed Consent Form from the policy makers reached by the project, a **series of exploratory meetings** with the relevant policy makers and funding agencies were then launched. These dialogues are currently ongoing with those policy makers/Funding Agencies still evaluating their participation in the project, in order to present the IDIH project and its first outcomes, as well as to describe how and when policy makers/Funding Agencies will be involved in the project.

As a follow up to these preliminary meetings, APRE - in collaboration with the local partners – requested PLC stakeholders to provide their first impressions and feedback on IDIH's initial findings through a **Questionnaire:**

---

**(EXPLORATORY MEETING) QUESTIONNAIRE – Summary**

1. **[APRE] Presentation of IDIH and your role as policy maker in the international policy dialogue in Digital Health for AHA**

→ [POLICY MAKER/ FUNDING AGENCY] Providing general comments on the project

2. **[APRE] Presentation of IDIH findings**

→ [POLICY MAKER/ FUNDING AGENCY] Indicate persons from the organization who may be reference persons for the IDIH consortium in the phase of contents validation

3. **[APRE] Presentation of the funding agencies involved in the international policy dialogue in Digital Health for AHA**

→ [POLICY MAKER/ FUNDNG AGENCY] Providing general comments and eventually highlighting on-going or previous collaboration with these agencies at international level.

4. **[APRE] Next steps**

→ [POLICY MAKER/ FUNDING AGENCY] Indicate persons from the organization who may represent the Agency in the PLC meetings

---

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 826092.

8

The Questionnaire is followed – in a second phase - by a **Contents Check Form** [Figure 1] to enable the appointed staff in the funding agency to report his/her feedback on IDIH deliverables and findings, which were provided with the form as supplemental materials.



Figure 1 IDIH policy engagement: IDIH contents check form (Layout)

Six Funding Agencies, one per each country/region involved in the project, have been then engaged in the PLC dialogue at the international level.

Currently the policy makers participating in this process are the following[2]:

- **EC – European Commission (EU)**
  - *Method of involvement:* internally, via IDIH Project Officer
  - PLC Meeting Participants appointed:
    - Saila Rinne, Head of Sector DG CNECT.DDG1.H.3 – eHealth, Well-Being and Ageing, European Commission
    - Irina Kalderon Libal, Senior policy officer DG CNECT.DDG1.H.3 – eHealth, Well-Being and Ageing, European Commission
- **CIHR - Canadian Institutes of Health Research (CANADA)**
  - *Method of involvement:* Through CIHR, the Canadian partner in IDIH

---

[2] Except for NNSFC and METI, all other policy makers/Funding Agencies provided their first feedback on IDIH and its findings. These comments are currently being embedded in ongoing project outcomes and further activities.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 826092.

9

- o PLC Meeting Participants appointed:
    - ▪ Jane Rylett, Scientific Director of the Canadian Institutes of Health Research CIHR Institute of Aging
    - ▪ Étienne Murgues, Advisor, Strategic Partnerships and International Relations
    - ▪ Jennifer Gunning, A/Director General, Strategic Partnerships and International Relations
- ▪ **NIA – National Institute on Aging/NIH (USA)**
    - o *Method of involvement:* Through the liaison of CIHR, the Canadian partner in IDIH
        - ▪ *Melinda Kelley,* Ph.D. Acting Deputy Director of NIA, Director, Office of Legislation, Policy and International Activities
        - ▪ PLC Meeting Participants appointed:
            - • *Dr. Dana Plude*, Deputy Director, Division of Behavioral and Social Research, NIA
            - • *Dr. Nina Silverberg*, Director of Alzheimer's Disease Centers Program, Division of Neuroscience, NIA
            - • *Dr. Todd Haim*, Chief, Small Business and Training, Division of Extramural Activities, NIA
            - • *Dr. Yuan Luo,* Program Director of the Clinical Interventions and Diagnostics branch in the Division of Neuroscience - NIA
- ▪ **KIHDI - Korea Health Industry Development Institute (SOUTH KOREA)**
    - o *Method of involvement:* Through GSBC, the South Korean partner in IDIH
    - o PLC Meeting Participants appointed:
        - ▪ Kim Taek Sik, Department of Medical Devices & Cosmetics Industry, Support Center for Senior Friendly Industry (Director of the Center and Chief Researcher)
- ▪ **NNSFC – National Natural Science Foundation of China (CHINA)**
    - o *Method of involvement:* Through Philippe Vialette, EU Delegation
    - o PLC Meeting Participants appointed:
        - ▪ Shen Jie, Programme Officer, Division of European Affairs, Bureau of International Cooperation
- ▪ **METI - Ministry of Economy, Trade and Industry (JAPAN)**
    - o *Method of involvement:* through the liaison of SAWARABI (IDIH partner)
    - o PLC Meeting Participants appointed:
        - ▪ Kumiko Takahashi, Deputy Director, Healthcare Industries Division, Commerce and Service Industry Policy Group, Ministry of Economy, Trade and Industry

In preparation for the first PLC meeting, these policy makers were contacted to ensure their participation, by connecting regarding the following four steps before the meeting.

1. Encouraging them to vote in a poll on preferable dates/hours for the PLC meeting
2. Sending a Save the Date on the agreed date/hour for the PLC meeting
3. Sending a calendar invitation, including the draft agenda and the link to access the meeting
4. Sending a reminder about the meetings aims, accompanied with the final agenda

Section 2.4 provides an overview of the policy makers who participated in the PLC meeting on May 27, 2021.

## 1.3 Roles and Activities of Policy Makers in IDIH

The exchange with policy makers and funding agencies allows the project to keep, indeed, its work and findings in line with the policy agendas in the different countries and regions concerned, as well as to create an avenue in which to receive feedback on the on-going work of the IDIH Forum.

Moreover, for their part, the policy makers from the respective strategic countries have the chance to connect and strengthen the discussion around potential jointly funded schemes in the field of digital health for AHA.

During these Programme Level Cooperation meetings, the funding agencies (including EC services) have the opportunity to:

- Give feedback and input for the development of the successive iterations of the Report *Towards an international collaboration in digital health [for AHA]* (D3.6/D3.7)
- Discuss concrete joint activities to incorporate the experts and users' recommendations (including potential funding schemes)
- Provide input on IDIH activities, with special focus on informing the format or thematic focus for the R&I stakeholders workshops (WP4) in order to ensure more significant impact and long-term sustainability of the IDIH endeavors.

Section 4 of the Information Sheet, in particular, highlights the requested engagement within IDIH, summarized as follows:

- **Confirmation of the IDIH findings**: To allow the Consortium to finetune its activities and deliverables in line with the orientations and policies of the funding agencies
- **Participation in the two PLC – Programme Level Cooperation meetings**

Moreover, funding agencies are engaged at different levels, depending on the aforementioned activities, addressing mainly ***Policy and Project Officers*** for the contents check, and ***Directors or Head of Unit*** for representing the funding agency within the PLC meetings.

As part of the Digital Health Transformation Forum, held in conjunction with the Expert Groups meetings, the funding agencies from the strategic partner countries should meet with the relevant European Commission officers, according to the following timeline (Figure 2) that has been set and shared with the policy makers involved:
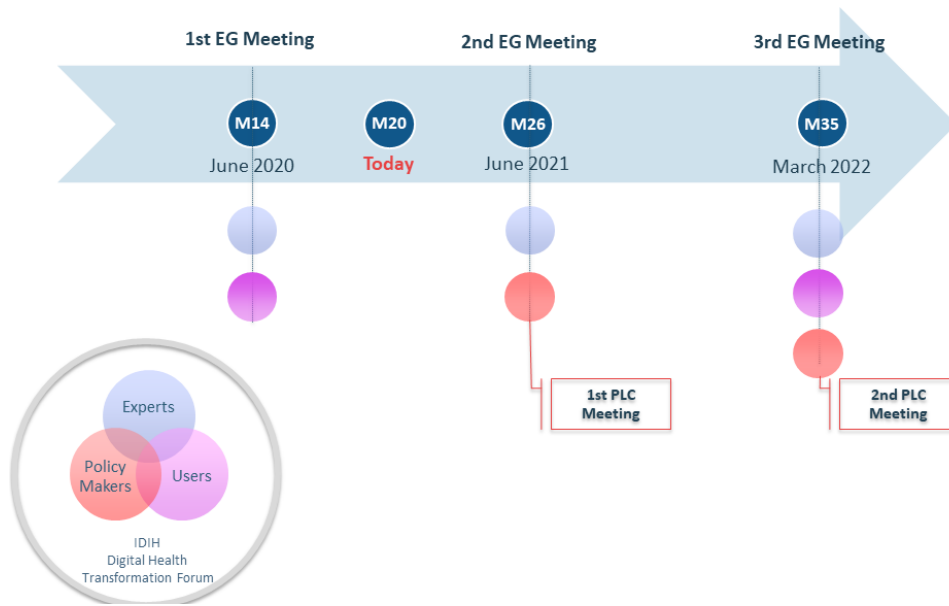
**Figure 2 Timeline planned for the IDIH international dialogue at policy level**

This timeline and plan– with several parallel meetings among the different actors involved - allows the Consortium to create the conditions for the mutual exchange of visions and results, with the ultimate goal of improving IDIH project outcomes. outcomes.

# 2 The First PLC meeting

The first meeting of the Programme Level Cooperation (PLC) was held online on May 27, 2021, using the Microsoft Teams platform. This section serves to provide a description of the aims, participants and the key steps of this two-hourlong meeting, which engaged the Funding Agencies considered by the IDIH project as relevant – at the international level – in the field of digital health for AHA.

Some insights into the meeting preparation are also included, as a first introduction.

## 2.1 Preparatory activities

As preparatory activities, some background materials (especially recently updated deliverables) were shared to encourage the participants to deepen some aspects of potential interest for the Funding Agencies involved and better preparing their participation in the meeting.

In particular, the background materials shared in this preparation phase are outlined below.

**The Guidebook for RDI stakeholders (D2.1),** that introduces the funding schemes supporting international cooperation in digital health and AHA (Active and Healthy Ageing) in the EU and in five Strategic Partner Countries (Canada, China, Japan, South Korea, and USA). This Guidebook has been made freely available to the public at https://idih-global.eu/wp-content/uploads/2021/05/IDIH_D2.1-Guidebook-for-RDI-stakeholders-1.pdf

**The Factsheets on the Panorama of the Digital Health Landscape in the EU and Strategic Partner Countries**, which provides a synthesis of priorities regarding the digital health research and innovation in the European Union, the United States of America, South Korea, Japan, China and Canada. The Factsheets summarize the information included in the report D1.2 - *Panorama of the digital health landscape in the EU and in the Strategic Partner Countries*. These Factsheets, published by country, are also made accessible to the:

- Factsheet Canada (June 2021)
- Factsheet China (May 2021)
- Factsheet Japan (April 2021)
- Factsheet South Korea (April 2021)
- Factsheet USA (April 2021)

**Priorities for International Cooperation (D3.6):** A report on the priorities for international collaboration outlined in the following four expert groups: Inclusive Living, Integrated Care, Independent and Connected Living, and Preventive Care. The report outlines the current needs and trends regarding AHA and the four domains as discussed in the first of a series of meetings.

## 2.2 Meeting Objectives

The first PLC meeting aimed to **start an international policy dialogue around digital health for AHA**, based on the priorities identified as suitable for international cooperation in these domains by the IDIH Expert Forum.

Therefore, the meeting was structured in three main sessions, allowing the exchange with IDIH Experts (Sessions 1 and 2) and then, a Round Table only among the policy makers involved, facilitated by APRE, in synergy with the Project Coordinator (Session 3).

- Session 1: Presentation by the Rapporteurs of the IDIH Experts Groups
- Session 2: Q&A with the IDIH Experts
- Session 3: Open Discussion

## 2.3 Meeting Agenda

The agenda of the first PLC Meeting is reported in Figure 3, according with the three sessions identified in Section 2.2.



**Figure 3 Agenda of the 1st PLC meeting (May 27, 2021)**

## 2.4 Meeting Participants

The **policy makers** who attended the 1st PLC meeting on behalf of the Funding Agencies engaged within IDIH were the following:

- **Dana Plude**, Deputy Director, DBSR. Office(s): Division of Behavioral and Social Research (DBSR) – NIH
- **Irina Kalderon Libal**, Policy Officer DG CNECT.DDG1.H.3 – eHealth, Well-Being and Ageing, European Commission
- **Jane Rylett**, Scientific Director of the Canadian Institutes of Health Research CIHR Institute of Aging
- **Nina Silverberg**, Director of the Alzheimer's Disease Research Centers (ADRC) National Institute on Aging
- **Saila Rinne**, Head of Sector DG CNECT.DDG1.H.3 – eHealth, Well-Being and Ageing, European Commission
- **Yuan Luo**, Program Director of the Clinical Interventions and Diagnostics branch in the Division of Neuroscience – NIA

While the following participants attended from the **IDIH Team:**

- Elizabeth Brown (Catalyst)
- George Zissis (ATC)
- **Hicham Abghay (S2i) – Moderator**
- Joanne Goldberg (CIHR/IRSC)
- **Martina De Sole (APRE) – Moderator**
- Mathilde De Bonis (APRE)
- Sakon Yamamoto (Sawarabi Group)
- Susan Rogers (CIHR/IRSC)

The **IDIH Experts** who, mainly as Expert Group (EG) Chairs, attended the sessions 1 and 2 of the meeting, were the following[3]:

- Giovanni Saggio, *Preventive Care* EG Chair
- Yves Joanette, *Preventive Care* EG member
- George Demiris, *Independent and Connected Living* EG Chair
- Matthew Lariviere, *Inclusive Living* EG Chair

## 2.5 Sessions Overview

### 2.5.1 Presentation by the Rapporteurs of the IDIH Experts Groups

As part of the first session of the meeting, after a short *Tour de Table* among the participants - who introduced themselves, including their expertise and current business in their organizations - the EG Chairs were invited to present the results of the recent EG meetings held online between May 17 and

---

[3] As rapporteur of the Integrated Care EG, the project Coordinator  - Hicham Abghay (S2i) – reported about the priorities identified in the related EG meeting as suitable for international cooperation.

May 20, as co-creation workshops for the setting of the international priorities in the field of digital health for AHA.

The contents of the presentations from the EGs Chairs are summarized as follows, with reference to the 4 strategic topics around which the EGs are organized to deal with digital health for AHA.

### 2.5.1.1   Priorities identified as suitable for international cooperation for *Preventive Care*

**Priority 1:** *Forward/backward longitudinal study and big data analysis to better understand the determinants of healthy ageing and the trajectory towards the "un-healthy", from normality to the presence of disease.*

**Linked keywords:** *AI, home-monitoring, data analysis, common predictive tools.*
**Highlights**: Given the potential of the translation of interpolated data collection, it is possible to understand how the future of patients might be but also how were the early stages of the pathology. For example, there are several known pathologies, such as Parkinson's, for which we do not know the origin, yet the subject matter is of crucial importance in order to improve health outcomes Collecting big data is the basis for better understanding potential causes of the pathology and providing insights into those factors that may play a role in negative health outcomes.

**Priority 2:** *Development of international standards and procedures for interoperable outputs of wearable (and all) technologies*

**Linked keywords:** *international standards, wearables*
**Highlights**: As languages vary between regions, different standards, metrics, procedures, approaches, etc. exist to assess digital health technology, is not the most suitable way to diagnose, treat, or prevent diseases. Data from different regions or geographical areas will create dissimilar and heterogeneous information which will limit its potential use. To avoid this, there exists a need to enhance interoperability, define international standards and procedures for technologies, in particular wearables, in this domain.

**Priority 3:** *Data analysis modelization at different levels, such as: determinants of wellbeing, diseases...[4]*

**Linked keywords:** AI, human digital twin
**Highlights:** Critical is the need to analyse data meaningfully and comprehensively. Today, there is the option to use machine learning approaches that open the way to new possibilities. For example, the efforts to set up simulations of many pathologies related e.g. to organs (lung, brain, etc.) allow additional medical education prior to treatment of real patients. It would permit to see what the evolution/effects of some specific interventions could be before proceeding. This approach would help to choose the right therapy to the right patient in the right moment, which is certainly the main pilar of Personalized Medicine, to be prioritized in this domain.

---

[4] This could be adapted to AHA outcomes, defining the illnesses/diseases this refer to, such as chronic conditions across the life-course or Age-related diseases.

**Priority 4:** *Empower individuals to find the right technology and information through co-design and digital literacy.*

**Linked keywords:** healthy habits, digital literacy

**Highlights:** People are inundated with information from a diverse range of sources. However, the quality and veracity of this information is not always properly managed or curated to suit individual needs of older adults, their families, or health professionals. It is critical to empower individuals through digital literacy and co-design processes, so they have the appropriate skills and knowledge to locate appropriate, evidence-based resources of information and minimise untrustworthy sources and poorly designed digital health technology.

**Priority 5:** *Creation of eco-systems for open innovation in wearables: co-creation and co-design Academia/Industry/Consumers/Institutions.*

**Linked keywords**: wearables, taxonomic approach, monitoring technologies.

**Highlights:** It is necessary to create sustainable, multi-stakeholder engagement among academia, industry, consumers and institutions with multilayer considerations reflecting the complexity and multifaceted nature of sensible data, ultimately allowing the analysis and the participation of everyone. Considering wearables, gathered data from smart watches, for instance, shall by design be able to inform the company that it has to fulfil certain specific needs and certain accuracy and values to meet its requirements as digital health technology. When data is collected from sensors, there is need for communication with manufactures to clearly define the collaboration frameworks, considering the specific needs of the end-users, providers, and suppliers alike.

**Priority 6:** *Support learning health and wellness and social systems through the access to data, procurements, etc.*

**Linked keywords:** procurement models, home monitoring technologies, public healthcare systems.

**Highlights:** As these technologies are rooted in sensitive and personal patient medical data, it is crucial to guarantee privacy to individuals but also to allow for the possibility to access this data. Another key consideration is the fact that in different countries there are different laws related to privacy, this is a big issue because sometimes it can create disparities regarding data protection. One possibility is to share not the original data, but the features related to those data, protecting sensitive personal data.

### *2.5.1.2* **Priorities identified as suitable for international cooperation for** *Integrated Care*

**Priority 1:** *Digital inclusion: inclusive healthcare system using digital tools (Digital literacy, access to infrastructure...).*

**Linked keywords:** social isolation, digital exclusion, unobstructive data generation, critical health parameters, healthcare professionals' engagement, technology usage.

**Highlights:** Inclusive healthcare systems striving for integrated care delivery through the deployment of novel digital tools shall:

o Enhance the capabilities of both service providers as well as beneficiaries of healthcare by improving their **digital literacy** and skills to harvest full potential of digital tools for an adequate active and healthy ageing;

o Increase the **engagement of healthcare professionals** in the process of integration as well as utilization of digital tools in order to increase the propensity of uptake of digital tools in the healthcare workforce and older adults as end-users;
o Provide **access to infrastructures** that enable the integral usage of digital tools not only in the healthcare environment but both at home and remote areas;
o Apply **unobstructive data generation** that will allow a critical mass of ethically sound and usable data that does not encroach in the beneficiary's (data) safety;
o Identify **critical health parameters** that permit decisive and evidence-based prediction, prevention and protection that is comparable and quantifiable;

**Priority 2:** *Interoperability by design: data (big data, highly curated, metadata...) formats, security, international standards.*

**Linked keywords:** interoperability standards, data exchange, broadband infrastructures, technology business and architectural guidelines.

**Highlights:** Data (big data, highly curated, metadata...) formats shall:
o fulfil security and **international standards** that allow interoperability and data exchange beyond institutional and regional boundaries which will not only increase usability but also comparative analysis and thus learning and transferability;
o be provided with the necessary and **solid broadband infrastructure** that in its turn allows the processing, transferability and full exploitation;
o be based upon **technology, business and architectural guidelines** underlying a consensual basis by design that averts reverse engineering and unnecessary or redundant interfaces.

**Priority 3**: *Harmonization of policies to address transparency, security, ethics, privacy, data preservation*

**Linked keywords:** barriers in healthcare, policy, ethics, privacy
**Highlights:** setting this policy framework conditions will allow:
o Breaking down barriers in healthcare value chains;
o Increasing key stakeholder commitment;
o Minimalizing bottlenecks and creating conditions that may evolve with the pace of innovation.

**Priority 4:** *Person centric long term chronic care supported by standardized digital solution, and personalized medicine*

**Linked keywords:** long-term care, digital solutions, multicentric/multiregional trials.
**Highlights:** this shall take into account:
o Long-term care considerations especially with relation to cases of not only **age** but also **comorbidity** requiring care provision from different healthcare service providers and settings;
o **Digital solutions evolvements** overtime including the integration of novel technologies and updates with the most relevant and evidence-based insights (see above the access to digital solutions with framework conditions that go with the pace of technology);
o **Multicentric/multi-region trials.**

**Priority 5:** *Co-design and co- development with the involvement of caregivers across different typologies and disciplines (i.e., physiotherapists and doctors) to tackle gaps and barriers.*

**Linked keywords:** caregivers support, healthcare providers.
**Highlights:** Service Co-design and co- development shall be addressed, as follows:

o Caregiver's support and medical expert engagement shall be explicitly encouraged;
o Health Care Professionals workflows and data needs should be taken into account;
o Patient requirements and end-customers major challenges shall be attenuated through the active engagement in the design and co-creation process through the consideration of the special needs and requirements related to active and healthy ageing
o IT support shall be oriented to enabling and empowering the use thereof. Digital technologies shall meet the needs of the senior adults and not the way around.
o Healthcare providers barriers shall be overcome through the long-term benefits and return of investment through health impact assessments based upon longitudinal and multidisciplinary studies /considerations.

### 2.5.1.3 Priorities identified as suitable for international cooperation for *Independent and Connected Living*

**Priority 1:** *Promoting independence and mobility through smart and connected communities and environments.*

**Linked keywords:** infrastructures, smart mobility, communities
**Highlights:** the focus is on the need to explore how we can create a solid evidence base for intervention, not just within smart homes but also in smart communities, creating connections between rural and city environments. This calls for a real world and large-scale deployment of smart and connected technologies, with the growth of IoT solutions and the focus on smart "communities".

**Priority 2:** *Create a standardized framework for International Data Governance & Security (Big Data, Meta Data and Curated Data) based on interoperability and sharing patient-data and patient generated data.*

**Linked keywords:** interoperability, telehealth, standards, common regulation, data sharing, security, machine learning
**Highlights:** With the emergence of a large range of different technologies, whether these are wearables or behavioural setting technologies, there are opportunities to facilitate behavioural sensing outside of a clinical setting. These generated data of patients can indeed play significant role in improving both health care and delivering outcomes for older adults. But we need to consider the related challenges, such as the need for interoperability, validity, and reliability of the data sources, posing issues like: how many data would belong in the electronic health record, what are the implications for the clinical workflow, and how can clinicians contribute to integrate these outcomes in clinical decision making? Finally, security is still a big issue, especially if we need to address how these data are obtained and maintained in and outside the formal system of care.

*Priority 3*: Develop age friendly technologies to facilitate social connectivity and address social isolation and loneliness through international and multidisciplinary research teams.

**Linked keywords:** multidisciplinary, age friendly, social services, digital health literacy
**Highlights:** At stake is to recognize the needs of the users to come up with innovative and inclusive solutions for this global challenge, such as loneliness among older adults, now exacerbated by the recent pandemic. Moreover, it is important to recognize the value of interdisciplinarity and multidisciplinarity, involving not only technical or clinical expertise but also psychological and social competences. In this field, digital literacy plays an important role. It is crucial to understand and explore the level of familiarity that different stakeholders have with technologies, their expectations, and previous experiences.

*Priority 4:* Enable enhanced mechanisms to share best practices and barriers to independent and connected living.

**Linked keywords:** experience/knowledge sharing, mutual learning
**Highlights:** Knowledge transfer is necessary to recognize the plethora of tools both - hardware and software - already being deployed in this specific space related to digital technologies for ageing. This will enable a better understanding on how to translate this knowledge into other settings, what are the lessons learnt, especially for what concerns ethical considerations and clinical implications. Enabling tools and platforms can substantially enhance facilitating this knowledge transfer in multiple settings and across borders.

### 2.5.1.4   Priorities identified as suitable for international cooperation for *Inclusive Living*

*Priority 1: Understanding marginalization connected to ageing and promote targeted and co-created inclusive solutions.*

**Linked keywords**: inclusive design, digital literacy, marginalisation, social participation
**Highlights**: In the context of this priority, it is needed to focus on historically marginalised ageing groups, such as: people with low income, people situated in remote and isolated areas (rural areas, islands etc.). It is also essential to understand the needs and work towards the participation of "new ageing" groups such as people with HIV, ex-drug addicts, etc.
It is important to promote inclusive design of services and solutions that enhance the social participation of older people with particular attention to the above-mentioned groups. The design and development of "dementia-friendly communities" also needs to be addressed by the international collaboration initiatives.
This EG also reported the need for user-led research, based on the experiences of Partner Countries, such as Japan[5].

---

[5] The Tojisha-Kenkyu' methodology for the involvement of specific groups (such as marginalized groups, new ageing groups etc) has been mentioned as an example in this field: an approach that originated in the mental health community in Japan, in which the person with disability or disorder studies themselves and become the expert, analysing and researching difficulties of their own that are incomprehensible to others. Cognitive scientists, roboticists and engineers will be able to verify their work with the active involvement of the elderly both at the design and the development stages.

**Priority 2**: *Sharing tools and methodology, practices in the field of LHS (learning health systems) to reduce health disparities in ageing populations*

**Linked keywords:** mutual learning, EU medical guidelines, training
**Highlights:** The development of learning health systems (LHS) may address unmet needs of ageing populations and enhance the quality of services and the expertise of medical professionals. The development of LHS platforms will facilitate the rapid dissemination of medical guidelines in EU and Strategic Partner countries at an international level. LHS will increase awareness about appropriate services for older people and facilitate the provision of training to healthcare organizations and professionals in EU countries and worldwide.

**Priority 3: Enhance virtual care by understanding barriers to and opportunities for digital literacy of care professionals/end users for improved digital health outcomes**

**Linked keywords:** virtual care, digital literacy
**Highlights**: We must understand evolving digital literacy needs of all end user groups (older person, carers/families, care workforce). It will be necessary to identify and trial appropriate interventions to increase digital literacy. Also, it is of equal importance to invest in the development of tools and methodologies to evaluate the impact of improved digital literacy for virtual/distant care platforms.

**Priority 4**: *Integrate data generated from NGI (AI, IoT, robotics...) technologies to inform evidence based decision making*

**Linked keywords:** integrated data, decision making, policy
**Highlights**: Sharing of data generated from next generation internet (NGI) technologies can inform and influence evidence-based decision making and support the design and development of efficient systems and services able to address the needs of the elderly.

## 2.5.2  Questions & Answers with the IDIH Experts

This session let emerge three main areas for discussion and/or further clarification, as follows.

### Longitudinal studies

Giovanni Saggio (Preventive Care EG Chair) was asked about the importance of understanding and possibly **harmonizing measurement methods in longitudinal studies**. He reinforced this as a central problem that still requires further addressing by comparing methods for data collection. Dr. Saggio additionally observed that this would make it impossible to carry out big data analysis and apply algorithms. This point was reiterated by the rapporteur for the Integrated Care EG, Hicham Abghay, who confirmed that this need for generalizing and establishing standards for key performance indicators in longitudinal studies had been highlighted within the Integrated Care EG.

In response to the inputs from the EG Chairs, a relevant 2020 publication containing contributions from the NIA Division of Neuroscience - *The Collaborative Aging Research Using Technology Initiative: An Open, Sharable, Technology-Agnostic Platform for the Research Community* - was highlighted to facilitate further discussion on remote clinical assessments and in-home monitoring. The report outlines the **Collaborative Aging Research Using Technology (CART)** initiative that was introduced to

establish a digital technology research platform that could widely assess activity in the homes of diverse cohorts of older adults and detect meaningful change longitudinally. The built end-to-end design of the CART platform, its functionality, and the resulting research capabilities were identified as fundamental in the assessment and further reflection by the IDIH Experts on the state-of-the-art of Digital Health for AHA and the path towards innovation in this field.

## Data Security and Interoperability

Another key area emphasized during the Q&A portion of the conversation with the IDIH Experts was data security, and the importance of including the international perspective when accounting for this matter. Considering that requirements in this field in the EU differ substantially from a more common set of standards in other countries, the Preventive Care EG Chair - on regards of his presentation of priority 2 - was asked about which could be the concrete challenges in this area. The Preventive Care EG Chair brought up the GDPR regulation that is applied throughout the EU, noting that, without an international political agreement, technical expertise is likely unable to resolve fragmentation on data security, due to a still diverse application at local/national level. Martina De Sole, part of IDIH project partner APRE as well as one of the moderators across all the EGs, added that Canada and the EU are currently addressing the issue by developing a working group focused on the international alignment of regulations, while Yves Joanette, a member of the Preventive Care Expert Group, contributed that the concept of **interoperability,** and its key distinctions from harmonization, has been identified as a strong focus area in this regard.

Interoperable data spaces to unlock the potential of data, in general as well as across sectors, has been indeed highlighted as a high priority for the European Commission. In the health sector, for instance, there is a proposal for an **European Health Data Space** based on legal security around health data and how it may be used. Moreover, there is a new approach emerging at EU level, that should be further explored, that is **people "donating" their data,** thus, allowing them to maintain personal control of their data. Dr. Saggio, the Preventive Care Expert Group Chair, emphasized further that there may be an alternative to the sharing of original data, which is sharing only the *features* of such data, which may mitigate many of the current complexities with data security.

## A user-centered perspective

It was highlighted how a large spectrum of individuals is regrouped under the "ageing population" – e.g., from 65 to 100 year – with a big diversity in technology **usage and understanding** among individuals. Therefore, a special attention must be paid to individuals, how they perceive technology, its use and benefits. To address the challenge raised by the policy makers of **how to make people more self-determining and able to maximize the benefits individuals receive from technology understanding and use**, George Demiris, as Chair of the Independent and Connected Living EG, called for design and evaluation of inclusive solutions based on different degrees of cognitive and abilities. Additionally, consideration is also needed for the enhancement of patient education (e.g., about Informed Consent) through clinicians. Dr. Saggio, of the Preventive Care EG, added how this can also be addressed by enhancing the **collaboration with manufacturers**, in order to have solutions so smart to be run almost without users' activity. Matthew Lariviere, Inclusive Living EG Chair, pointed out how **CSOs and charities**, besides tech organizations, should be further engaged for this purpose. Martina

De Sole (APRE) remarked how IDIH is taking care of consulting users associations, as part of the works within the IDIH Forum.

The priority topics identified by the EGs in this field have, thus, been recognized as in line with the EU policy agenda and recent policies, especially for topics concerning **digital literacy and stakeholders' engagement**. A substantial number of H2020 projects – it has been stated - have been funded in these fields, with many addressing needs of the older population; a common effort, indeed, can be reported at EU level towards the **co-creation of solutions encompassing the users, the health care professionals, and the informal carers**. Moreover, as a suggestion to the EGs, it has been highlighted how a special focus should be paid towards harnessing the role of **clinicians** in encouraging the use of supportive digital health technologies among patients.

## 2.5.3 Open Discussion

After Session 2, the EGs Chair left the meeting and the remained participants started then the open discussion. Here, policy makers were invited to further share their approaches and policy agendas highlighting if they are already dealing with the topics mentioned in earlier Sessions, or if any are yet to be covered as potential areas of interest for future (joint) funding.

### EU – Relevant policy agenda and priority topics of interest

Considering the pending official launch of the Work Programmes of the new EU Framework Programmes for Research and Innovation, some core areas, upon which the Digital Europe Programme has been built, have been designated. These central areas within the field of digital health - **AI, high performance computing, and cybersecurity -** are consistent with the contents emerged in the prior sessions.

Moreover, **Pillar 2 of Horizon Europe,** which is dedicated to *Global Challenges & European Industrial Competitiveness*, and especially the 2021-2022 topics under the Clusters *Health* and *Digital, Industry and Space,* have been indicated as very much aligned with the priority areas presented by the EGs. Therefore, as a logical continuation of what EU funded so far, these *IDIH priority topics* could be further explored with policy makers in view of the next Work Programme within Horizon Europe, for the period 2023-2024.

Finally, the **EU emergency funds for COVID-19**, especially those supporting the development of ICT use, were also discussed, highlighting the fact that these projects may provide solutions that could be easily applied to the older adults as well.

### USA – Relevant policy agenda and priority topics of interest

The priority topics presented by the EGs have been considered in line also with NIH policies, now particularly focused on the **early detection of the Alzheimer** disease. The NIA portfolio International Alzheimer's and Related Dementias Research Portfolio (IADRP) has been shared as a publicly available database available at: https://iadrp.nia.nih.gov/.

Additionally, the development of a **global database for degenerative diseases** has been identified as a need in the US research and innovation, to be better addressed through international cooperation.

Among the topics presented by the EGs Chairs, the creation of **Dementia-Friendly Communities** has been identified as a specific priority area to be further explored, particularly in relation to the need of having a general consensus at international level on what makes this communities friendly for people with dementia. This idea encompasses a wide spectrum of considerations, starting from physical environments, mobility and accessibility to other dimension, such as educating people, the community itself and the health care professionals as well, while mapping and sharing already existing models that may envisage concrete opportunities for pursuing such communities in the near future.

Moreover, **harnessing all data coming e.g. from wearables or sensors through AI, machine learning algorithms** in order to make these data understandable and usable in terms of behavioral interventions has been identified by the United States as a global challenge. Recently, NIH funded the development of centers comprising AI and technology laboratories for ageing research to harness this kind of data.

Finally, despite the continuance in the US of a relative lack of infrastructures, a practical issue has been also highlighted concerning the usage of technologies by older adults and the need of providing **technical IT support** to this population as well as their formal and informal carers.

A publication by the Task Force of the US Government on research and development for technology to support aging adults was also highlighted to facilitate the IDIH Experts' understanding of the US landscape of R&I in the field and guide their work within the IDIH Forum. Here follows the related abstract[6]:

*This report identifies a range of emerging technologies that have significant potential to assist older adults with successfully aging in place, each categorized by their role in supporting a set of primary capabilities. It identifies a number of focus areas that could support each capability and provides recommendations for research and development (R&D) that are required to develop key technology solutions over the coming decade. Cross-cutting topics that affect multiple capabilities are also discussed. These recommendations are offered as a guide for both public and private sector R&D. The overall goal is to improve the quality of life, enhance individual choice, reduce the financial and emotional burden of care to individuals and families, and reduce the burden of providing care on the American healthcare infrastructure.*

## CANADA – Relevant policy agenda and priority topics of interest

The priorities presented by the EGs were also relatively consistent with CIHR programs, particularly **dementia friendly communities**, the development of tools for individuals with cognitive impairments, for caregivers, as well as the **Learning Health Systems**; all of these topics have been designated as key areas of interest. Likewise, **co-creation - as a result of stakeholders' consultations –** has been recognized as a fundamental factor in shaping future CIHR research strategy, ensuring consistency of innovations in digital health for the adult seniors.

---

[6] Extract from the publication available at: Report

## 2.6  Conclusions & Next Steps

The first Programme Level Cooperation meeting marks the start of the **international policy dialogue around digital health for AHA** within the IDIH project. This exploratory meeting of the PLC delegates focussed on the four topics considered as strategic for AHA, around which the IDIH Experts Groups are organized: *Preventive Care*, *Integrated Care*, *Independent and Connected Living*, and *Inclusive Living*.

The priorities identified as suitable for international cooperation in each of these domains by the EGs have been brought to the attention of the attending international policy makers, allowing to collect their feedback and further inputs in relation to the policy agendas as well as future national/regional perspectives around digital health for AHA.

An expert-driven approach – thus – has led the discussion by highlighting several **areas of major interest for the policy makers** (summarised in Figure 4 below), as domains that have been already addressed/funded at the national/regional levels (in line with current policy agendas), and/or as topics with potential for R&I strategies at international level, demonstrating potential for future (possibly joint) funding initiatives.

| Areas | In line with current policy agendas | With potential for future R&I strategy at international level |
|---|---|---|
| **Innovative digital solutions for AHA co-created among researchers, manufacturers, users, formal and informal carers.** | 🇪🇺 🇨🇦 🇺🇸 | |
| **Dementia-friendly communities** | 🇪🇺 🇨🇦 🇺🇸 | 🇪🇺 🇨🇦 🇺🇸 |
| **Learning Health Systems** | 🇪🇺 🇨🇦 🇺🇸 | 🇨🇦 |
| **Unlock the potential of data coming e.g. from wearables or sensors through AI, machine learning algorithms** | 🇪🇺 🇨🇦 🇺🇸 | 🇪🇺 🇺🇸 |
| **Sharing data on degenerative diseases** | 🇪🇺 🇨🇦 🇺🇸 | 🇺🇸 |

**Figure 4 Areas of major interest highlighted by policy makers in the 1st PLC meeting**

Therefore, as a first step towards the enhancement of international cooperation in the field of digital health for AHA, the first PLC meeting has produced a set of **preliminary broadlines for cooperation** around 3 main priority-areas identified by the IDIH Expert Groups:

- EG Inclusive Living - Priority 1: *Understanding marginalization connected to ageing and promote targeted and co-created inclusive solutions* (connected with "Dementia-friendly communities" in Figure 4).

- EG Inclusive Living - Priority 2: *Sharing tools and methodology, practices in the field of LHS (learning health systems) to reduce health disparities in ageing populations* (connected with "Learning Health Systems" in Figure 4).
- EG Preventive Care - Priority 2: *Development of international standards and procedures for interoperable outputs of wearable (and all) technologies* (connected with "Unlock the potential of data coming e.g. from wearables or sensors through AI, machine learning algorithms" in Figure 4).

Moreover, besides a general consensus on the need for co-creation among the stakeholders of innovative digital solutions for AHA (as *in line with current policy agendas* in Figure 4), *sharing data on degenerative diseases* has been added to the set of priorities identified by the IDIH experts, as a need – especially for the US research and innovation - to be better addressed through international cooperation.

As a follow up of the first PLC meeting, this Report has been shared with the PLC representatives and associated program managers for additional check and any eventual integration. As next steps in the Programme Level Cooperation within the project, APRE will continue managing a flow of communication with the policy makers involved based on updates related to relevant project initiatives and findings.

Moreover, IDIH partners plan to update the PLC ahead of the second PLC meeting with the results of the IDIH Experts and, in particular, the iterations of the Roadmap drafted by the IDIH Experts, *Towards an international collaboration in digital health*; this is intended to serve as a primary outcome of the project addressing the funding agencies in the EU and the five IDIH Strategic Partner Countries.

Finally, the IDIH Consortium will evaluate the eventual possibility and feasibility of further engaging the policy makers in the informative public initiatives of the project addressing the international stakeholders of digital health for AHA, especially for what concerns current and upcoming funding opportunities managed by their Agencies.



**IDIH**

**INTERNATIONAL COLLABORATION**
**DIGITAL TRANSFORMATION**
**HEALTHY AGEING**