

Eva Theresa Jahn<sup>1</sup>, Sofia Santos Nunes<sup>2</sup>, Marine Luc<sup>2</sup>, Milene Moreira<sup>2</sup>, Toshimi Ogawa<sup>3</sup>, Yasuyuki Taki<sup>3</sup>, Rainer Wieching<sup>1</sup>, Volker Wulf<sup>1</sup>

<sup>1</sup>University Siegen, Institute for New Media & Information Systems, Siegen, Germany

<sup>2</sup>Age Platform Europe, Brussels, Belgium

<sup>3</sup>Tohoku University, Sendai, Japan

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### BACKGROUND

The e-VITA project represents a significant collaborative effort between Europe and Japan, aimed at leveraging advanced digital solutions to support Active and Healthy Ageing (AHA). As both regions grapple with the challenges posed by an increasingly aging population, such as healthcare sustainability, social integration, and economic pressures, e-VITA addresses these issues through the development of an innovative virtual coaching system tailored to the diverse needs of older adults. The project's primary objectives include enhancing the quality of life for older adults through personalized health management, empowering them with user-friendly and culturally sensitive technologies, and promoting sustainable and scalable AHA solutions through robust stakeholder engagement. 22 interdisciplinary participants, 12 from Europe and 10 from Japan, have worked together and used a total of six test centers in Germany, France, Italy and Japan.



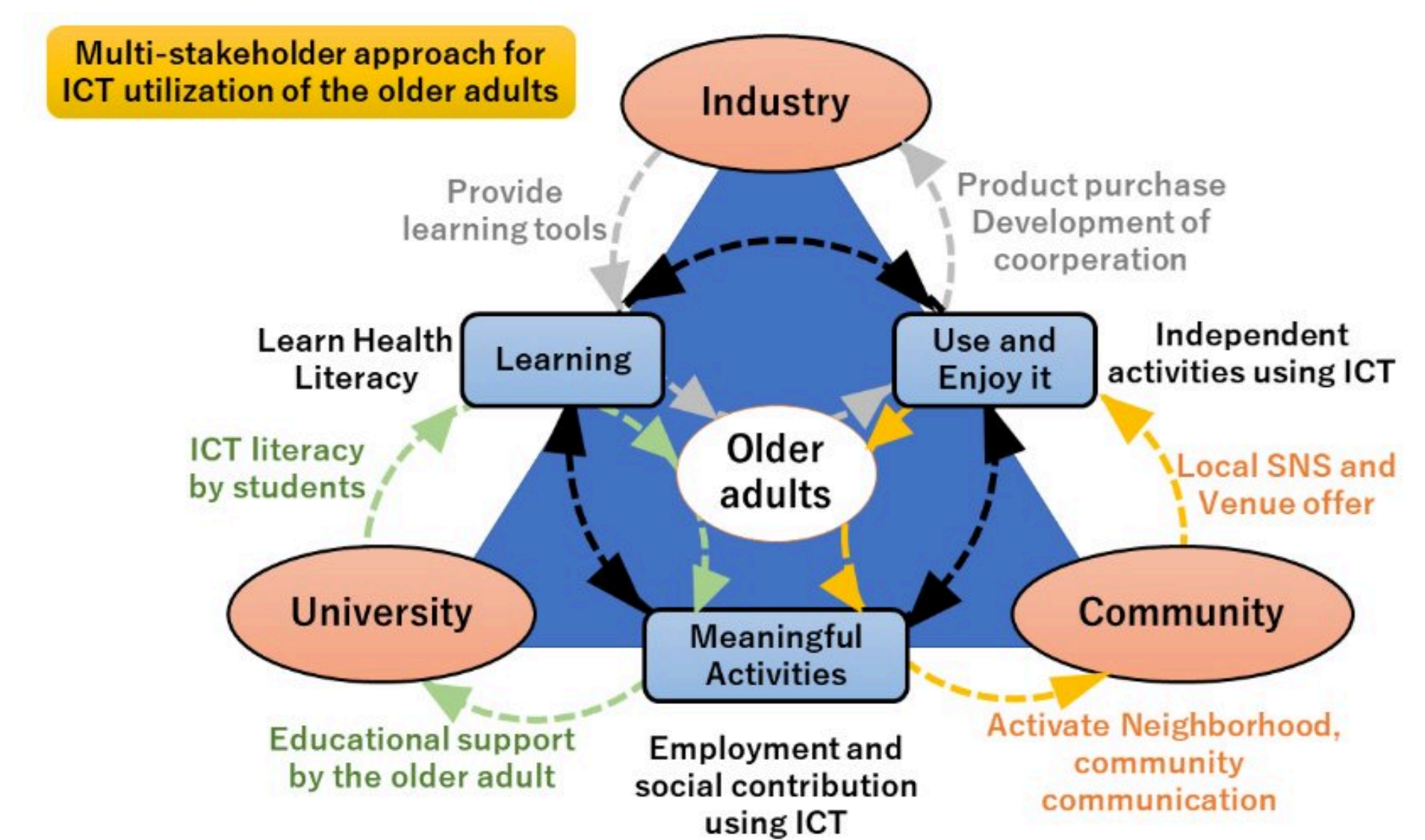
### DEVICES



- The e-VITA virtual coach used different representation systems:
- **NAO**: a humanoid robot by Aldebaran Robotics, 74 cm tall, 25 degrees of freedom, autonomous mobility
  - **Gatebox**: a 3D virtual coach with 720p resolution screen
  - **ExBrain**: an ultra-compact device for measuring brain activity, Bluetooth 4.1LE
  - **DarumaTO**: a social robot resembling a traditional Japanese Daruma doll with print function
  - **TYXAL**: a wireless motion detector for security and monitoring
  - **SanTo**: a 2 degrees of freedom robot designed as a small interactive statue of a Christian Catholic saint
  - **Android**: a humanoid communication robot by AIST and Prof. Hiroshi Ishiguro from Osaka University, 12 degrees of freedom

### METHODOLOGY

The e-VITA project utilized a comprehensive and interdisciplinary approach encompassing user centered design, iterative development, and extensive field-testing in real-life environments, known as LivingLabs. The initial phase involved extensive stakeholder analysis to identify key participants, including older adults, caregivers, healthcare professionals, and policy-makers. User interviews, surveys, workshops, and focus groups were conducted to gather in-depth insights into the needs, preferences, and challenges faced by older adults. This information was used to develop the first prototypes of the virtual coaching system.



### MAIN OUTPUTS

#### E-VITA COACHING SYSTEM

Built to empower older people well-being, our system included several innovative components like chatbots for nutrition and physical exercise, use cases configurator, knowledge graphs for active and healthy living and ageing.

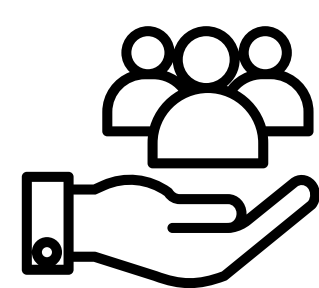
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#### E-VITA SOCIAL PLATFORM AND PHYSICAL TRAINING APP

In our pilot sites and living labs, we have set up a social platform through which local stakeholders (e.g., sports clubs, NGOs) can offer services or events to older people, thus facilitating intergenerational exchange.

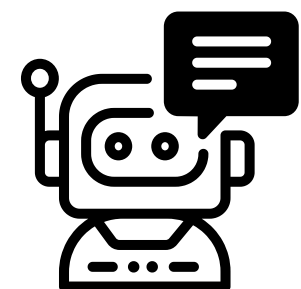
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#### CONVERSATION-BASED COACHING DEVICES AND SENSORS

From social robots and holograms to environmental and physiological wearable sensors, e-VITA tested everything to guarantee sociality and acceptance to different groups of older people!

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#### DESIGN TECHNOLOGY WITH OLDER ADULTS

Living Labs' praxilabs methodology used in e-VITA uniquely evaluates and refines emerging technologies with stakeholders in real-world settings, bridging the gap between innovation and practical application.

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#### AGEING EQUAL PODCAST

We welcomed speakers working on ageing issues, such as researchers, advocates for older people's rights, older and younger people sharing their experiences and expectations.

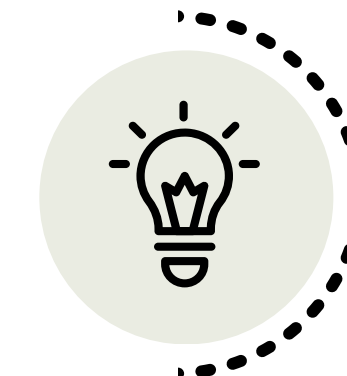
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### LESSONS LEARNED

#### 1 IMPORTANCE OF USER-CENTRIC DESIGN

Invest in intuitive design and user training to make technology more accessible to older individuals. Simplifying procedures, sharing ownership and providing clear instructions can significantly improve adoption.



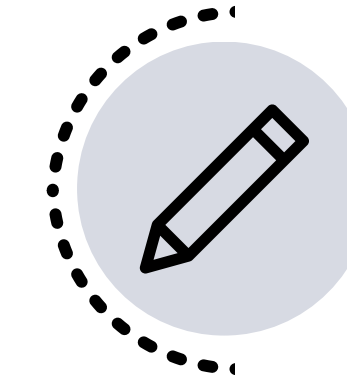
#### 5 SUSTAINABILITY AND ACCESSIBILITY

To address economic barriers, innovative funding models such as public funding, health insurance benefits, subscriptions, or leasing options should be explored. This type of technology is still highly expensive and not accessible to older people.



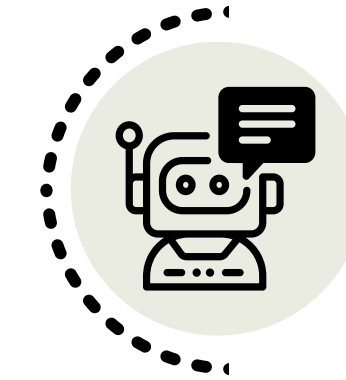
#### 2 FIGHT AGEISM: OLDER PEOPLE ARE NOT 'ALL THE SAME'

The project revealed the diversity and individual differences within the older population, including in language barriers and in digital skills, emphasizing the need for personalization and inclusivity.



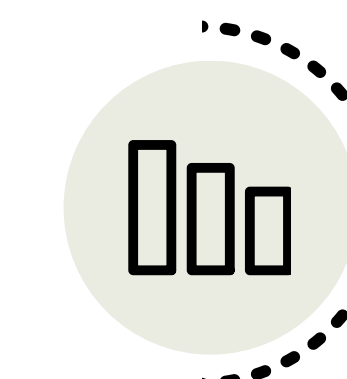
#### 6 EMBRACE PERSONALIZATION

Recognize the diverse needs and preferences within the target population by offering customizable features, including language options, and by making the technology adaptable to various levels of tech-savviness.



#### 3 NEED FOR TRUST AND SECURITY

Address data security explicitly and ensure transparent communication regarding how data is used. Give users control over what data they share and who has access to it.



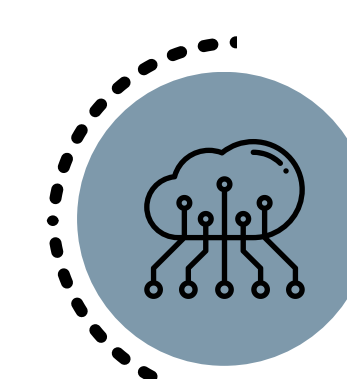
#### 7 MULTIDISCIPLINARY APPROACH

Collaboration with different professionals and stakeholders as older people family, healthcare providers, municipalities, developers, researchers, etc., in co-designing sessions can enhance the value and effectiveness of the project.



#### 4 ENSURE INTEROPERABILITY OF SYSTEMS

Incorporating e-VITA and new technology into existing systems and ensuring it is not seen as a substitute for human interaction but as a complement, posed significant challenges.



#### 8 EDUCATIONAL PROGRAMS AND SUPPORT

Implement digital education programs targeted at older individuals and their family to boost their confidence in using new technologies. Providing ongoing support and reassurance can help mitigate fear and resistance if they exist.

