IDIH

INTERNATIONAL COLLABORATION
DIGITAL TRANSFORMATION
HEALTHY AGEING

Inclusive Design of Digital Solutions for Active and Healthy Ageing (AHA)

VIRTUAL EVENT

LINK TO ACCESS THE MEETING: CLICK HERE

NOVEMBER 5, 2021

14.00 – 16.00 CET

PROJECT COORDINATOR:

DR. KRISTIN DALLINGER

Steinbeis Europa Zentrum

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

IDIH SHORT FACT SHEET

- **Full Title:** International Digital Health Cooperation for Preventive, Integrated, Independent and Inclusive Living
- **Duration:** May 2019 – April 2022
- **Aim:** **Promote and increase international collaboration** to **advance digital health** in the EU and key Strategic Partner Countries to **support active and healthy ageing (AHA) through innovation**

9	4	5	36	2.4
Partners	EU Countries	Strategic Partner Countries	months (May 2019 - April 2022)	million € (including partners' own contribution)

PROJECT PARTNERS

9 partners – 4 from the EU and 5 from the Strategic Partner Countries:
From research to industry through to governmental support organisations and networking platforms

BACKGROUND

The **population is rapidly ageing** in industrialised and emerging economies. Health risks need prevention, treatment of health issues needs assistance, as well as access to innovations not only for the elderly but also for other patient groups.

Health systems around the world should learn from each other. Sharing experiences, innovative approaches and best practices will be key to accelerating the progress of individual regions.

Joint efforts and mutual learning for the benefit of the society and industry on a global level is vital.

IDIH is operating as a catalyst for the international dialogue in digital health.

IDIH's AIM

Supporting the further development of international cooperation in the digital transformation of health care

- IDIH will operate as a **catalyst for the international dialogue** in digital health.
- By **identifying key opportunities and shared priorities** for global cooperation in digital health, IDIH will set up a **Digital Health Transformation Forum** to foster collaboration between the EU and five Strategic Partner Countries.

IDIH's OBJECTIVES

To support the **definition of common priorities** to enhance strategic international cooperation in digital health.

1

2

To provide specific contributions to the **international dialogue in digital health** with the creation of a **Digital Health Transformation Forum**.

To **facilitate the exchanges** between RTI stakeholders from the EU and the Strategic Partner Countries in digital health.

3

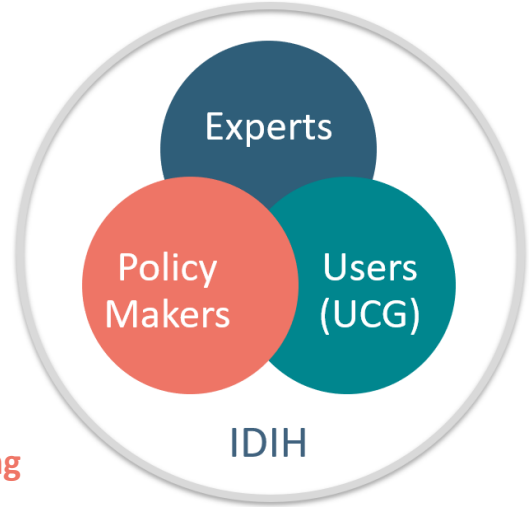
4

To **foster international collaboration** for digital solutions in health care benefitting the society.

APPROACH

An expert-driven approach ensures the **involvement of RTI and policy stakeholders, as well as user associations** where relevant.

- IDIH has set-up an expert-driven "Digital Health Transformation Forum", gathering global top-notch experts, executives and advocacy groups with the aim to:
  - Pave a path that overcomes fragmentation in R&I Investments in AHA,
  - Tackle system biases in AHA e.g., in terms of gender, regions, cultures etc.,
  - Generate impact from EU and international programs,
  - Target future trends and drivers of high impact and disruption in AHA
- The "Digital Health Transformation Forum" is expected to become a **long-lasting mechanism for an international dialogue.**



EXPERT-DRIVEN APPROACH

Preventive care

Integrated care

Independent and connected living

Inclusive living

- IDIH has set-up an expert-driven "Digital Health Transformation Forum", consisting of **4 Expert Groups (EGs)**.
- The EGs has **at least 6 members each,** coming from **research, technology, industry, advocacy groups**, etc.
- The scientific exchange will be managed by an **Expert Group Chair** selected from the RTI community.
- The "Digital Health Transformation Forum" is expected to become a **long-lasting mechanism for an international dialogue.**

ensure the **involvement of RTI, policy stakeholders, user associations** where relevant.

Taking the context of **society, tec**
industry, but also the **policy fra**
account for the development of a
international cooperation

IDIH PRODUCTS AND SERVICES (I)

1 IDIH Factsheets

Overview of the **digital health research and innovation landscape** in Strategic Partner Countries (CAN, CN, JP, KR, USA):

- Priorities within digital health and AHA
- Challenges,
- Relevant key programmes
- Key players in the field
- Strengths and weaknesses

Overview of **international collaboration** and

- Success stories in digital Health bw EU and Strategic Partner Countries

Access the factsheets:

- **Factsheet Canada**
- **Factsheet China**
- **Factsheet Japan**
- **Factsheet South Korea**
- **Factsheet USA**

2 IDIH Guidebooks

Updates on opportunities for researchers and innovators

- from IDIH Strategic Partner Countries under EU Funding
- from the EU under the American, Canadian, Chinese, Japanese and South Korean Funding Programmes

https://idih-global.eu/outcomes/

IDIH PRODUCTS AND SERVICES (II)

3 IDIH Helpdesk

idih-global.eu/idih-helpdesk

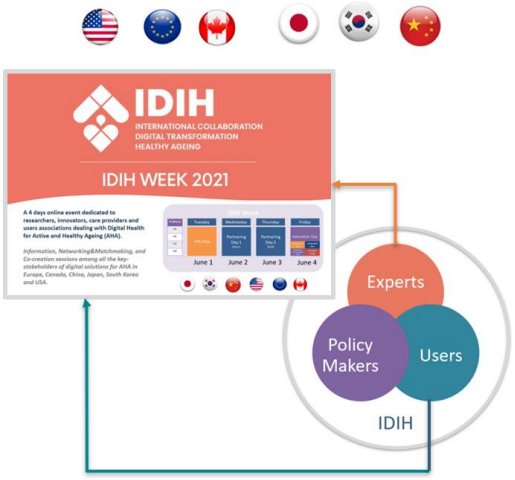
Ad-hoc advice to RTI stakeholders from the EU and the Strategic Partner Countries on Funding Programmes and Calls that offer opportunities for international cooperation in the field of Digital Health and AHA

4 IDIH Long-term Matchmaking Platform

Networking among all key-stakeholders of digital solutions for AHA

Register at: https://idih-week-2021.b2match.io/

- Create your online profile specifying your Area of Activity and/or expertise request/offer in the Marketplace + Schedule B2B-meetings with your potential international partners until Dec 31, 2021.



5 IDIH Week 2021 & 2022

- 4 days online event dedicated to researchers, innovators, care providers and user associations dealing with Digital Health for AHA.
- Information, Networking & Matchmaking, Co-creation sessions
- Materials available at: https://idih-week-2021.b2match.io/page-4061

IDIH PRODUCTS AND SERVICES (III)

6 IDIH Podcast

- **The Future of Ageing Actively and Happily** is the podcast of the EU Project IDIH - International Digital Health Cooperation for Preventive, Integrated, Independent and Inclusive Living.
- Each episode focuses on one of these **topics**, and a strategic **region** of the world: Europe, China, Canada, Japan, South Korea, and USA.
- Available on 6 platforms

TIMING

PODCAST 1: March 2021 (Intro HE)
PODCAST 2: July 2021
PODCAST 3: October 2021
PODCAST 4: December 2021
PODCAST 5: January 2021
PODCAST 6: March 2022

Duration: max. 25 minutes

WHERE TO LISTEN

7 IDIH Magazine

- IDIH MAG FORMAT: a full PDF version
- IDIH MAG FORMAT: a reduced HTML version

- You can just draft your article promoting ***events, initiatives and R&I projects at national/international level or experts/stakeholders from your organization/network***, dealing with Digital Health for Active and Healthy Ageing

6 sections:

CONTACT DETAILS

Thank you for your attention!

Project coordinator

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IDIH Global

https://idih-global.eu/

IDIH Partners

IDIH Webinar | Agenda (November 5, 2021)

BACKGROUND & AIMS | IDIH project aims at enhancing international collaboration in the field of digital transformation for Active and Healthy Ageing (AHA). As part of this, one of the main activities of the project has been setting up an expert-driven "Digital Health Transformation Forum", which is expected to become a long-lasting mechanism for international dialogue in digital health for AHA. The Forum consists of 4 Expert Groups, each focusing on key-topics in this domain: *Preventive care, Integrated care, Independent and connected living, Inclusive living.*

Expert Groups had gathered together in workshops to define potential priorities for international collaboration, to investigate collaboration pathways and provide recommendations within each of the four groups. ***Inclusive Design of digital solutions for Active and Healthy Ageing*** has been identified as a crucial aspect encompassing almost all key-priority topics identified, as such the webinar will tackle this subject.

The main objective of this webinar is to **present innovative approaches and methodologies for the inclusive design of digital solutions for the Active and Healthy Ageing Domain**. Therefore, in our webinar it is planned to address several critical issues, such as **end-users' involvement/engagement** in the design process and the methodologies and approaches to address the needs of the older people in the design process. This webinar is addressed to **engineers, end-users representatives, practitioners, anthropologists, sociologists** etc. that are involved in the development process of systems and tools for the older persons. The participants of this webinar will be able to discuss interesting topics with our experts, address their questions and share their experience.

AGENDA	
14.00 – 14.15	Welcome and introduction *Lead by the IDIH Coordinator*
14.15 – 14.30	**Inclusive Design for AHA and the Social Determinants of Health** ***Prof. Gloria Gutman,*** *Gerontologist, Professor/Director Emerita, Dept. of Gerontology/Gerontology Research Centre at Simon Fraser University Vancouver Campus*
14.30 – 14.45	**Accessibility of digital solutions for AHA** ***Dr. Jose Martinez-Usero,*** *Senior project manager at Digital Europe*
14.45 – 15.00	**Inclusive Digital Design for Inclusive Ageing** ***Dr. Matthew Lariviere,*** *Lecturer in Social Policy at the University of Bristol*
15.00 – 16.00	**Q&A session, Round table and discussion with the participants** *Lead by ATC partner of the IDIH project*

For any need of further information or clarification on this event: idih@apre.it

INCLUSIVE DESIGN AND THE SOCIAL DETERMINANTS OF HEALTH

Gloria Gutman, PhD
Simon Fraser University

Vancouver, Canada

November 5, 2021

SFU

Overview of the Presentation

- Part 1: Current and Potential Future Use/Importance of Technology By and for Seniors
- Part 2: Barriers to Technology Transfer from Research to Manufacture
- Part 3: Key Issues for Acceptance of Technology by Seniors

Key Life Domains for Application of Technology

- Communication
- Health
- Living Environments
- Employment
- Learning
- Transportation

Source: Pew & Van Hemel (2003)

Living Environments

- **Private households**
- **Collective dwellings**
  - Supportive housing
  - Assisted living settings
  - Care facilities
  - Hospitals

Technological Developments Related to Living Environments

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- Environmental Control (e.g. heat, light, doors, windows, etc)
- Assistive devices that compensate for motor, sensory or cognitive difficulties
- Monitor and response systems, both for emergency response to crisis situations and for early warning for less critical and for emerging problems
- Social Communication aids

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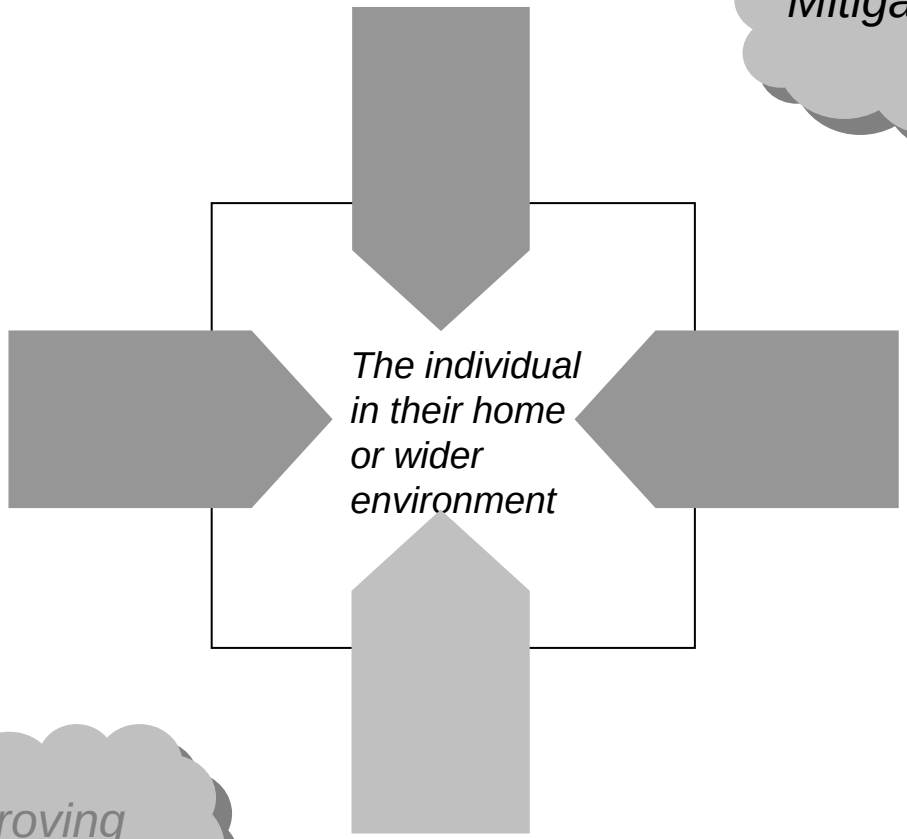
Functional disability is a key determinant of moves from independent living

- In AL in USA typical resident requires assistance with 3 ADLs & approx. 50% have some cognitive impairment (Mollica, 1998)
- In NH in USA typical resident needs assistance with 4.7 ADLs and 75%-86% have cognitive impairment (Cohen & Miller, 2000)
- For every 1 in AL or NH, there are 2 equally frail living in the community. The key mediating factor is the availability of social support. Technology may also play a role in enabling people to remain in less restrictive environments/delaying AL or NH placement.

Safety and security monitoring, e.g.
Bath overflowing, gas left on, door unlocked

Mitigating risk



Personal monitoring:
- Physiological signs
- Activities of daily living

Information & communication, e.g.
health advice, triage, access to self-help groups

Improving functionality

Electronic assistive technology, e.g.
environmental controls, doors opening/closing, control of beds

Source: Barlow et al (2004)

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Assistive Devices

- **Mobility aids**
- **Cognitive orthotics – these range from simple reminder systems to robotic assistants**
  - Support executive function
  - Rehab/compensative technology

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Communication may be:

- Between people
- From a person to a system
- From a system to a person

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Internet Use by 65+ Population

- USA – 42% in 2002
- 75% in 2021

according to Pew Research Center

On-line Activities

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- Stay in touch with friends & relatives 94%
- Stay current with news & events 72%
- Research health information 70%
- Make purchases online 52%
- Research other topics 51%
- Research products & services to purchase offline 49%
- Research/check stocks & investments 38%
- Play games 35%
- Genealogy Research 27%
- Access discussions 17%
- Access chat rooms 13%
- Buy/sell on eBay 12%
- Other 15%
- Source: 2002 SeniorNet survey

Social Media Use 65+ Population

- While younger age groups use a wide variety of social media including Instagram and Snapchat, the majority of social users age 65+ only use Facebook
- 2018 – 41% Facebook, 9% Linked in
- But in 50-64 age group 65% have a Facebook profile, 24% Linkedin, 21% Instagram

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Tech Product Purchase by 65+

- 2019 AARP national online survey found that 51% of older Americans had bought some tech product in the prior year
- Smartphone (23%)
- Computer (12%)
- Smart TV (11%)
- Tablet (10%)
- Smart home device (12%)
- Wearable device (7%)

Health

Changing view of healthcare:

- From responding to disease
- To an attitude of “How can we help people to live their life well?”

Transition in healthcare delivery

- From clinic-centred model
- To community-centred model
- Since COVID-19 to telemedicine

Uses of technology include:

- Health information
- Health monitoring
- Enabling independent living

IT and Wireless Technology Aiding Elderly and Disabled

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- Environmental control devices (e.g. heat, light, doors, windows)
- “Smart” homes and appliances
- Mobility aides (e.g. “smart” walkers/wheelchairs)
- Personal Emergency Response Systems (e.g. Life Line)
- Movement monitoring systems that use Global Positioning System to extend in-care monitoring systems outdoors
- Cognitive orthotics including various reminder systems, using task sequencing strategies and artificial intelligence

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Care-giver Aids

- Power Assist suit– works with a computer that controls airbags (e.g. Nakamura, 2004)
- Robotics

Barriers to Technology Transfer from Research to Manufacture

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- **Cost – especially for customization**
- **Lack of understanding of the market**
  - Seniors are not a homogeneous group; neither are "Boomers"
  - It is important not to over-compensate for real (or imagined) physiological (and social) losses

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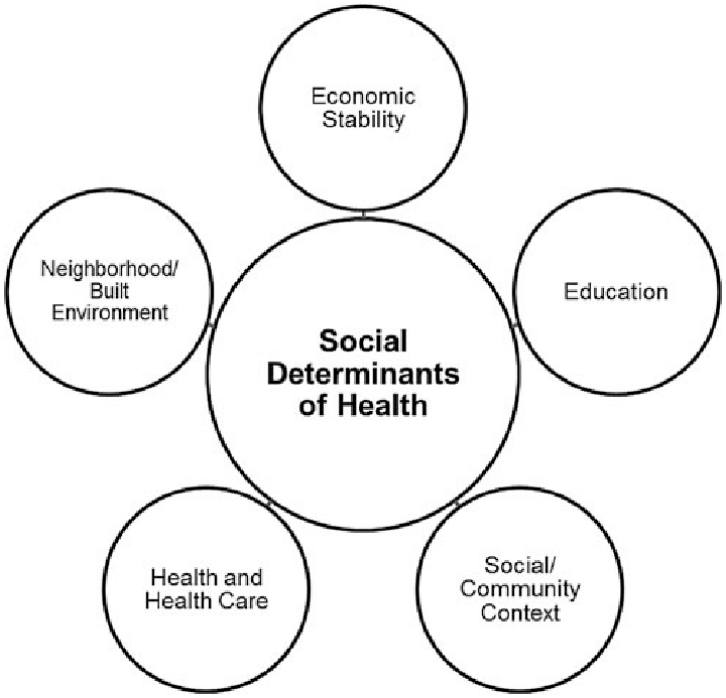
Key Issues for Acceptance of Technology by Seniors

- Accessible -- not just for wheelchair users
- Affordable
- Appropriate
- Attractive
- Acceptable -- not stigmatizing
- Alternatives

Social Determinants of Health



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WHO Determinants of Active Ageing

Thank you

Gloria M. Gutman, PhD

Gerontology Research Centre

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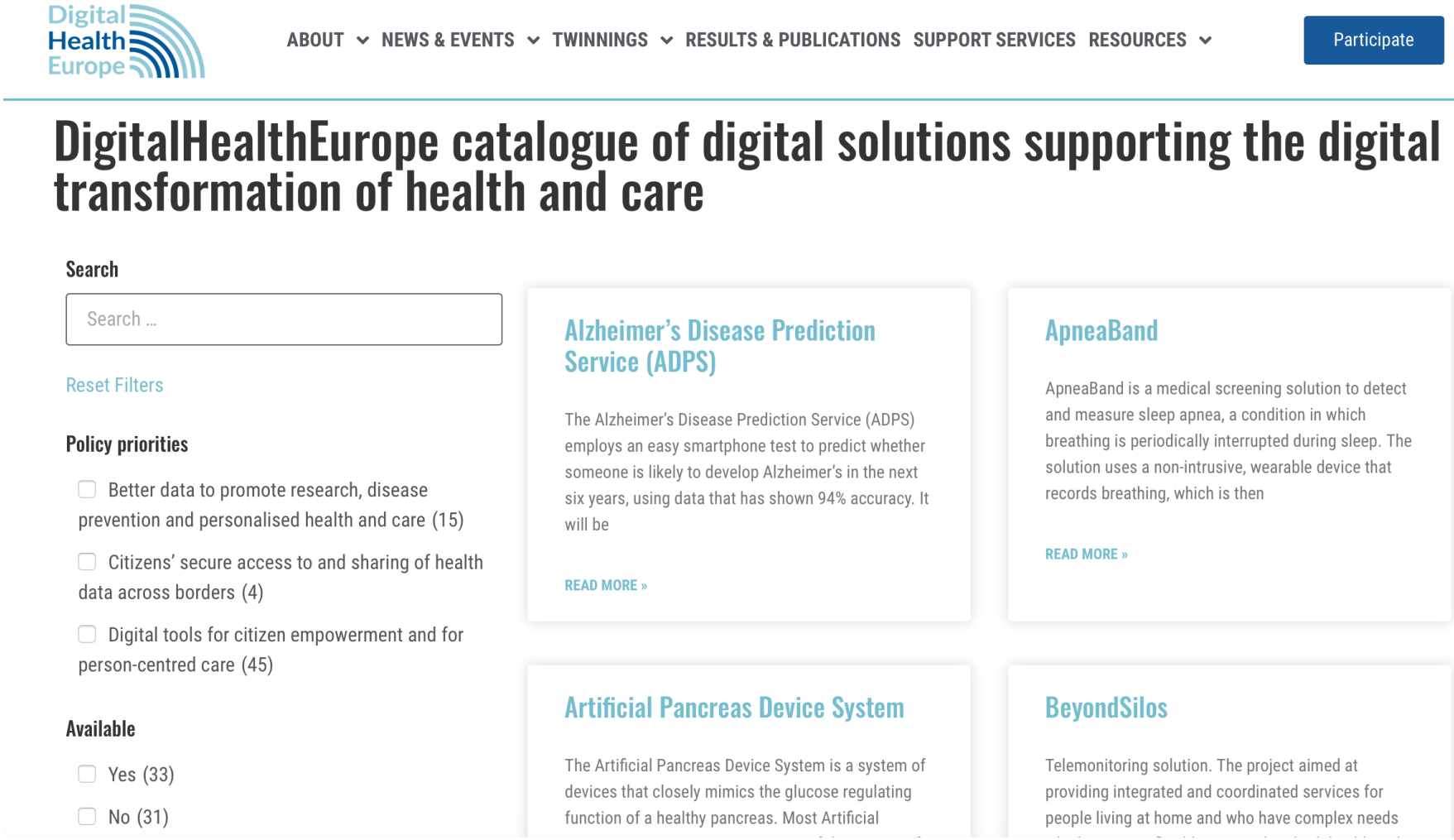
Accessibility of Digital solutions for AHA

Jose Usero

Catalogue of 64 digital solutions



Digital Health Europe

ABOUT NEWS & EVENTS TWINNINGS RESULTS & PUBLICATIONS SUPPORT SERVICES RESOURCES Participate

DigitalHealthEurope catalogue of digital solutions supporting the digital transformation of health and care

Search

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Policy priorities

- Better data to promote research, disease prevention and personalised health and care (15)
- Citizens' secure access to and sharing of health data across borders (4)
- Digital tools for citizen empowerment and for person-centred care (45)

Available

- Yes (33)
- No (31)

Alzheimer's Disease Prediction Service (ADPS)

The Alzheimer's Disease Prediction Service (ADPS) employs an easy smartphone test to predict whether someone is likely to develop Alzheimer's in the next six years, using data that has shown 94% accuracy. It will be

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ApneaBand

ApneaBand is a medical screening solution to detect and measure sleep apnea, a condition in which breathing is periodically interrupted during sleep. The solution uses a non-intrusive, wearable device that records breathing, which is then

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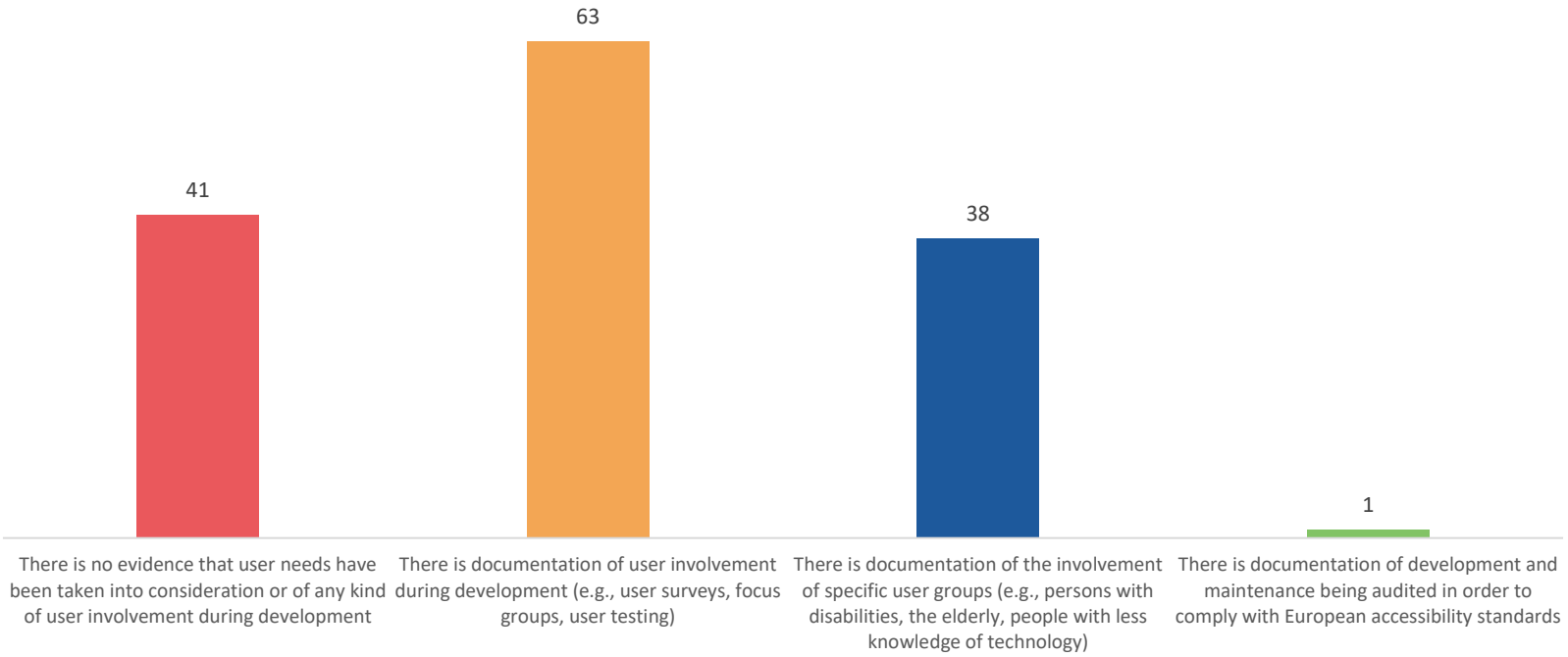
Artificial Pancreas Device System

The Artificial Pancreas Device System is a system of devices that closely mimics the glucose regulating function of a healthy pancreas. Most Artificial

BeyondSilos

Telemonitoring solution. The project aimed at providing integrated and coordinated services for people living at home and who have complex needs

User involvement



Accessibility context

Directives

- Web Accessibility Directive
- European Accessibility Act
- Procurement directive – article

Ministerial Declarations

European Commission. Ministerial Declaration on eGovernment - Tallinn declaration. 2017.

European Commission. Berlin Declaration on Digital Society and Value-Based Digital Government. 2020.

Thank you for your attention!

IDIH

INTERNATIONAL COLLABORATION
DIGITAL TRANSFORMATION
HEALTHY AGEING

Inclusive Design for Inclusive Ageing

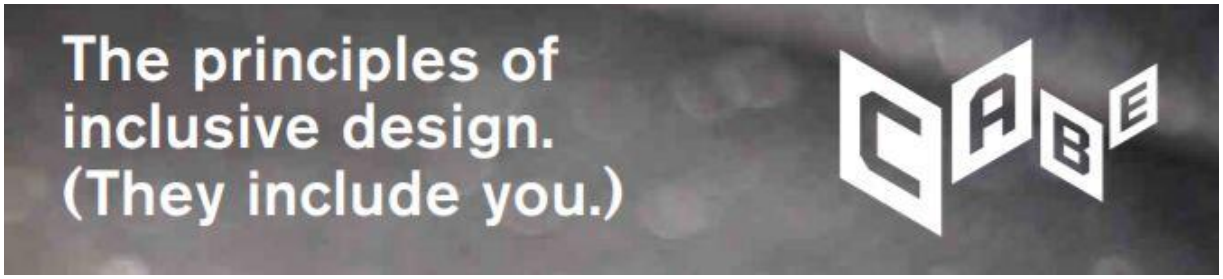
DR MATTHEW LARIVIERE
LECTURER IN SOCIAL POLICY
UNIVERSITY OF BRISTOL

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

What do we mean by inclusive design?

Design is a futures-oriented way of thinking.

It requires us to think not only about the current context of use and people's goals but to imagine how we can do things better.



Inclusive design…

-Places people at the heart of design processes.

-Acknowledges diversity and difference.

-Offers choice where a single design solution cannot accommodate all users.

-Provides flexibility in use.

-Makes products satisfying or enjoyable.

Design Council, 2006.

Inclusive designers often evaluate user experience (UX) based on three principles:

1. Effective – how well does the new thing (technology, service, etc) let us achieve our goals.
2. Efficient – how long (time, clicks, etc.) does it take to achieve our goals.
3. Satisfying – how enjoyable is the experience.

What do we mean by inclusive living?

Inclusive Living

The processes and outcomes associated with a person‘s meaningful involvement in all aspects of personal, familial, community, civic, and social life.

Drawing on work on wellbeing (McGregor, 2018), inclusive living outcomes can be evaluated across three domains:

- Relational – social connections with family, peers, neighbourhood, community, nation, companion species, environment.
- Material – access to safe and affordable housing, age-friendly/universally accessible public spaces, income/assets, infrastructure to facilitate connectivity and participation in different sociocultural occupations.
- Subjective – personal sense of feeling included, affective/emotional responses to inclusion/exclusion, wellbeing.

Outcomes may be linked across many or only a single domain. For example, an older person may use ICT technology that makes them *feel* (subjective) more *connected* to family members living in a different area (relational).

Does ageing present particular challenges to inclusive living?

Social exclusion is not an age-related problem.

Ipsos Mori (2017) report on social exclusion in London highlighted people aged 15-34 more likely to feel isolated from others when compared to people aged 55+. **However, there was no statistical significance when controlling for age across the life-course.**

Inclusive design that informs the development of new technologies to ensure people remain connected and included may address this growing social problem across the life-course.

THANK YOU FOR YOUR ATTENTION!