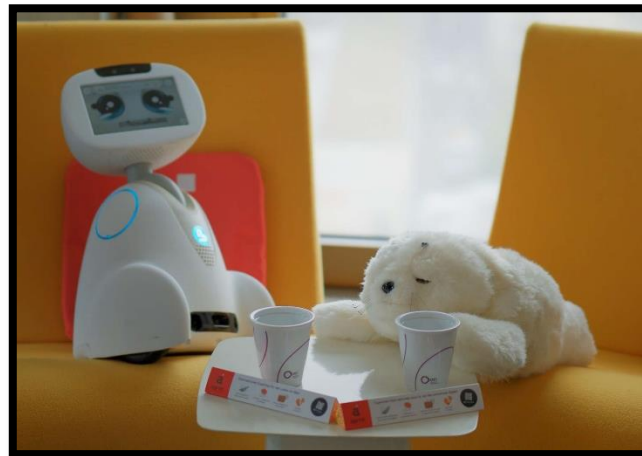


## Roadshow 2023: New technologies - new age(s)?

### Final report



## Roadshow 2023: New technologies – New Ways of Age(ing)? Final report

### Background

Like other countries around the world, Switzerland is experiencing a very strong ageing of its population and thus is undergoing a demographic transition due to increasing life expectancy and a declining birth rate. The number of people aged 65 and over will increase from 1.5 million (2015) to 2.2 million (2030) (BFS 2015). In addition, the number of very old people will continue to increase.

To address this emerging societal structure, various research projects are being conducted in Switzerland, among which one of the largest is the [AGE-INT project](#), led by the Institute for [Ageing Research \(IAF\)](#) of the OST, Eastern Switzerland University of Applied Sciences.

The aim of the project, amongst others, is to identify best practice examples of how to deal with an aging society on a national and international level, to present them and make them tangible to a broad audience. One approach that has become increasingly popular in recent years for dealing with the challenges of demographic change is the use of **digital or technological support systems**.

One of the main problems in this specific field is that research findings on the opportunities offered by digital technologies, technological innovations or robots are not (sufficiently) familiar to the target age group outside the academic world. In addition, access to information about existing products is insufficient. Therefore, many people do not know which technical support offers are or will be available on the market and are often not sufficiently informed about current developments.

The technology roadshow "[New Technologies - New Ways of Age\(ing\)?](#)" aims to reduce unawareness in the population, respectively to promote a critical dialogue by bringing and presenting selected technologies to the population.

The three major language regions of Switzerland are/were therefore visited in 2022, **2023** and 2024 with a barrier-free trailer. This year's route (2023) led from Chur via Bellinzona, Fribourg and Basel to Zug. In each of the cities, a central location served as a stopover point, where people could spend a day visiting the exhibition and learning about technologies for seniors.



Trailer in front of the «Bildungszentrum Gesundheit und Soziales» (BGS) in Chur

## The Roadshow 2023: A Review

### Advertising

The roadshow was promoted through the communication channels of the OST and through local partners (e.g., BGS in Chur, Marktplatz 55+ in Basel, City of Zug, or senior citizens' associations) as well as the Institute for Ageing Research (LinkedIn and Institute network).



*Advertising in Zug*

### Execution of the Roadshow

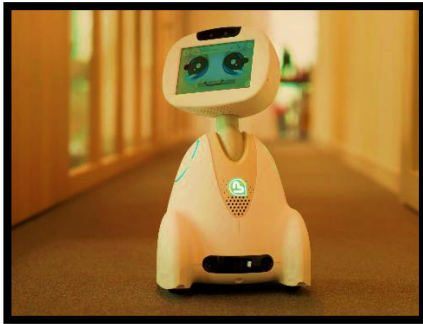
The roadshow took place in Chur, Bellinzona, Fribourg, at the Marktplatz 55+ in Basel as well as in Zug and was accordingly held in three national languages (German, French and Italian). Depending on the location, the number of visitors varied between approximately 40 and 100 people, with the majority being over 60 years old and slightly more women visiting the exhibition. In addition to older adults 60+, our traveling exhibition was also visited by relevant organizations in the field of ageing such as Alzheimer's and several people from the health sector.

### Exhibits

The exhibits ranged from high-tech objects such as robots to low-tech or no-tech objects such as memory boxes, cutlery, or furniture (see detailed description of the exhibits below). There was explicitly no brand advertising, and the functionality of the exhibits was described and explained objectively. In addition, videos of selected research projects were taken along and shown on tablets.

## Technological devices

### Buddy



Manufacturer: [Blue Frog](#)

Functions: 3 wheels, high mobility, can move head, show emotions, 56cm, 5kg, 16GB, 8-10h battery, iPad control (communication), monitoring function, open-source

Short description: BUDDY can be used for child supervision, as a playmate for children with disabilities, as assistive technology for adults and as a companion robot for older adults. Buddy can remind older adults to take their medication or keep appointments, while also serving as a communication technology.

Price (2023): From € 3,579 incl. VAT (without software, programming, installation & training) (cf. [Price on Leobotics](#)).

General Feedback: Buddy's appearance was described as cute and appealing.

### NAO



Manufacturer: [SoftBank Robotics](#)

Functions: 60 cm, 5.2 kg, battery approx. 60-90 minutes, head = 1.6 GHz Intel ATOM Z530 processor (a secondary processor is in the torso) and two integrated HD cameras with 30 fps, programming tool, open source

Short description: NAO is a humanoid robot from the French manufacturer SoftBank Robotics and a well-known programming tool. NAO is used, among other things, as a therapy robot (exercise or intervention therapy) in healthcare facilities to greet, inform and/or entertain visitors or older adults.

Price (2023): CHF 12'950 (cf. [Price on educaTEC](#))

## Paro



Manufacturer: [Takanori Shibata \(Japan\) National Institute of Advanced Industrial Science and Technology \(AIST\)](#)

Functions: 2-5 kg, 60 cm, soft, responsive

Short description: Paro was originally developed in Japan for the treatment of people with dementia. Today, it is used in retirement and nursing homes worldwide. Paro has a positive influence on the mental state and social behavior as well as on the physiological level (e.g., reduction of stress hormones).

Price (2023): From CHF 2500

General Feedback: Paro was a hit at the roadshow. His cute appearance made him an above-average hit. Only the price was considered too high by many visitors.

## Alpha Mini



Manufacturer: UBTECH Robotics

Functions: Face and object recognition etc.

Short description: Alpha Mini is a small humanoid robot. It can communicate and has face and object recognition and can be used for learning purposes.

Price (2023): From € 1260

## Obi



@Picture belongs to [Kinova](#)

Manufacturer: [Kinova Assistive](#)

Functions: Food aid, 4 bowls, spoon and arm, 3.5 kg, battery 4h

Short description: OBI is a food aid robot with four bowls. The robot arm picks up the food with the spoon and carries it to the mouth. The person using it must still be able to move their head so that they can eat from the spoon and operate a button.

Price (2023): From € 7000,00

General Feedback: Visitors generally talked about Obi for quite some time. For some visitors, the question arose as to whether an eating aid was necessary or whether it would be better for caregivers to take on this task. Others found the autonomy offered by Obi valuable.

## Sensor Fearless

Manufacturer: [Cogvis](#)

Functions: Fall detector

Short description: Using infrared technology and artificial intelligence, the sensor can detect falls without a senior having to press a button. The sensor is mounted on a wall or ceiling and can then monitor part of the room depending on its size. The sensor can also be integrated into the emergency call system and trigger the appropriate alarm.

Price (2023): *Price on request from manufacturer*

General Feedback: Interest in fall sensors was high. People recognize added value for themselves and their relatives.



## Emergency buttons



Short description: Emergency buttons, bracelets, watches, or medallions now come in a wide variety of forms and are equipped with various technical systems. The basic idea is simple: in the event of a health problem or fall, the person concerned can press a button. In this way, he or she contacts an emergency call center or another saved number and can be rescued.

Price (2023): *Price on request from manufacturer*

General Feedback: Emergency buttons already seem to be known and used by the public. The new versatile design has been enthusiastically received.

## CARU care



@ Picture belongs to [Caru care](#)

Manufacturer: [CARU care](#)

Functions: Home emergency system

Short description: CARU care combines the latest technology with outstanding design and thus creates more safety in everyday life. CARU care is a product made in Switzerland, which is developed and produced in Zurich. By voice or pushing a button an emergency call is triggered. It is connected to the 24-hour control center or relatives. For additional safety, severe falls are automatically detected by the sensors on the wrist.

Price (2023): CHF 439 (basic price)

General Feedback: The neutral and attractive design of CARU and the additional air measurement function were well received. There were questions about its use in Switzerland in particular.

## Withings Steel HR

Manufacturer: [WITHINGS](#)

Short description: Withings Steel HR is a smartwatch that monitors physical activity, sleep and heart rate. It is used in health studies, particularly those on sleep, cancer and in the future also Alzheimer's disease.

Price (2023): CHF 180 (basic price)

General Feedback: Visitors mainly told individual stories about medical screening based on health monitoring.

## Aidwatch



@ Picture belongs to [NESTOR](#)

Manufacturer: [NESTOR](#)

Functions: Web-based emergency call/fall alarm

Short description: If a person falls, the aidwatch independently calls an emergency contact. In addition, the smartwatch has a call-for-help button that can be linked to five selected numbers. One press of the button is all it takes to call one emergency contact after another until a person answers the call. Since the aidwatch works with a SIM card, it is the ideal companion both at home and on the road.

Price (2023): CHF 49/month or CHF 539 (rental price)

General Feedback: The design and use of the aidwatch were well received. Above all, the fact that no button needs to be pressed and that the watch automatically recognizes a fall was found to be useful. However, the watch is a little heavy.

## Senopi



Manufacturer: [Senopi](#)

Functions: VR-based (memory) training

Short description: With SenopiMed, users are immersed in a fascinating virtual world and can playfully train their physical and cognitive skills. This innovative VR solution was developed by SenopiVR especially for people over 60. The training includes different difficulty levels and focuses on everyday skills such as arm mobility, executive functions and working memory. As part of residential care, caregivers provide support and track progress via the associated app.

Price (2023): CHF 3000 per headset + annual license fees of CHF 600

General Feedback: Senopi proved to be fun for all ages. Older adults quickly understood how the system works too. The landscapes and graphics were admired. In French-speaking and Italian-speaking Switzerland, there were several requests for a program in their languages.



## Flower



@ Pictures belongs to Ullo

Manufacturer: Ullo (closed)

Functions: Breathing exercises and calming

Short description: Flower is a device for stimulating the senses. Flower offers a new way of coping with stress. It is an interactive, mobile, and lightweight product that guides breathing through light variations in soft or bright colors. Flower is the result of a research collaboration with laboratories specializing in cognitive science and ergonomics. According to various studies, Flower has a positive effect on both users and the working lives of professionals.

Price (2023): € 195

## Online Platforms and Apps

### Easierphone



[EU Project \(AAL\)](#)

Manufacturer: Pappy GmbH (AAL-Projekt)

Nowadays, the smartphone is an indispensable tool in the everyday life of all generations. However, its use is often complicated for older people. As part of a current project, the Institute for Ageing Research is testing a recently developed smartphone app, which should make it easier for older people and those unfamiliar with technology to use their smartphones by simplifying certain functions and navigation. As part of the project, the app will be tested in direct cooperation with various end-user groups (older people, family members) at the Living Lab 65+ of the Research Institute on Ageing at the University of Applied Sciences and Arts Eastern Switzerland (OST), and based on the feedback received it will be refined and improved for the Android operating system over several development cycles. The app can also be used in tandem, so that a younger trusted person (e.g., a child) can directly assist the older person via remote access.

## Wisdom of Age



### [EU Project \(AAL\)](#)

Manufacturer: Pappy GmbH (AAL-Projekt)

With the WisdomOfAge (WoA) project, a modern, flexible and open digital platform is being developed with the aim of connecting companies and adults 55+ with work experience (e.g., in technology and IT). Since the user interface must meet the needs of the end users, they are closely involved in the development of the project from the very beginning. The goal is that through the platform, adults aged 55 and over can easily share their knowledge and experience in the fields of technology and IT with organizations and companies in the form of mentoring, coaching, and consulting.

However, the objective is not limited to mere knowledge transfer, but also wants to promote active and individualized ageing.

## Heroes



### [EU Project \(AAL\)](#)

To meet the local demand for caregivers, the HEROES project aims to make the recruitment of caregivers fast, reliable, and cost-efficient. The project team is developing a digital recruitment platform in which retired individuals and caregivers support private individuals and institutions in the recruitment process of caregivers.

## Bonjour Grow App



### [Bonjour Grow App](#)

Bonjour's Grow app aims to create new inspirations for daily life. The user can choose goals for the week in six areas of daily life. Once the goal for the week is reached, a new flower appears.

Price: free

## Boxes and other innovations

### Impulse box

Manufacturer: [Zeitpolster \(Zeitvorsorge\)](#)

Functions: Facilitates access to difficult topics

Short description: The Impulse Box makes it easier to approach difficult topics. An Impulse Box contains topic cards, a guide and invitation cards. Depending on the thematic area (e.g., dementia or retirement), the questions were compiled in cooperation with the relevant organizations.

Price: € 12

### Experiential box



@Picture belongs to [Komform](#)

Manufacturer: [Komform](#)

Functions: Collapsible box, ring opening, elastic bands to secure contents, compartments for sorting and storage, age-appropriate surface, cleanable with a cloth and list of appropriate items to fill the box

Short description: The thematic experience boxes are designed to awaken memories in older adults and encourage independent action. Pictures, colors, and words as well as tactile elements play an important role. The practical box offers compartments in which to classify and arrange the various elements.

Price: *Price on request from manufacturer*

## Lotte Chair



@Picture belongs to [Girsberger](https://www.girsberger.com)

Manufacturer: Sarah Hossli (Design) / Girsberger ([girsberger.com](https://www.girsberger.com))

Short description: Lotte is a chair that enables users to stand up and sit down on their own, regardless of age and ability. Due to age-related impairments, this often represents a major challenge and restricts the freedom of older people in everyday life. One striking feature is the slightly raised armrests that extend towards the front of the furniture. Thanks to their shape, they can be grasped safely and at the same time serve as a comfortable armrest and offer support when standing up or sitting down.

Price: CHF 2'490

General Feedback: Nearly all visitors tested the chair. Older adults described it as comfortable and chic.

## Everyday helpers

### Integral cutlery



Manufacturer: AMEFA

Short description: The ergonomic cutlery is not only nice to look at but features a special design for people with limited motor skills. The custom-designed spoon shape helps people with limited motor skills to be more independent at mealtimes and can improve their quality of life.

Price: CHF 110

General feedback: The nice design was very well received.

## Sippa - Universal Drinking Aid

Manufacturer: [juvas](https://www.uvas.ch)

Short description: The Sippa drinking aid helps people with movement limitations and swallowing disorders to drink. Sippa significantly reduces the risk of aspiration.

Price: CHF 67.9

## Survey Results

After the visit of our exhibition, 35 people out of an estimated 250 visitors filled out a questionnaire, in which we asked them about their experiences with the use of technology and their impressions of the roadshow. The results are not representative, and only give indications and impressions from the population. Most survey participants were people interested in and knowledgeable about technology. In sum, here are some insights that may be of interest from an exhibitor's perspective.

Roadshow visitors learned about aging technologies through the following channels: Internet, congresses/trade fairs, aging and care organizations, social media, from the environment, television and radio.

97% of the visitors (N=35) already use technologies such as smartphones or cell phones, whereas only 42% used age technologies either in their daily work or for themselves. Informal conversations revealed that in theory many are open to technologies for older people, but do not see the benefit for themselves because they are still young. It refers to the fact that only "others" can be old.

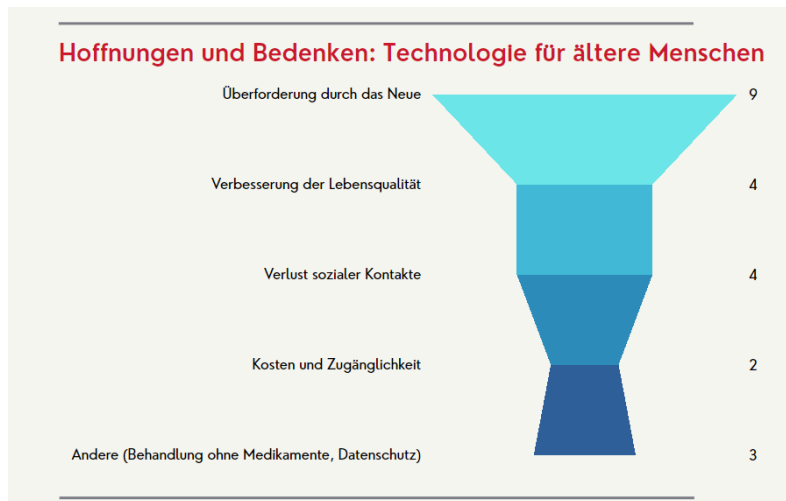
There was a great deal of interest especially in safety technologies such as fall sensors or emergency watches, where the range of products on offer was particularly convincing.

According to our rating, the following technologies were the most popular:

- 1.) The roadshow itself - overview of existing technologies for older people
- 2.) Paro
- 3.) Experiential box
- 4.) Senopi and the Lotte Chair
- 5.) Sippa glass and generally all security systems

According to our observations and the written feedback from the participants, low-tech and simple technical solutions such as watches were best received. These included the experience box and the Lotte chair as non-technological exhibits and Senopi (VR glasses) and Paro as technological exhibits.

They shared the following hopes and concerns about the use of technology for older people:



(From top to bottom: being overwhelmed by new technologies, increasing quality of life, loss of social contacts, costs, and accessibility)

If you are interested in more detailed feedback, please contact Samira Hüsler ([samirasalome.huesler@ost.ch](mailto:samirasalome.huesler@ost.ch)) to arrange an appointment.

### Brief Outlook

The Roadshow will take place again in 2024 with the existing project funds in the week of 16.09.2024. So far, it is planned to visit the cities of Winterthur, Locarno, Lucerne, Neuchâtel and Spiez (subject to change).

We are very grateful for all contributing organizations and people, without whom the road show would not be possible. 2024 we will be happy to carry all previously carried exhibits with slight adjustments and some new objects as well.

The future beyond 2024 depends on whether we can acquire further funds for the project, or whether we can find an organization that can sponsor or finance its implementation, or which has personnel resources for the project. We would also be happy to pass on the knowledge and organizational experience to another organization.

The previous person in charge, Samira-Salome Hüsler, will hand over her task to Monika Freund Schoch in 2024, also a research associate at the OST, Institute of Ageing Research.

Questions regarding 2023 can be addressed to Samira Hüsler ([samirasalome.huesler@ost.ch](mailto:samirasalome.huesler@ost.ch)). Questions, suggestions, or ideas for 2024 can be addressed to Monika Freund Schoch ([monika.freund@ost.ch](mailto:monika.freund@ost.ch)).