

E-VITA NEWSLETTER #3

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EU-Japanese virtual coach developed for and with older people

The e-VITA virtual coach provides a solution built on socio-technology excellence of "Made in Europe" and the excellence of technology "Made in Japan", by combining the most advanced partners and expertise from both areas, and by following the concepts from Society 5.0 (Japan) and Digital Europe (EU).

The e-VITA virtual coach will provide personalized recommendations and interventions to older people, for sustainable wellbeing in a smart living environment at home, through different technologies.

In a first step, research centres, IT companies and Universities in Europe and Japan developed the interactions with the users, specifically the so-called Natural Language Processing (NLP). The challenge was to make technologies directly interact with older adults through the voice, listening and answering to requests.

For the first time in research, technologies of the e-VITA coaching system such as Gatebox, OuraRing, NeU and chatbots were tested by 22 older persons for 2 to 7 weeks in Japan, Germany, France and Italy in their private homes.

The older people show that:

- They would like to receive information and recommendations in different ways (audio and visual).
- Robots seem to be the preferred technology for interaction.
- Older people would like to choose the voice, the physical aspect, and the avatar.
- The system must be able to answer the participants' questions accurately and converse continuously.
- Older people would like to turn on/off the coach so it does not intervene in their daily and social life.
- Different devices should be integrated e.g. that a reminder is provided by a robot but also by the smartphone.

What's next?

Based on the feedback from older people, the e-VITA coaching system will be adapted to be more of a conversational companion that can be switched on and off. The adapted e-VITA virtual coaching system will then be tested in 2023 with 180 people.

If you would like to know more about the first wave please follow the link of the press release issued by the 12th of September: <https://www.e-vita.coach/wp-content/uploads/2022/09/eVITA-PR-MT-of-the-project-1.pdf>



e-VITA Mid-Term conference

e-VITA Mid-term conference was held on July 14th and 15th, 2022, organized by AIRC/AIST, in cooperation with other consortium partners. The conference aimed to discuss the achievements at the halfway point of the project as well as to strengthen international cooperation. The conference was originally planned as an in-person conference, but it was held as a fully virtual conference due to COVID-19 situation.



The conference had four sessions: “Knowledge-aware conversational AI for virtual coaching of community-dwelling older adults”, “ICT support for aging well and good health”, “Policy perspectives to support ageing well in Europe and Japan”, and “Exploitation – silver economy and market”. We had four keynote presentations, twelve presentations both by the e-VITA consortium members and by the invited speakers from various field, and two special sessions for demonstration and presentation of experimental results.

The number of registrants was 115 both from EU and Japan, and total participants of this two-day event (including consortium members) was more than 150.

Project - Objectives

Socio-Technical System with Robots, Smart Devices and Trustworthy AI



- **Objective 1:** Develop a set of standards and norms for interoperability of advanced IoT, NLP and AI based smart living technology in Europe and Japan
- **Objective 2:** Develop an advanced intercultural virtual coach with seamless integration of smart living technologies, advanced AI and tailored dialogue interaction
- **Objective 3:** Enable smart living support and tailored AHA interventions for physical, cognitive, emotional, and social wellbeing of older adults in real-life settings in Europe & Japan
- **Objective 4:** Propose and design practice-based ICT tools to empower older adults to experience ageing as a positive process and meaningful period of life
- **Objective 5:** Conduct a proof of concept study to assess user acceptance in real-life environments from different countries and cultural backgrounds (EU/JP)
- **Objective 6:** Explore the feasibility of a new ecosystem for disruptive innovations of AHA coaching and incubation of SMEs and NGOs in Europe and Japan

When Art meet Science from Yves Gellie



[Yves Gellie captured precious moments](#) of interaction between e-VITA tested robots and older persons in Japan and Europe.

Yves Gellie has been exploring robotics and artificial intelligence as a photographer and filmmaker for several years. His last movie, “The year of the Robot” (2019), has received 17 international awards and is now regularly screened in contemporary art museums. By studying further, the prospects of an intimate dialogue between human and machine in the E-Vita project, Yves Gellie depicts a close future where robots will be able to break the “older adults” isolation by accompanying and supporting them on their daily life.

These videos take the viewer through personal stories made of desires, fears and emerging relationships where the robotic and human protagonists ask each other about their future life together.

The footage includes different shots made in in Germany, Japan and France, allowing us to perceive the different cultural approaches between Asia and Europe.

[Portraits of the researchers from e-VITA:](#) filming interviews from Yves Gellie of the various researchers we have in the project e-VITA in Japan, Germany and France.



A New Life Stream ©Yves Gellie

Consortium meeting in Cologne in June , 2022



The EU side of the project met in person for the first-time last June in Cologne for 3 days of Consortium Meeting connected online with the colleagues from Japan. We thank the organisers of this meeting and particularly Johanna Möller from the Diözesan-Caritasverband für das Erzbistum Köln for the great hospitality! It was a nice opportunity to take stock from the first pilot study and reflect on the future development of the platform according to the feedbacks from older adults. Rainer Wieching, European consortium coordinator of the project nicely answered to an interview during the consortium meeting, available on YouTube and produced by Michele Bigi from INRCA. [Interview Rainer Wieching.](#)



EU – Japanese Review meeting by the MIC and EC, July, 2023

After our Consortium meeting in Cologne, we had the opportunity to present the work done by the consortium, 18 months after the beginning of the project. This review meeting took place over two days in July and brought online together the Japanese and European reviewers, as well as the representatives of the different work packages of the project. A live demonstration of virtual coaches was done from the living lab of Germany. This review meeting was an opportunity for the consortium to receive valuable advice for the continuation of the project and the future development of the platform.

Visit to Japan from the EU coordinator, Rainer Wieching

The European coordinator of the project Rainer Wieching from the University of Siegen went to Japan from the 10th to the 20th of September 2022, to visit the Japanese partners and to participate with them in the working meetings on crucial topics for this phase of development of the project.

The visit started in Tokyo to meet the colleagues from WASEDA University, developing 2 devices used in e-VITA, DarumaTO and CeleSTE. The meeting was an opportunity to provide updates for the re-designed phase of the devices, including safety specifications, a demonstration of the Pillow Prototype and a meeting with Professor Shigeki Sugano, Professor of Engineering degrees in mechanical engineering, from the Department of Modern Mechanical Engineering, School of Creative Science and Engineering.

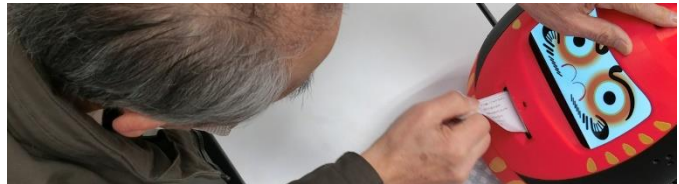


Figure 1 A prototype from Waseda University



Figure 2 Japanese partners met in J.F. Oberlin University for the JP weekly meeting

The visit continued in Tokyo with a meeting in J. F. Oberlin University welcomed by Dr. Shuichiro Watanabe, where colleagues from Tohoku University (Mr. Takamitsu Shinada, Dr. Halima Sultana, and Dr. Toshimi Ogawa, JP coordinator), Gatebox (Mr. Shuji Nishizaki), Waseda University (Dr. Yegang Du), AIST - National Institute of Advanced Industrial Science and Technology (Dr. Keiko Homma), Misawa Homes Institute of Research and Development Co., Ltd (Ms. Asako Ohara) met together on the weekly JP meeting.

Topics discussed were the development of the RASA system, the integration of the sensors, and further development of the Human Coach Concept.

Then, Dr. Rainer Wieching and Dr. Toshimi Ogawa, the Japanese coordinator of the project, met at Sendai, where Tohoku University is located. This venue was the opportunity to meet the Digital Arts School, Mr. Kazuhiro Sugawara,



Figure 3 Left to right, Mr. Imura, Martin, Rainer Wieching and Mr. Kazuhiro Sugawara.

the director of the school and Mr. Imura, a musician and instructor for digital technology, who has been involved with the research activities at Tohoku by co-creating lectures and educational materials for human coach (left side the picture 3), and also Martin Rathmann from German Materna Company working in Japan.

The courses offered for older people and for human coaches have been very successful and range from creating a QR code to using a smartphone in a fun way to editing videos that users have taken themselves. Coaches who have taken its courses now volunteer to teach other senior organizations. The involvement of this private company in the project had an impact on the Sendai Municipality, which helped us contact some districts in Sendai with particularly high populations of older people to participate in the study.



Figure 4 Android robot in a nursing home with older people and care staff in Sendai

Digital Arts Studios offered to use their nursing home for the Android Study. The coordinators went in the home for a workshop with end user and the care staff with the director of the nursing home. The staff (picture 4) was very interested in the project, through its approach of user-centeredness rather than technology-centeredness.



Figure 5 Living Labs from Tohoku University in Sendai

The visit in Tohoku University was also the opportunity to visit the Living Labs where experiments from the Work Package 6 on Practice Based Design in Intercultural Living Labs are realised in Japan.

Finally, coordinators met with Local Community of Workers for Human Coaching in the Proof-of-Concept Study



Figure 6 Meeting between e-VITA and a local community of workers for Human coaching in Sendai



Coming back to Tokyo, Rainer Wieching met with Dr. Gabriele Trovato from the SHIBAURA Institute of Technology, leader of the Work Package 6, Practice Based Design in Intercultural Living Labs, and Dr. Du Yegang from WASEDA University, who is responsible for DarumaTO and CelesTE developments. The meeting was the opportunity to re-design the hardware and software for both CelesTE and DarumaTO for the

Proof-of-Concept study.

Figure 7 Left to right, Yegang Du, Rainer Wieching and Gabriele Trovato

Then a meeting was held with Mr. Shuji Nishizaki from GATEBOX for the re-design of the hardware and software of the device for the Proof-of-Concept study.



Figure 8 Picture with Shuji Nishizaki and Gatebox device in the back

The coordinator finalized his visit meeting Ms.Asako Ohara from Misawa Homes Institute of Research and Development Co., Ltd. This was the opportunity to discuss about the dissemination and exploitation activities, and to present an innovative Housing Concept for the Future of Community Dwelling Older Adults in Europe and Japan.



*Figure 9 Asako Ohara from Misawa Homes
Institute of Research Development Co. Ltd*

EVENTS

eVITA partners will attend and contribute to several events across Europe and beyond in the next few months. If you know any other relevant events, please do not hesitate to [email us](#) and ask for a presentation of our research and innovations.

- **September 30, 2022, Ancona, Italy:** IRCCS INRCA will participate to the European researcher's night in Ancona, SHARPER: <https://www.sharper-night.it/>
- **October 18-20, 2022, Gdansk, Poland:** Ageing well week 2022 (AAL) The EUROPEAN WEEK OF ACTIVE AND HEALTHY AGEING <https://ageing-well-week.eu/>
- **October 18-21, 2022, in Nara Japan or Virtual:** 10th international conference on affective computing & intelligent interaction (ACII 2022) where Kristiina Jokinen from AIST and Graham Wilcock will present a paper "Towards multimodal expression of information reliability in HRI". <https://acii-conf.net/2022/>
- **November 8, 2022, Paris, France:** AP-HP will present a poster entitled "Co-design of specifications for a virtual coach promoting the well-being of seniors at home" at the 42nd Annual Meeting of the French Society of Geriatrics and Gerontology: <https://jasfgg.com/>
- **November 14-17, 2022, Düsseldorf, Germany :** MEDICA "Where healthcare is going" <https://www.medica-tradefair.com/>
- **November 29-30, 2022, Paris France :** Silver Economy Expo 2022 https://www.silver-economy-expo.com/silver-economy-expo_hp_eng/ Join us at

this 100% professional show which brings together the Silver Economy's main players.

- **December 13th-16th 2022, Florence, Italy:** ICSR 2022 – 14th International Conference on Social Robotics

Our last podcast is out!



[This episode is the first one from three episodes](#) interviewing Elizabeth Mestheneos, sociologist and strong profile in the field of research around Active and Healthy Ageing. As a member of the Ethical Board of e-VITA, Liz provides her opinion and advice to developers and researchers in the field of AI, ICT development, and robotics to take into consideration older people's rights and preferences considering older people as individuals and not as homogenous group of people with same wishes, same needs and same challenges.



Liz is a past President of Age Platform Europe and founder member of 50plus Hellas. After leaving the UK and an academic teaching job, Liz moved to Greece into film production. She helped found a research company and had 20 years of experience in R&D on social issues including ageing. Liz in 2005 was a founder member of 50plus Hellas, an NGO concerned with the human rights and active participation of older people, acting as CEO until 2016. She served on AGE Platform Europe's Board from 2003 and as its President 2008-11. She was on the Board of IFA 2008-2015 and visited Japan then. She is emeritus member of the Board of the Hellenic Association for Gerontology and Geriatrics, supporting the e-library. (www.gerolib.gr) Her mission is to represent older

people's perspectives, especially in the use of ICT. She has worked as juror on many EU projects and is always concerned with their ethical dimensions, hence her interest and involvement in the ethics Board of e-VITA. Her articles are on Research Gate, and she is trying to finish writing a book on Greek post cards of older people.

You can listen the podcast buy clicking the link above:

<https://anchor.fm/marine-luc/episodes/The-one-with-Elizabeth-Mestheneos-on-decrypting-how-AI-and-ICT-developers-should-promote-older-people-rights-for-e-VITA-e1og4me>

<https://open.spotify.com/episode/761kaP8d6AGvxmrq5DX3W5?si=NE-200hCT4SnlojbUG6O8A>

PUBLICATIONS

Please take a look to our last publications on our website : <https://www.e-vita.coach/publications/>