Seniors´ Learning in the Digital Society

The project focuses on elderly students and older people in general to improve and develop their digital skills and knowledge.
2019-1-SK01-KA204-060649

https://selid.efos-europa.eu/

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1. STRATEGIC PARTNERSHIP

The Partners of the project *Senior´s Learning in the Digital Society*:

Coordinator:

Univerzita Komenského v Bratislave Centrum ďalšieho vzdelávania RUK, Bratislava, **Slovakia** https://cdv.uniba.sk/en/university-of-the-third-age/	

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Vysoké učení technické v Brně Brno, **Czech Republic** https://www.lli.vutbr.cz/en/education-for-seniors	
Dresdner Seniorenakademie für Wissenschaft und Kunst, Dresden, **Germany** https://senak.inf.tu-dresden.de/wordpress/	
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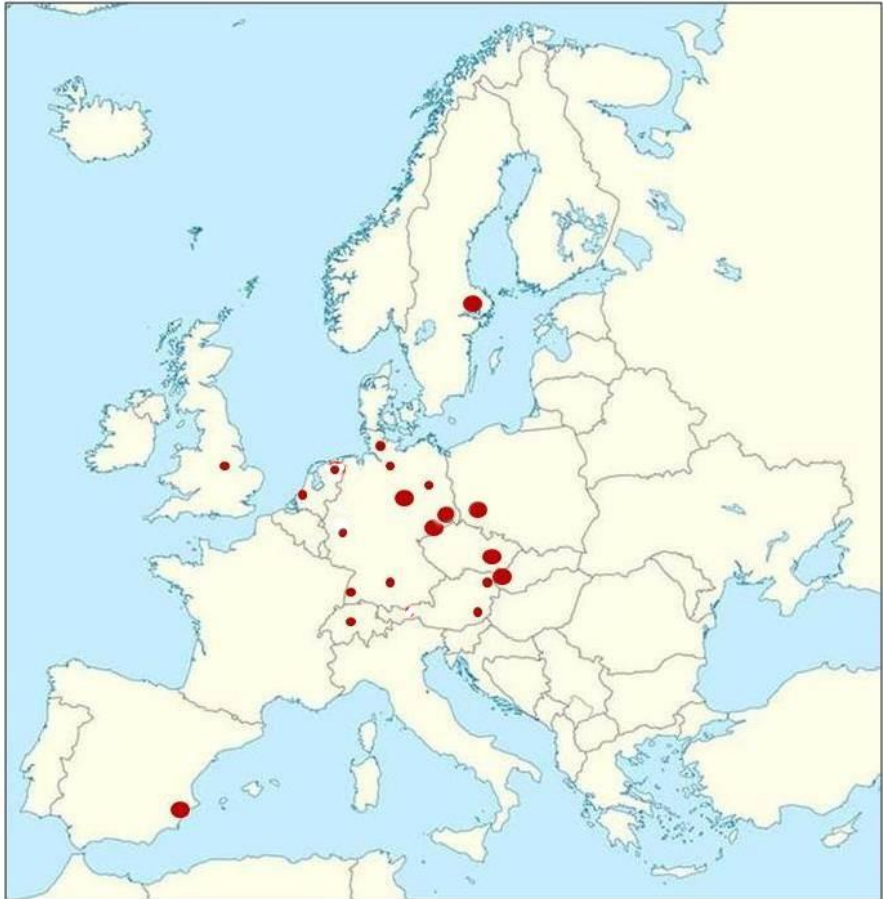
- • Cooperation partners   • Project partners

Other institutions included in the project: EFOS (European Federation of Older Students in Universities) and its members from Universität Wien, Austria, Senioren Academie Groningen-Friesland-Drenthe, Groningen, Netherlands and seniors from the Third Age Trust, UK.

2. CONTENTS

3. INTRODUCTION OF THE PROJECT SELID

SELID (Senior´s Learning in the Digital Society) is an Erasmus+ project of the European Union. The main objectives are open education and innovative practices in a digital era, focusing on improving and extending high quality learning opportunities for digital technologies and ICT (Information and communications technology), tailored to the needs of individual low-skilled or low-qualified adults.

The project is co-ordinated by the Comenius University in Bratislava, Centre for Continuing Education and its University of the Third Age which has established an international reputation for work in the field of older people and lifelong learning. The teams involved in this project brings together lifelong learning schools and associations from six European countries (Slovakia, the Czech Republic, Germany, Poland, Sweden and Spain). The project is realised in the partnership with the European Federation of Older Students in universities (EFOS) which assures involvement of other associated institutions and individuals from Austria, the UK and the Netherlands who voluntarily cooperate with the project partners.

The project started in September 2019. The first step of the project aims to know the state of the art regarding "The use of the Digital Technologies" of people over 50 in each of the countries. A direct survey was carried out with the help of a questionnaire with the same content in all the eight participating universities, with some adaption to the special situation in each country for this purpose, seeking to have first-hand access to senior citizens' availability, learning modes, use, difficulties, and perception of digital technologies in the six countries of the partnership. 1505 seniors answered the questions. The reports, which show the results of the survey questionnaire completed by the senior citizens in the project countries, offer relevant information for the next stage of the project: the creation of new innovative curricula, training activities and enlargement of the seniors' skills.

The description of the project, along with other specific information, can be found at https://selid.efos-europa.eu/

4. NEWSLETTER 1

NEWSLETTER 1

This European project 2019-1-SK01-KA204-060649 provides information about learning opportunities for people over 50, innovations of the programmes and training for low-skilled adults in digital technologies

What is SeLiD?

The main objectives are open education and innovative practices in a digital era, focusing on improving and extending high quality learning opportunities for digital technologies and ICT, tailored to the needs of individual low-skilled or low-qualified adults.

The project concentrates on learning and training of basic ICT skills and key digital competences of the elderly. Methods that will be applied are:

- classical teaching,
- group learning and training,
- peer learning,
- work with manuals,
- excursions to the shops with electronics,
- collection of good practices to develop digital literacy and skills of the elderly.

The project focuses on elderly students and older people in general to improve and develop their digital skills and knowledge. They need special education and training in many fields for a more flexible use of ICT in their daily life and for an active citizenship.

Outcomes

- Review table presenting study of learning possibilities of digital technologies
- Research about the needs of the elderly in the use of digital technologies and home equipment.
- New innovative curricula for the training of the seniors´ skills.
- Ways and possibilities for encouragement of isolated elderly for involving in the life of digital society.
- Digital education and training of low-skilled adults.
- Spreading information about learning activities by the elderly in using ICT.
- Results of the project will be published in the booklet and on the project website.

The Partnership:

1. Univerzita Komenského v Bratislave, CĎV UK – UTV Bratislava, Slovakia
2. Technische Universität Chemnitz Seniorenkolleg Chemnitz, Germany
3. Otto-von-Guericke-Universität Magdeburg Studieren ab 50, Magdeburg, Germany
4. Dresdner Seniorenakademie für Wissenschaft und Kunst, Dresden, Germany
5. Universidad Permanente de la Universidad de Alicante, UPUA, Alicante, Spain
6. Vysoké učení technické v Brně, Brno, Czech Republic
7. Uniwersytet Wroclaw-UTW, Wroclaw, Poland
8. Uppsala Senioruniversitet Uppsala, Sweden

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The Project SeLiD is Co-funded by the Erasmus+ Programm of the European Union
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25.10.2019, Bratislava, SLOVAKIA
http://SeLid.efos-europa.eu/

Next project meeting: 23 – 25 April 2020 in Dresden (Germany)

5. NEWSLETTER 3

NEWSLETTER 3

This European project 2019-1-SK01-KA204-060649 provides information about learning opportunities for people over 50, innovations of the programs and training for low-skilled adults in digital technologies

Senior´s Learning in the Digital Society – SeLiD

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- research about the needs of the elderly to improve and develop their digital skills in ICT for their daily life and for an active citizenship.

Project meetings

The current situation during Covid 19 and the lockdown has forced us to cancel the project meeting in April 2020 in Dresden and in September 2020 in Alicante. In order to be able to fulfil our project plan, we have decided to hold the online meetings.

In November 2020, we held **a trial project meeting** to see if online would be possible with all project partners. The online meeting started with a testing of how participants can join the meeting through MS Teams.

After the opening of the meeting the project teams and participants introduced themselves. **Information on the project progress and team´s activities have been shared.** Each project partner as well as non-project participants from the Third Age Trust in the UK, Groningen in the Netherlands and Cologne in Germany reported on their work. They described their efforts and implementation of the online courses, smartphone courses, etc. in the current corona crisis.

The meeting was rounded off with **information about the preliminary project report** which has been consequently submitted in January 2021. Management and implementation of the project activities as well as financial arrangement and budget fulfilment were realised according to the project planes.
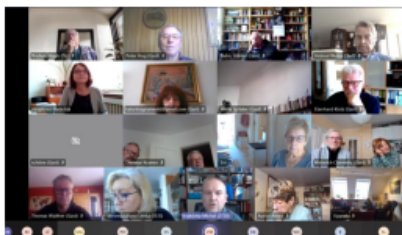
The second online project meeting took place on 4. December 2020. After brief information about the preliminary report and activities carried out by the project participants and volunteering members the project partners presented the evaluation of the research results discovered in Alicante, Bratislava, Brno, Dresden, Chemnitz, Magdeburg, Uppsala, Wroclaw. Subjects focused on:
- Digitalisation, needs of and barriers to seniors, curriculum for courses, project research work, etc. - what has been done so far
- Evaluation of the questionnaires
- New activities for seniors, use of DT, ICT, etc.

Project website: New literature links and project results from the partners had been added. See the link bellow.

The **third** online project meeting took place on **18. February 2021.** Three power point presentations were connected to the previous meetings with updated project results. Some structural changes in the coordinator institution have led to consequences which have to be managed with the project partners and the National Agency due to the pandemic.

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25.02.2021, Bratislava, SLOVAKIA
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Next project meeting: June 2021 in Dresden (Germany)

NEWSLETTER 3

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After the three project meetings, we can list the specific topics of interest for each of our project partners:

Uppsala:
- Questionnaires for seniors without an email connection
- Cooperation with the University

Alicante
- Telebanking
- Teleshopping
- Online courses, workshops, training on the digital environment carried out
- Recruitment of participants from outside Alicante

Magdeburg
- Voice control, online events are planned
- Fake news - awareness
- Talks with ministries planned

Chemnitz
- Courses with the smartphone for seniors from different communities in Linz
- Establishing contacts with meeting centres

Brno
- Online courses are made available, unfortunately little interest in them
- Digital courses on the history of Bohemia
- There are programmes for seniors on TV

Wroclaw
- Teleshopping
- Courses on Smartphone and network security
- Every week a new topic is offered for seniors via Facebook
- Seniors from the communities in Lower Silesia are also included
- Online courses and trainings are attended by 10% of the students

Dresden
- Online-Banking
- Digital Health services
  Special questionnaires were developed and evaluated for this purpose. As a result, lectures and training sessions are offered to enable senior citizens to use the systems.

Bratislava
- Development of videos on the operation of devices with digital display
- Smartphone courses of one week are organised
- Digital courses on Social Networks are offered
- Documents for the courses are offered as pdf files via e-mail

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The project is co-ordinated by the Comenius University in Bratislava, Centre for Continuing Education and realised in cooperation with the European Federation of Older Students in Universities (EFOS).

6. NEWSLETTER 4

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Senior´s Learning in the Digital Society – SeLiD

The main objectives of the project are open education and innovative practices in a digital era, focusing on improving and extending high quality learning opportunities for digital technologies and ICT, tailored to the needs of individual low-skilled or low-qualified adults. The project concentrates on learning and training of basic ICT skills and key digital competences of the elderly. Methods that will be applied are:

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- excursions to the shops with electronics,
- collection of good practices to develop digital literacy and skills of the elderly,
- research about the needs of the elderly to improve and develop their digital skills in ICT for their daily life and for an active citizenship.

Project meetings

In order to fulfill our project plans, we decided to organize five project meetings from which we realised three face-to-face transnational meetings and some online webinars. In September 2021 we held the meeting **at the Seniorenakademie in Dresden on the theme** *Best practices for solving problems in the digital society. Internet of things, social media, and digital security.*

The transnational meeting in December 2021 was realized at the UPUA, University in Alicante on the theme *Needs and wishes of the elderly in the digital society*. The meeting was in a hybrid form and focused on the practical usage of digital technologies by teachers and Seniors during online education and practical utilisation of the applications by senior students. The project partners succesfully evaluated the research results, presented a project Booklet and created a collection of Good practices. Participants were trained in the usage of the APP Senior tourist guide created for Seniors by the UPUA in Alicante.
The last transnational project meeting and conference is scheduled to take place in Magdeburg in March 2022.

The project Booklet with the content of the project research and collection of the Good practices will be available on the project website and describes important findings from the group of 1 175 seniors respondents.

The most obvious needs of the older persons are:

- help in better understanding of social, financial and economic changes in the digital society and its digital services;
- integration of Seniors into the digital society and minimalization of feelings of social inadequacy through personal encouragement;
- help in preserving personal agility, interests, self-reliance, self-fulfilment and inclusion in the digital environment;
- differentiation of digital competence levels inside groups of Seniors which poses practical challenges to both lecturers/tutors and senior participants;
- find out about learning ICT programs, their training possibilities and the ways of enrolment and participation in them;
- acknowledge new innovative curricula and learn about new practices and programs;
- exchange and share skills and knowledge with other elderly in many different countries; comparison of the conditions and results;

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25.01.2022, Bratislava, SLOVAKIA
http://selid.efos-europa.eu/

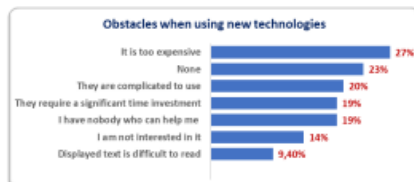Next project meeting: March 2022 in Magdeburg (Germany)

NEWSLETTER 4

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- collection of the best practices for the exchange of knowledge and skills in two main target groups: lecturers and seniors.
- practical utilisation of the collected and shared good practices from other institutions and personal training, with the responsible citizen as a goal.

Digital skills make it possible to expand and update one's knowledge in the fast-changing world. It is a fact that many older people do not even know the benefits of digital technology. Their digital skills are not sufficiently available, they do not believe in digital technology because of e.g. fake news.

Risks in use of digital technologies

Category	%
E-commerce (Online-Shopping)	39%
Administrative or banking formalities (Online-...	25%
Information search	23%
Application procedure with public authorities...	20%
Digital Medical History and/or other medical...	17%
Personal communication	10,50%
Working with photographs	7,70%
Office automation	5,50%
Other	4,40%
Reading online publications	3,30%
Working with videos	3,30%
Geographic Information Systems (On-line maps)	3,30%
Multimedia reproduction	2,20%

One of the barriers to the use of new technologies by older people is their own financial background, because technical equipment is sometimes very expensive. As the new technologies are complicated to use, developers should take into consideration older people's needs and design age-appropriate devices.

Obstacles when using new technologies

Category	%
It is too expensive	27%
None	23%
They are complicated to use	20%
They require a significant time investment	19%
I have nobody who can help me	19%
I am not interested in it	14%
Displayed text is difficult to read	9,40%

The project "SeLiD" wants to encourage older people to strengthen their digital learning interests and train the Seniors to be prepared for an independent life in the digital society and reduce the number of low-skilled adults.

Especially in the time of pandemic, access to internet and social connection is very important. Digital technology can help elderly people avoid exclusion and loneliness, so they can be included into society and use these tools against discrimination. We don´t want one left behind so we must develop many ways for bringing new technologies in housing for people with disabilities as well for the diversity of people in rural areas. For these tasks, older people need to make themselves as decision-makers more visible.

Despite the risks, the new technology opens up a new world for users in different areas of life. The elderly, after their digital learning and training, will be more flexible in their daily life in using the digital equipment in their own home, in using banking digital tools and the digital services of the municipalities, e-shopping, personal material-technical equipment and computer security. Practical use of digital technologies will help elderly people to become more integrated into their society and to maintain connections to their relatives and friends.

Use of digital technologies is...

Category	%
Practical	57,50%
Educational	51,40%
Entertaining	35%
Pleasant	35%
Efficient	35%
Manageable	26%
Important	14%
Complicated	4,40%
Boring	1,70%
Harmful	1,70%
Unnecessary	0%

According to the above results from the project research, we can conclude that most respondents have a positive attitude towards digital technologies and are willing to overcome possible difficulties in using equipment.

Next project meeting: March 2022 in Magdeburg (Germany)

7. DIGITAL EXCLUSION OF SENIORS IN THE SOCIETY

Background and problems

According to all relevant information and research more people in Europe are connecting more often to the internet than they did just a few years ago. Probably less people are left in digital exclusion in 2022 than before the time when the SELID project started in 2019. Even if this is a general information it gives indications on the situation for older retired seniors in Europe. Many people are still not included and there are observations which indicates why it is like this. Here we will try to summarize what we know so far.

Age is the dominating factor to explain that part of the European population does not connect daily. But there are also other factors behind:

- Gender – a majority are women
- Income – a majority have low income
- Living site – a majority live in rural areas
- Education – a majority have lower education

Other factors observed are: marital status / being single; being unemployed or on sick leave; skills, etc.

On the other hand, those who start to use the internet do not stop and those who start to use specific services do continue. Those born in the 1940s feel as involved in the digital society as those born in the 1960s did a few years ago. The 1940s generation are increasingly connected in different ways. Those in the oldest group account for the largest increase.

The costs for having access to the internet for a period of one year is about 700 euro per year/person, which is quite a heavy burden for most retired people. Of course, it is a question of priorities, but a majority of seniors cannot event think of this because of too low a pension. Statistically females earn about 25 % less than men and the pension is lower for females. If you are living single this means that you cannot share costs for internet connection.

 If seniors are living in rural areas there is also an initial cost to be linked up by fibre, which often is about 2000 euro. In many places the traditional telephone net is already taken away and fibre installation is often delayed by years. The planners for tomorrow´s society need not only to take into account whether a particular target group uses the internet or not, but also why, how and how often they do it and how experienced they are.

Questions like this are also relevant when U3As are developing new programs to offer digital support to its members.

Lifelong Learning and the internet

As long as you are employed you get continues updating via job or colleagues, but as a retired person it is up to each individual to get updated. Very few municipalities do take responsibility for the updating of retired people! The national policies are at the same time often stressing the importance of Lifelong Learning. There must at least be one digital help-center in each municipality - easy to get access to.
Many seniors feel ashamed that they do not know how to use and handle the internet and thus feel excluded in the society if they do not get help, when needed. Digital shame can also lead to further isolation of seniors and be a hinder for inclusion in the society as a whole.

Sociopsychological effects of digitalisation

For many older people there are now less and less opportunities during their daily activities to meet and talk with other people e.g., at the bank, when buying tickets, when shopping. This has been even more stressed during the corona pandemic. People risk becoming lonelier when getting older, which is not healthy. This is clearly underlined by the Canadian social psychologist Susan Pinker *("The Village Effect").* Living together in a "village"/human society means a longer and more healthy life. It is necessary to build an infrastructure within the society which makes it easy to develop social contacts.
The more we have of digital technology, the more we get of a fragmentized society. By the way we act in social media" we establish our own rooms" in the society, where others are not coming inside. This phenomenon is studied by the Swedish prof. Elin Wihlborg, who underlines that democracy means a bottom-up process, where people have to listen to each other and solve problems together. A democratic dilemma will be the result if we are not aware of and find ways to solve this problem.

Implementation of digitalisation

The fact that millions of European seniors do not have full access - by different reasons - to the society and its different institutions is a sort of

discrimination. Most people still can pay their bills with a simple invoice on paper, but it is becoming more and more costly and complicated year by year.

When older people need some sort of assistance, it is almost impossible to get in touch with someone to assist by a simple telephone call. You will be met by a mechanical voice telling that "you are number 87 on a waiting list", or "you should press 1 for xx and 2 for yy and 3 for zz". You will have to go to the home page of that institution/company, use chat or create a personal account/a profile or log in with Bank Id. (It is not just older people who think that this is a complicated procedure.) Members of the society, who have been paying taxes during their whole life do not easily get in contact with Welfare Institutions of the society. Welfare companies also lose customers.

Ask the right questions at every step in the implementation process of digitalisation. How to assure that European people can continue to live a safe and comfortable life is an overall international question and the same for all senior people. It is necessary to underline the importance of thinking before implementation!

Model for analysing digital exclusion

A useful model for analysing digital exclusion has been developed by the Dutch researcher Jan van Dijk. It has previously been illustrated as a triangle with motivation as a broad basis, but based on new research, we illustrate it as a staircase with the steps: motivation, access, skills, use. This model shows how research has gone from focusing on access to digital technology, to seeing it as a more complex phenomenon.
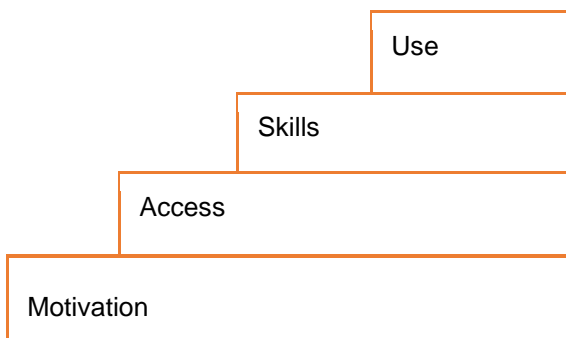
The results from previous research have explained and understood that individual digital exclusion is mainly based on the following factors:
• Lack of motivation
• Lack of infrastructure/access
• Lack of knowledge and skills
• Low socio-economic status
• Lack of trust/self-reliance

When it comes to societal factors that can contribute to digital exclusion, can be mentioned:
• Lack of governance and management
The opposite of digital exclusion is digital inclusion and inclusion in the society. The main results from the reports studied, shows that it is an ongoing process that is likened here to a staircase. As digital development is ongoing, digital competence and inclusion cannot be seen as completed processes; people need to constantly upgrade their skills in order to keep up. However, people who are on the upper ladder can slip down in a changing life situation, such as moving from being healthy to sickness.

Factors - important for digital inclusion

The study that most clearly shows this and also provides tools for what can be done to improve the situation is van Dijk's description of how the digital divide can be reduced.
In this model, as a matter of 1999, he addresses the four prerequisites of motivation, access, skills and use. Finally, we would like to summarize the research that has been highlighted in the literature overview with the following list of factors central to digital inclusion of seniors:

A. To motivate
- To increase awareness of useful e-services
- To involve intended target groups in the design of information and design
- To increase the user-friendliness of e-services
- To adapt e-services for specific groups if necessary
- To create trust by combating digital crime and strengthening privacy protection
- To start from the strengths and interests of the elderly

B. To create accessibility
- To work for reliable internet access - even outside the cities
- To work for access in the public space – e.g., library
- To work for support for economically weak groups

C. To promote the skill
- To support the conditions of adult education to teach digital skills
- To systematically plan education for pensioners / seniors
- To adapt the education to the needs of seniors

D. To promote use
- To create easy-to-navigate social information
- To provide easily accessible relevant information to seniors
- To support individuals who experience frustration and anxiety when using digital tools

<u>Justification of the problems</u>

After retirement, pensioners realize that it is now up to them to cope with the changing world around them. The working environment can no longer be their major source of information. At the same time, they realize that there is much more worth to know outside their field of experience. On one hand the elderly need to communicate, exchange messages, share knowledge, and interact with each other digitally and on the other side they have to deal with the challenges of their digital equipment at home and of the digital services connecting them with society. Therefore in the project we focused on the encouragement of the elderly to boost their digital learning interests and train the seniors to be prepared and ready for an independent life in the digital society. Context and objectives of the project are aimed at the individual needs of the elderly in the context of their social groups such as families, senior clubs, study groups, communities, etc. On the other hand, we have to train seniors in the practical use of new technologies in their personal learning process. Therefore, we have to know the needs of the elderly students and the seniors generally to prepare them and offer them appropriate learning programs, study materials, etc. We have to develop methodologies for the tutors to enable them to modify the study programs and to adapt the study conditions for the target groups. What can be innovated, how and for whom? Specification of the conditions can lead us to innovated courses on subjects such as digital technologies

and creation of the training information communication technologies (ICT) programs."

For the implementation of the project goals special ICT learning programs, we have created by the tutors and lecturers and the volunteers realised the needed training activities.

Björn Odin, Senioruniversitet Uppsala, Sweden

8. DIGITAL ACTIVITIES BEFORE AND DURING SELID PROJECT

Comparison

Table: Changes in digital activities at UTA during SELID project period

University	**A** **Number of subjects / activities for seniors focusing on digital skills before the project/ pandemics**	**B** **Number of students before pandemics**	**C** **Number of innovations / activities influenced by the project SELID and COVID-19**	**D** **Number of students involved in the online activities in the time of COVID-19**
Univerzita Komenského v Bratislave / Comenius University Bratislava Slovakia	**2019/2020** - Number of study subjects offered in general - **37** Courses on digital technologies - **5**	**2019/2020** – Total number of senior students at UTA: **2002** Women **1765** Total number of senior students in the courses on digital technologies - **70**	**2020/2021** - Number of subjects - **13** offered for online UTA from January to June 2021 **2021/2022** – Number of subjects offered online - **32**	**2020/2021** - Number of students - 0 in Winter semester **Spring 2021** Total number in semester – **261** / Women **206** **2021/2022** – Total number of students - **655 /** Women **576**

University	Number of subjects / activities for seniors focusing on digital skills before the project/ pandemics	Number of students before pandemics	Number of innovations / activities influenced by the project SELID and COVID-19	Number of students involved in the online activities in the time of COVID-19
Universidad Permanente de la Universidad de Alicante UPUA, Spain Alicante	**2019/2020** - Number of study subjects offered in general - **75** Courses on digital technologies - **10**	**2019/2020** – Total number of senior students at UPUA: **2875** Women **1983** Men: **892** Total number of senior students in the courses on digital technologies - **202**	**2020/2021** - Number of subjects offered online - **19** Total number of senior students in the courses on digital technologies - **369** **2021/2022** – Number of subjects offered online - **7** Total number of senior students in the courses on digital technologies - **135**	**2020/2021** - Total number of senior students at UPUA: **772** Women: **478** Men: **294** **2021/2022** Total number of senior students at UPUA: **2128** Women: **1276** Men: **852**
Dresdner Seniorenakademie für Wissenschaft und Kunst, Dresden, Germany	Courses on digital technologies – **1** [Course smartphone]	Number of senior students in the courses on digital technologies - **20**	Number of lectures face to face and online – **13** Number of Seminars, training courses - **15**	Total number of students – **959** Students involved in online activities – **178**

University	Number of subjects / activities for seniors focusing on digital skills before the project/ pandemics	Number of students before pandemics	Number of innovations / activities influenced by the project SELID and COVID-19	Number of students involved in the online activities in the time of COVID-19
Vysoké učení technické v Brně Brno, Czech Republic	**WS 2019/2020:** Courses total **36** IT courses **17**	**WS 2019/2020:** Students total **1387** IT courses students **238**	**SS 2019/2020:** Courses total **38** Online/distance courses **10** **WS 2020/2021:** Courses total **14** Online/distance courses **14** **SS 2020/2021:** Courses total **13** Online/distance courses **13**	**SS 2019/2020:** Students total **1394** Online/distance students **323** **WS 2020/2021:** Students total **142** Online/distance students **142** **SS 2020/2021:** Students total **125** Online/distance students **125**
Technische Universität Chemnitz Seniorenkolleg Chemnitz, Germany	Smartphone courses - **4** general offer before COVID-19: lecture series English courses, Smartphone course, Photo course	about 800 seniors per semester 2019/2020: **864**	Lecture program and course program completely canceled, instead 2020 + **2020/2021**: **5** offers lecture series	2020: **40** 2020/2021: **63** 2021: **196** 2021/2022: **195**

			2x English courses, Smartphone courses: **3** **2021:** **4** offers lecture series 2x English courses + Science Interactive Smartphone courses: **3** **7** Online conferences	**2021/2022**: **3** offers lecture series 2x English courses, Smartphone courses: **3**
University	**Number of subjects before the project**	**Number of students before the project**	**Number of subjects influenced by project / pandemics**	**Number of students during project and pandemics**
Otto-von-Guericke-Universität Magdeburg Studieren 50 Magdeburg, Germany	<u>Winter Term 2019/20:</u> **11** courses focusing on digital skills (1x Adobe Photshop, 1x Introduction to the Internet, 1x Internet of the things, 1x Introduction to the use of the computer, 3x Digital Photography [different levels], 1x Introduction to the use of Smartphone, 1x Internet-	Total number of Students <u>Winterterm 2019/20:</u> **727** Number of senior students in the courses on digital technologies/ digital skills, <u>Winterterm 2019/20:</u> **143**	Use of online - and hybridformat: <u>Summerterm 2021:</u> **14** online or hybrid-courses out of **50** courses. <u>Winterterm 2021/22:</u> **9** online or hybrid-courses out of **90** <u>Cooperation with the Dresdner Seniorenaka demie:</u>	<u>Summerterm 2021:</u> **14** online or hybrid-courses with **122** students***)** Total number of students: **127** <u>Winterterm 2021/22:</u> 9 online or hybrid-courses with **106** students***)** Total number of students: **335**

	Scums, 1x E-Learning, 1x Siri, Alexa & Co.)	***)** It's not 122 out of 127 or 106 out of 335 students - many students have visited more than one online or hybrid course	Echange of digital lectures and echange of senior students (depending on the topic)	Summerterm 2021/Winterterm 2022: Cooperation with Dresden: seniors from Magdeburg visited online lectures from Dresden; seniors from Dresden visited our lecures (about 5-15 students)
Uppsala Senioruniversitet Uppsala Sweden	0	0	Total number of online courses from beginning of fall 2020 to the end of fall 2021: **103** Total number of teachers trained in online courses: **16**	Total number of online students from beginning of fall 2020 to the end of fall 2021 was **1145**
Uniwersytet trzieciego wieku Wroclaw, Poland	1. Recruting of educators 2. Lectures /quantity 3/ for educators /**19 to 30** educators/ 3. Lectures for senior students - **4** **4.** Educators training and meetings -**10**	Senior students - **142** Number of educators on each meeting **5 -15**	Online training for educators and senior students. Individual consultation for beginers using Iphone and PC/ Laptop/ Training with screenshots/ Smartphone, Laptop/	Participans / senior students - **1563** at all trainings and consultations **74** coaching courses for seniors including consultations

9. PROJECT METHODOLOGY, WORKING PROCESS, EXPECTED OUTCOMES

The project concentrates on learning and training in basic ICT skills and key digital competences of older people. Methods that will be applied are:
- classical teaching,
- group learning and training,
- peer learning,
- work with manuals,
- excursions to the shops with electronics,
- collection of good practices to develop digital literacy and skills of the elderly.

The project focuses on elderly students and older people in general to improve and develop their digital skills and knowledge. They need special education and training in many fields for a more flexible use of ICT in their daily life and for an active citizenship. Our study used a questionnaire method to gather information across the four age groups taking part in the research.

The questionnaire consisted of twenty-four questions of different typologies: close-ended, open-ended, multiple-choice and multiple-answer. The questions were grouped together into eight conceptual blocks, namely: (1) profile of respondents; (2) technological resources available; (3) learning modes of the use of the digital technologies; (4) case of more frequent use of digital technologies; (5) the smartphone; (6) the Internet of things; (7) main difficulties in the use of digital technologies; and, finally, (8) their perception and attitude towards digital technology.

The questionnaire was divided into two sections. The first section had seven questions concerned the respondent profile.

The second section of twenty questions focused on participants' experiences and skills in using digital technologies and the types of technologies they use to perform everyday tasks such as shopping, online banking, communication, and other activities.

An additional question was added in the Spanish questionnaire about the kind of computer courses or workshops the UPUA could offer in the future.

An additional question was added also in the German questionnaire from Magdeburg about increase of use of digital devices during the corona pandemic. Participants were offered the choice of completing the questionnaire online or in printed form.

9.1. Outcomes

- Review table which presents the changes in digital activities at UTAs (Universities of the Third Age) during SELID project period.
- Research about the needs of older people in the use of digital technologies and home equipment.
- Ways and possibilities for encouraging of isolated older people to become involved in the life of digital society have been practiced.
- New innovative curricula for the training of the seniors´ skills to be prepared for online learning and able to use digital technologies.
- Courses on Digital technologies, education and training of low-skilled adults have been on offer.
- Good practices have been collected and spread out for innovation of learning activities for older people and implementation by the institutions in using ICT.
- Results of the project are published in a booklet and available on the project website: **https://selid.efos-europa.eu/**

Participants of the transnational project meeting in Dresden 2021

10. PROJECT RESEARCH ABOUT THE NEEDS OF OLDER PEOPLE IN THE USE OF DIGITAL TECHNOLOGIES AND HOME EQUIPMENT

10.1. Review table as a result of a questionnaire among seniors

Section A, Personal data, questions 1 to 7

A.1. Gender	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	Brno 118	Wroclaw 153	Alicante 221	Uppsala 143	Dresden 160	Chemnitz 82	Magdeburg 69
Male	18.8%	18%	22.9%	45%	31%	43.1%	48%	41%
Female	81.2%	82%	77.90%	33%	69%	56.9%	52%	59%
Other	0%	0%	0%	22%	0%	0%	0%	0%

A.1. Non-project partners	Austria	Netherlands
	Vienna - 8	Groningen 40
	Male 25%	Male 47.5%
	Female 75%	Female 52.5%

Table 1, 1a: Personal data / Gender
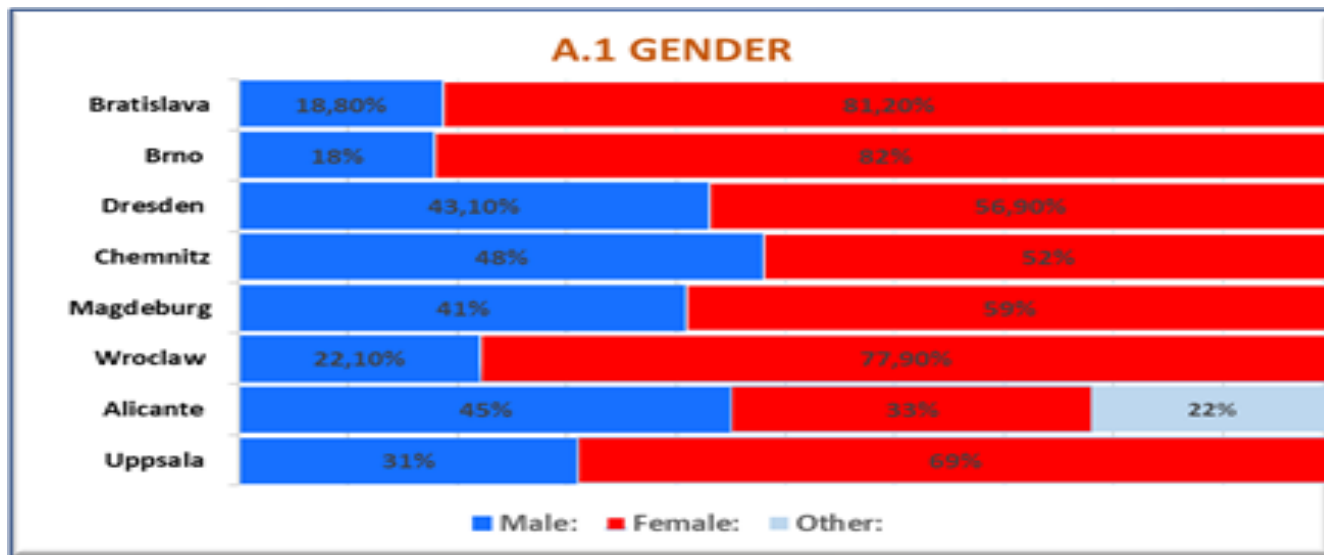
Figure 1: Gender

- **In Bratislava, Brno and Wroclaw** more than 2/3 of the respondents are females**.**
- **In Alicante** most of the respondents of the survey were men (45%), while the remainder was distributed among 33% of women and 22% who preferred not to be identified in terms of gender.
- **In Dresden and Chemnitz,** the gender distribution is almost balanced. In Dresden, the proportion of women (57%) is practically identic with the proportion of women over 65 in the city of Dresden (58%).
- **Magdeburg** - by a total of 69 responses, 41 of the participants were females (equal to 59%), while 28 were males (equal to 41%).

A.2. Age range	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	Brno 118	Wroclaw 153	Alicante 221	Uppsala 143	Dresden 160	Chemnitz 82	Magdeburg 69
50 – 60	5.5%	8%	0.6%	9.5%	0%	5%	2.4%	6%
61 – 70	**64.7%**	40%	**46.4%**	**69.2%**	33%	33%	35.4%	**49%**
71 – 80	27%	**47%**	37.3%	20.4%	**57%**	**41%**	**57.3%**	26%
81+	2.8%	6%	15.7%	0.9%	10%	21%	4.9%	19%

Table 2, 2a: Personal data / Age range

- **The age** of the surveyed respondents was balanced situated between **61 and 70 years** of age and between **71 and 80 years** of age.
- **In Dresden** 95% of respondents are over 60 years of age. With one fifth of the respondents, the proportion of people over 80 years of age is relatively high.
- **In Uppsala** the average age of the students is **74 years.**
- **In Magdeburg** the biggest age group was the one between 61 and 70 years, the second most represented age group was the one between 71 and 80 years. This also reproduces the general age structure of the participants to "Studieren ab 50" (the most represented age group is the one between 65 and 75). About 1/5 (19%) of the participants were over 80 years old.

A.2. Non-project partners	Austria	Netherlands
	Vienna - 8	Groningen - 40
50 – 60	0%	0%
61 – 70	12.5%	3%
71 – 80	25%	**33%**
81+	**62.5%**	3%
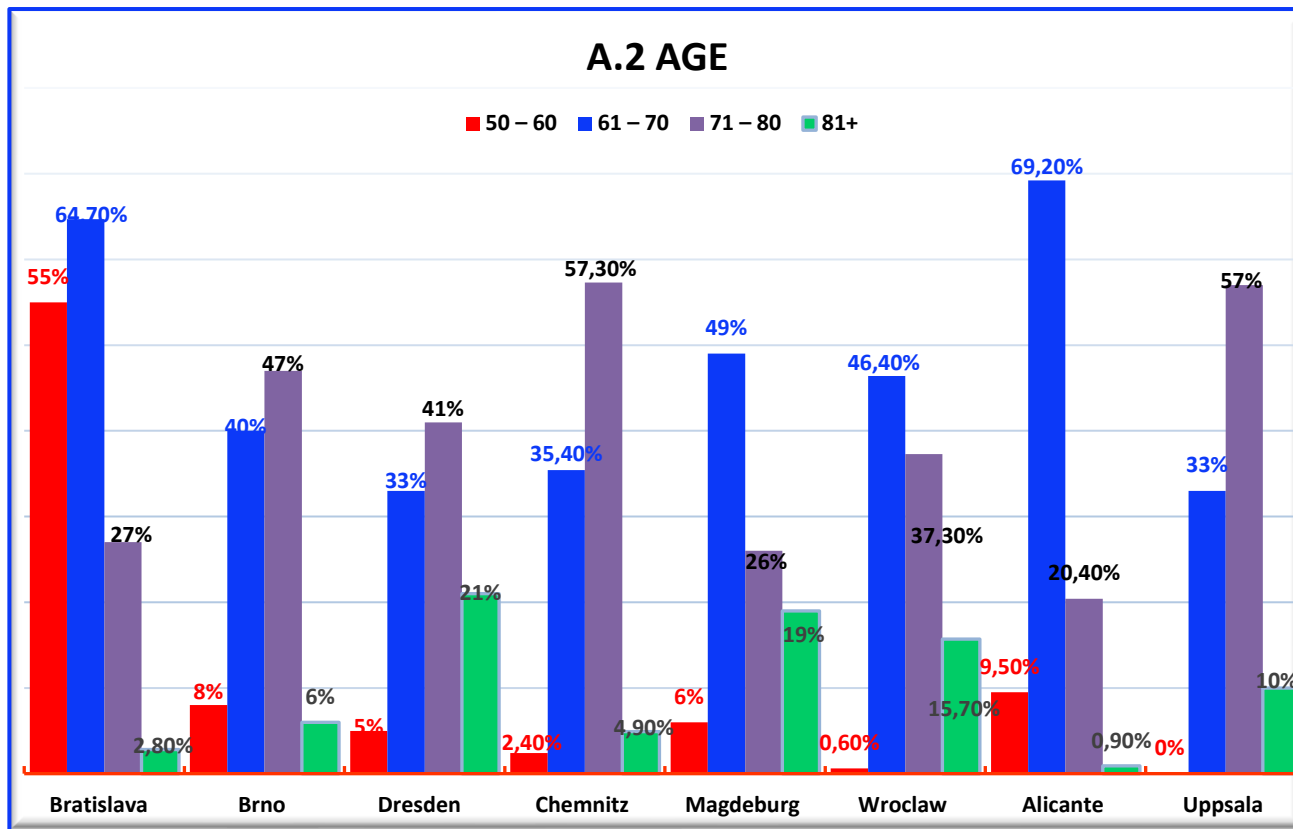
Figure 2: Personal data / Age range

A.3. Country of residence			Project partners			Non project partners		TOTAL
Slovakia	*Czech Republic*	*Germany 311*	*Poland*	*Spain*	*Sweden*	*Austria*	*Netherlands*	
		160 Dresden						
		82 Chemnitz						
181	**118**	**69** Magdeburg	**153**	**221**	**143**	**8**	**40**	**1175**

Table 3: Personal data / Country of residence

A.4. Education level of the participants from non-project partners

A.4. Education level / project partners	*Slovakia*	*Czech Republic*	*Poland*	*Spain*	*Sweden*	*Germany*		
	Bratislava 181	**Brno 118**	**Wroclaw 153**	**Alicante 221**	**Uppsala 143**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**
Primary	0%	0%	2.0%	0.9%	1%	4.4%	1.2%	0%
Secondary	7.2%	25%	0%	18.6%	7%	3.1%	3.7%	0%
Vocational school	23.2%	31%	6.5%	4.1%	1%	11.9%	0%	3%
College/ Higher School	2.8%	3%	33.3%	33%	0%	38.1%	26.8%	46%
University graduate	**64.6%**	**39%**	**57.5%**	**42.1%**	**90%**	**42.5%**	22%	**48%**
Other/degree Polytechnic	2.2%	2%	0.7%	1.4%	4%	0%	**46.3%**	3%

A.4.	Austria	Netherlands
Non-project partners	**Vienna - 8**	**Groningen - 40**
Primary	0	0%
Secondary	0	2.5%
Vocational School	0	0%
College /Graduate Higher School	12.5	37.5%
University graduate	**62.5**	**57.5%**
Other	25	2.5%

Table 4, 4a: Personal data / Education level

- In our project research, regarding the education level, most of the respondents have a university degree. A big group of respondents have a College/Graduate Higher School degree.

- Only in **Chemnitz** most of the respondents have Polytechnic degree (46.3%). The other level of education in the sample is high.

- For this part it is important to know that for a study at the UTA of Comenius University in **Bratislava** an educational prequalification at secondary school level is required. The same applies to **Brno**. The other partners do not require any pre-qualification.

- In **Poland** Primary and Secondary School lasts 8 years is obligatory and is called Basic School.

- In **Dresden** 80% of the respondents have a high school / university diploma, which is almost twice as high as in the population of Dresden. The cause is certain that mainly people in the vicinity of the Seniorenakademie were interviewed. Surveys outside this environment (sports groups, meeting venues) were only possible to a limited extent due to the beginning of the lockdown.

- **Alicante** - Regarding the education level, over three quarters of the total have a university degree, either as graduates (42%) or as undergraduates (33%), while the rest completed secondary school (18%), primary school (1%), attended a vocational school (4%) or had another kind of education (1%).

- **Magdeburg -** Almost half of the participants had a university degree (48%), while almost the other half had a college degree/higher school degree (46%). This also reproduces the general structure of the educational level presented in "Studieren ab 50" and could be associated with the fact that the university generally attracts more people with a higher degree (even if, as in "Studieren ab 50", no specific degree is requested for the inscription). Another possible cause is the fact that most of our participants live in the city[1] (please refer to A 7)

A.5. Which sector do you currently work/or did you previously work in if you are not working now?

A.5. Labour sector then and now	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	**Brno 118**	**Wroclaw 153**	**Alicante 221**	**Uppsala 143**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**
Industry, Transports, Communications	10%	18%	**22.9%**	13.6%	11%	17.5%	20%	13%
Banking, Insurance	15%	5%	5.9%	18.1%	1%	5%	11%	6%
Offices and Professional Practices	**28%**	14%	19.6%	8.6%	0%	**18.8%**	**23.2%**	**22%**

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[1] But this is just merely a supposition.

Health	4.4%	10%	7.8%	10%	**42%**	**18.8%**	2.4%	14%
Computing	0%	0%	0%	0%	0%	8.8%	3.7%	1%
Education	18.3%	15%	15.7%	18.6%	25%	16.1%	13.4%	**22%**
Commerce and Hospitality/ Catering	6.6%	8%	9.8%	4.1%	2%	3.8%	3.7%	0%
Agriculture/ Cattle-Raising and Fishing	1.7%	3%	0%	0.5%	2%	0.6%	9.2%	1%
Other	16%	**27%**	18.3%	**26.7%**	0%	10.6%	13.4%	20%

	Austria	*Netherlands*
A.5. Non-project partners	**Vienna - 8**	**Groningen - 40**
Industry, Transports and Communications	**37.5%**	12.5%
Banking, Insurance	12.5%	2.5%
Offices and Professional Practices	12.5%	2.5%
Health	25%	20%
Education	0%	**45%**
Commerce and Hospitality/Catering	0%	2.5%
Agriculture/Cattle-Raising and Fishing	0	0%
Other	12.5	17.5%

Table 5, 5a: Personal data / Labour sector then and now

To the point about the labour sector of our respondents, the most of them work/ed in offices and professional practices; relatively high ranking has the sector of industry, transports and communications, followed by the health care sector and education sector. A part of the respondents worked in a different sector than those listed in the questionnaire.

In **Dresden,** the relatively high level of education is also reflected in previous occupation. The good half of respondents (54%) worked as an employee or in health and education

In **Magdeburg** - the two larger groups were formed by those working in offices and professional practices and in the educational sector (both 22%).

A.6. Housing of the respondents

A.6. Housing	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	Brno 118	Wroclaw 153	Alicante 221	Uppsala 143	Dresden 160	Chemnitz 82	Magdeburg 69
Alone	31.5%	21%	31.4	28%	0%	26%	30.5%	26%
In a couple	**59.1%**	**52%**	**51.6**	**62%**	0%	**69%**	**64.6%**	**67%**
With relatives	7.2%	12%	4.6%	8%	0%	1.3%	1.2%	4%
With friends	2.2%	10%	0.6%	0.5%	**0%**	1.3%	0%	0%
Residential home	0%	2%	0%	0%	0%	0%	0%	0%
Other form of housing	0%	3%	11.7%	1.5%	0%	1.9%	3.7%	1%

Table 6: Housing

A.6. Non-project partners	Austria	Netherlands
	Vienna - 8	**Groningen - 40**
Alone	**62.5%**	27.5%
In a couple	37.5%	**70%**
With relatives	0%	0%
With friends	0%	2.5%
Residential home	0%	0%
Other form of housing	0%	0%

In terms of life status most of the respondents are living with a partner / married, but the next bigger group is living alone. The other respondents are living with relatives or with their friends. Uppsala question not asked.

For living with residence partners only **Brno** has percentage by 2%. Other life forms were mentioned by less than 8.6% in **Wroclaw**.

Table 6a: Housing for non-project partners
Figure 3: Marital / Life status of the project partners
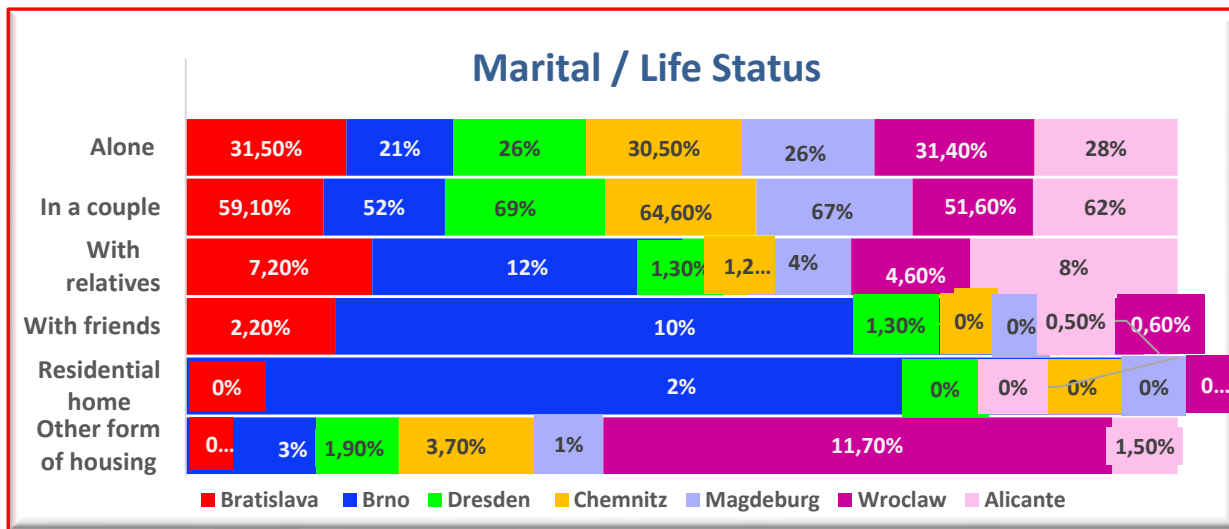
A.7. Living place of the respondents

A.7. Living place	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	Brno 118	Wroclaw 153	Alicante 221	Uppsala 143	Dresden 160	Chemnitz 82	Magdeburg 69
In a town / city	**86%**	**100%**	0%	0%	0%	**10%**	**55%**	86%
In a small city	0%	0%	0%	0%	0%	0%	15%	0%
In a village / country	14%	0%	0%	0%	0%	5.6%	30%	14%

Table 7, 7a: Living place

A.7. Non-project partners	Austria	Netherlands
	Vienna - 8	Groningen - 40
In a town/city	**100%**	50%
In a village/country	0%	50%

Relatively small number of surveyed persons live in a village / country (between 5.6% - 30%).
Wroclaw, Alicante and Uppsala have the participants question not asked.

Section B, Technological resources available

Question B.1.   **What do you rate your computer literacy (the ability to use the computer)?**

B.1. Computer literacy	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	**Brno 118**	**Wroclaw 153**	**Alicante 221**	**Uppsala 143**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**
Very good	22.1%	10%	5.2%	5.9%	19%	9.7%	12%	6%
Good	**41.5%**	19%	24.8%	27.1%	33%	32.3%	29%	35%
Acceptable	31.5%	**42%**	**41.9%**	**53.8%**	**34%**	**36.1%**	**33%**	**43%**
Low	4.4%	22%	20.3%	12.2%	8%	11.6%	11%	6%
Very low	0.5%	7%	7.8%	0.9%	2%	10.3%	15%	9%

Table 8, 8a: Computer literacy

Except for Brno and Alicante, for the other project partners the value for good (22.1% - 41.4%) and acceptable (31.5% - 43%) in using the computer is relatively similar.

Bratislava: If we want to assess the ability to use the computer of all respondents, we can see, that the most of them have good (41.5%), acceptable (31.5%) and very good (22.1%) knowledge in using the computer. Only small groups of respondents have a low (4.4%) and very low (0.5%) knowledge.

Dresden: The vast majority (80%) of the respondents rate their computer skills moderately (low to good), each 10% very good or very poor. These values correlate with the technical equipment.

Wroclaw: Table 8 shows that only 5.2% seniors assess their computer skills as very good, the most of respondents 41.9% assess their skills as average.
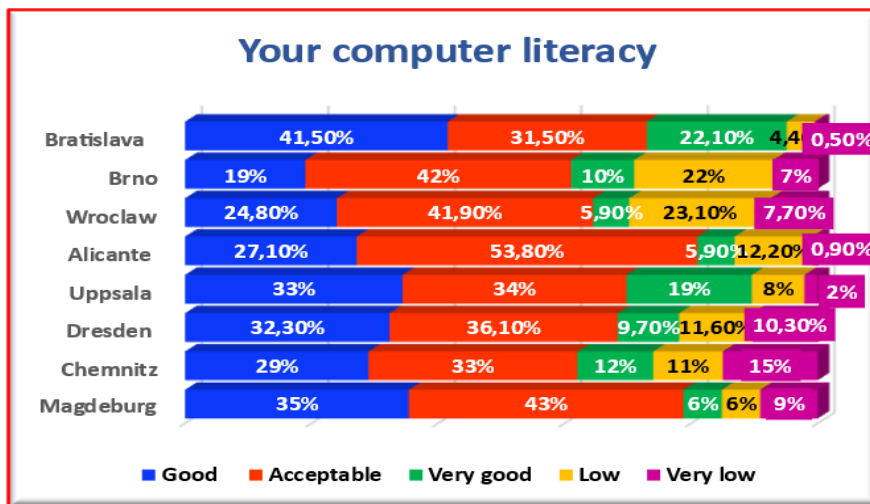
Figure 4: Computer literacy

B.1. Non-project partners	Austria Vienna 8	Netherlands Groningen 40
Very good	12.5%	17.5%
Good	12.5%	27.5%
Acceptable	**75%**	**52.5%**
Low	0%	2.5%
Very low	0%	0%

Alicante: When it comes to the assessment of their ability to use the computer, more than a half consider it is acceptable (53.8%), even good (27%) or very good (6%). On the other side, a small proportion of respondents admitted their skills are very low (1%) or low (12%)

Chemnitz: The rated computer skills are highly heterogenous, with a slight tendency towards "good".
Age category: 50-60, 61-70, 71-80, older than 80
- The older participants, the lower they rated their own computer skill.
- Should be interpreted with caution. The lowest and highest age category are underrepresented.
Magdeburg: The largest part of the participants estimated their own knowledge about the use of digital devices as acceptable (43%), while 35% reported to have a good knowledge, and 6% to have a very good knowledge. Based on the above, we have 84% of the participants which are able to use digital devices in more than a rudimental way.

Question B.2.

Which of the following technical devices do you use and to what extent?

n - never, r – rarely, f – frequently, **no - none**

B.2. Use of technical devices	Slovakia			Czech Republic			Poland			Spain			Sweden		
	Bratislava 181			Brno 118			Wroclaw 153			Alicante 221			Uppsala 143		
(You can also specify several answers)	n	r	f	n	r	f	n	r	f	n	r	f	n	r	f
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Traditional	24	31	45	6	26	68	71.2	9.2	19.6	16.3	31.7	52	37	6	20
Smartphone	25	8	67	15	12	73	20.3	12.4	**67.3**	2.7	2.3	**95**	6	2	**86**
Tablet / E-Reader	37	29	34	22	35	43	66.7	11.1	22.2	17.6	15.8	67	24	13	52
Personal Computer	0.5	11.5	**88**	0	3	**97**	18.9	15.7	65.4	1.8	8.1	90	7	11	75
Printer / Scanner	10	28	62	4	22	74	49.0	**26.8**	24.2	12.7	21.7	66	7	**27**	60
Game console /	**92.8**	5.5	1.7	**81**	12	7	**96.0**	3.3	0.7	**89.1**	6.8	4.1	**74**	2	1
Camera / Camcorder	49	**35.5**	15.5	15	**53**	32	81.7	11.8	6.5	20.4	**37.6**	42.	8	10	30
Other devices (Webcam,Satellite,GPS - navigation, etc…)	41.5	31.5	27	3	24	73	57.5	22.9	19.6	24.9	32.1	43	15	18	15

B.2. Use of technical devices	Germany									
	Dresden - 160			Magdeburg - 69			Chemnitz - 82			
(You can also specify several answers)	n	r	f	n	r	f	n	r	f	none
	%	%	%	%	%	%	%	%	%	%
Traditional phone /Conventional Mobile	19.4	20	22.5	49	26	25	34	27	24.4	15
Smartphone	8.8	13.8	66	20	7	**72**	15	15	**63.4**	7.3
Tablet / E-Reader	1	16	31.2	52	16	32	45	12.2	18.3	24.4
Personal Computer (PC) / Notebook	6.3	12	**72**	13	16	71	7.3	21	62.2	10
Printer / Scanner	8.8	21.2	53.1	17	26	57	11	28	50	11
Game console / Portable game console	**52**	1.3	1.3	**96**	4	0	**71**	2.4	1.2	**25.6**
Camera / Camcorder	21	**26**	16	46	**32**	22	25.6	**39**	13.4	22
Other devices (Webcam, Satellite navigation (GPS), etc…)	26	22.5	12.5	48	30	22	33	33	11	23

Table 9: Use of technical devices

B.2. Use of technical devices - non project partners	Austria			Netherlands		
	Vienna – 8			*Groningen - 40*		
(You can also specify several answers)	n	r	f	n	r	f
	%	%	%	%	%	%
Traditional phone/Conventional Mobile	12.5	0	50	37.5	12.5	27.5
Smartphone	0	25	62.5	7.5	10	80
Tablet / E-Reader	25	12.5	0	10	15	65
Personal Computer (PC) / Notebook	12.5	12.5	**75**	0	12.5	**82.5**
Printer / Scanner	0	25	62.5	0	17.5	**82.5**
Game console / Portable game console	**37.5**	0	0	**82.5**	2.5	0
Camera / Camcorder	0	25	25	20	**42.5**	22.5
Other devices (Webcam, Satellite navigation (GPS), etc…)	**37.5**	0	0	32.5	37.5	10

Table 9a: Use of technical devices - Non project partners: Austria, Netherlands

For all the interviewed people the most frequently use of technical devices are PC/Laptop (58.5% - 97%), Smartphone (63.4% - 95%) and printer (50% - 74%).

Only in **Wroclaw** the printer/scanner is used by 51% (r+f) while the 49% of participants never used. 79.7% (r+f) use smartphones. Smartphones are the most common used technical device. Personal computer is second in popularity because 65.4%.71,2% respondents do not use the traditional phone. Almost 100% because 96.0% of seniors do not use Games console. Tablets are also not popular because only 33.3% (r+f) use Tablets.

Alicante: Regarding the use of technical devices, the participants had to choose the frequency of use of eight categories of devices. Smartphones, PCs and laptops were the most popular for over 90% of the

respondents, followed by tablets, e-Books, printers and scanners (about 66%). The traditional phone or the conventional mobile are often used by half of the people, while the figures for GPS, Webcam, camera, camcorder, etc. do not differ too much (42%). At the other extreme are game consoles, whose use drops to the range of 10%.

Of the following eight devices the respondents in **Bratislava** extensive use as of PC/ Laptop 88%, followed by smartphone (67%) and printer/scanner (62%). The traditional phone /conventional mobile had 45% of users, more than tablet /e-reader 34%.
Camera/camcorder are not used by 49% of respondents, not used are other devices such webcam, GPS with 41.5%. It is surprising, that game console/portable game console were never used by 92.8% of our respondents.
Some of our respondents answered, that this electronically infiltrated age, is not for the older generation over 50, that has experienced a time with classic typewriters without a printer.

Dresden: PC (72%) and smartphone (66%) are, as expected, the most frequently used. Printers are also used frequently (53%). 9% do not have a smartphone or never use it. The PC is never used by 6%.

Chemnitz: The most frequently used technical devices were pc, smartphone and printer. The mean is calculated from the values: "never = 1, infrequent = 2 and frequent = 3".

Magdeburg: The most used devices are the smartphone (frequently 72%) and the PC/Notebook (frequently 71%). If compared with the results of the first survey (pre-pandemic), we see that the use of some devices has increased (Smartphone frequently: 67% - 72%; Tablet, E-Reader frequently: 19% -32%; PC/Notebook frequently: 57% - 71%).
We must consider though the fact, that the target of the first survey was mainly the group of students without a great knowledge of digital devices, while the participants to the second attempt declared to a larger extent (56%), that the pandemic didn't change their use of digital devices. It is therefore not possible to define a direct causality between the increase of the use of tablets and the pandemic, even if we have heard many students say that they bought their first Notebook because of the pandemic.
It would be interesting to compare these results with the Felix/Dabitz-Survey, where the data concerning the difference between pre-pandemic and pandemic are explicitly collected.

Question B.3.

Where do you use access to the Internet connection (You can choose more than one)?

B.3. Internet connection	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	**Brno 118**	**Wroclaw 153**	**Alicante 221**	**Uppsala 143**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**
At home	**95%**	81.3%	**91.5%**	**98.2%**	**96%**	**96%**	**93%**	**94%**
U3A/Senior Academy	7.2%	**86.4%**	18.9%	32.6%	0%	0.63%	6.1%	14%
In the office/at work	13%	23.7%	7.2%	9.5%	0%	10.6%	2.4%	7%
In library	2.8%	15.2%	5.2%	4.1%	15%	1.3%	1.2%	6%
In residential home/clubs	0.5%	10%	1.9%	0.9%	1%	1.9%	0%	0%
At home of friends and relatives	15%	23.7%	11.1%	20.8%	34%	20%	28%	28%
Other…….	4.4%	4.2%	5.2%	7.2%	58%	15%	13.4%	9%
No answer	0%	0%	0%	0%	0%	0%	3.7%	1%

Table 10: Internet connection

B.3. Internet connection	*Austria*	*Netherlands*
Non-project partners	**Vienna 8**	**Groningen 40**
At home	**100%**	**97.5%**
At U3A/Senior Academy	0%	0%
In the office/ at work	12.5%	5%
In library	0%	12.5%
In residential home/clubs	0%	5%
At home of friends and relatives	0%	42.5%
Other…….	0%	22.5%
No answer	0%	0%

Table 10a: Internet connection – non project partners

Most of the respondents have internet connection at home – the average of use the internet connection at home is 93%. Another possibility for people to use access to the internet connection is at home of friends and relatives (10.6% - 34%) or in the office / at work (0% - 23.7%).

The elderly students at Comenius University in **Bratislava** can also use the internet connection at their U3A (7.20%) or in library (2.8%). In residential homes and clubs there is seldom access to the internet connection. By "Other "may be internet connection in own smartphone or tablet. Nowadays in some public places will be offered a free Wi-Fi.

The majority of respondents of U3A in **Brno** use internet connection at their U3A (86.4%).

Dresden: The Internet is mainly used at home or with friends and relatives.

Alicante: According to the figures, almost all the participants have internet connection at home (98%). When they are out, they access the net mainly from the university or the senior centre/ club (32%), from friends' or relatives' home (21%) or at work (9%). Some people use also free Wi-Fi networks offered in libraries, clubs or their own connection through the smartphone.

Chemnitz: The participants prefer to use internet at home or at a friend's 'house.

Magdeburg: The largest number of respondents (94%) declared that they use the internet connection in their own home. For a further investigation it would be interesting to ask, if the participant would like to use more often internet connections for example in public spaces or at the university and/or what should be given to incentivise this kind of 'external' use.

In **Wroclaw** the survey seniors primarily use the Internet at home (91.5%), only 19.9% also at U3A.

Section C, Modes of the use of the digital technologies (DT)

Question C.1.

When you need to learn the basic use or to deepen your knowledge about the use of digital technologies, which type of training do you prefer? (4 options prioritized)

C.1. Training in DT	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	**Brno 118**	**Wroclaw 153**	**Alicante 221**	**Uppsala 143**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**
None (trial and error)	**42%**	0%	0%	0%	0%	0%	0%	0%
Lectures and presentations	17%	28.8%	28.1%	32.58%	17%	13.8%	23%	29%
Workshops	11%	68.6%	22.2%	65.6%	15%	10%	7.3%	12%
Computer regulars' table	0%	61.9%	17.6%	25.34%	25%	2.5%	10%	1%
Taster course	0%	19.5%	20.9%	33.93%	0%	3.75%	11%	12%
Distance learning	1.7%	11%	13%	29.41%	3%	1.3%	1.2%	0%
Lessons in the classroom or seminar room/courses	6%	61%	3.9%	**72.4%**	16%	15.6%	16%	35%

C.1. Training in DT	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	Brno 118	Wroclaw 153	Alicante 221	Uppsala 143	Dresden 160	Chemnitz 82	Magdeburg 69
Self-study (looking for information and help via the Internet)	10%	51.7%	**49.6%**	49.77%	32%	50%	16%	62%
Support provided by relatives or friends	20.4%	**76.3%**	31.4%	58,37%	**59%**	**71%**	**74.4%**	**71%**
Support provided by electronic shops	0.5%	11%	1.3%	7.03%	20%	10.6%	8.5%	14%
Support provided by telecommunication companies	1.7%	7%	5.2%	10.06%	0%	12%	7.3%	3%
Other…….	0.5%	11%	1.3%	6.33%	8%	0%	2.4%	1%

Table 11: Training in digital technologies

C.1. **Training in DT**	*Austria*	*Netherlands*
Non-project partners	**Vienna - 8**	**Groningen - 40**
None (trial and error)	0%	0%
Lectures and presentations	12.5%	15%
Workshops	25%	55%
Computer regulars' table	0%	5%
Taster course	0%	27.5%
Distance learning	0%	12.5%
Lessons in the classroom or seminar room/courses	25%	25%
Self-assessment (Looking for information and help via the Internet)	37.5%	55%
Support provided by relatives or friends	**75%**	**57.5%**
Support provided by electronic shops	12.5%	12.5%
Support provided by telecommunication companies	12.5%	10%
Other…….	12.5%	2.5%

Table 11a: Training in digital technologies – non project partners

Bratislava: For learning the basic use or to deepen the knowledge of the use of digital technologies the respondents gave the highest percentage of 42% to the "None (trial and error)". Trial and error are a fundamental method of problem-solving, repair, tuning, or obtaining knowledge. In the field of computer science, the method is called generate and test.

Some participants think that additional and regular training would be suitable in the form of lectures and presentations (17%) or taking part in workshops (11%). 6% of respondents would like to learn the basic use of the digital technologies by visiting lessons in the classroom or seminar room/courses.

A relatively high result was in the support provided by relatives and friends (20.4%), which can help participants to understand how to work with the digital technologies. Respondents looking for information and help via internet (10%), prefer to work with their own studying rhythm and their own time-plan and with guidance of tutor online.

Distance learning chose 1.7% respondents, the same percentage as support provided by telecommunication companies. Support provided by electronic shops, which are very helpful for the older people in the field of the use of electronical devices is the same (0.5%) as by the "other". Computer regular´s table and taster course have 0% each.

The most popular form for the respondents from **Brno, Dresden, Chemnitz, Magdeburg and Uppsala** by the work with digital technologies was support provided by relatives or friends.

Wroclaw: The most popular techniques for learning to work with a computer are: Self-assessment 49.6%. Support provided by relatives or friends 31.4% and Lectures and Presentation 28.1%.

Chemnitz: The majority of the participants prefer the support of family members / friends.

Dresden: Support from relatives / friends (71%) and self-help (50%) are the most common learning formats. Less use is made of support from electronics shops (11%) or telecommunications staff (12%).

Possible offers of the Senior Academy such as lessons/courses (16%), lectures (14%) and workshops (10%) are preferred by a relatively small proportion of respondents. There is little interest in other shooting options such as computer master table and taster course.

Distance learning is preferred by only 1.3%. The timing of the survey, before Corona, must be taken into account. In surveys after the first lockdown, there is a much higher interest in online teaching.

Learning opportunities are attended by 10%. It must be borne in mind that there has been a special question of universitarian institutions.

Magdeburg: 71% declared, that the main source for training/help is provided by relatives and/or friends, for 62% self-assessment is also an option. 29% attended lectures and presentations (mainly, but not only in our program, see C2).

Alicante: In this section, the survey enquires about the way seniors over 50 usually learn about new technologies. The first question focuses on the kind of training they choose in order to learn the basics or to deepen their knowledge. The question offered eleven options among which they had to choose a maximum of four. As shown in the results, attending courses was the first choice for only 23%, although if we added up all the rankings, it becomes the top option (72%).

Nevertheless, learning in workshops, that was the best scored in ranking 1 (28%), was relegated to the second place in the overall rating (66%). More than a half of the interviewees (58%) feel more comfortable in a trustful environment and tend to seek the support provided by relatives of friends when they need to improve their skills in digital technologies.

Self-study is a suitable proposal for 50% of the respondents who profit from tutorials and the information available online and learn at their own pace. Categories such as "taster courses", "lectures and presentations" and "distance learning" were chosen as the favourite learning method by a third of the respondents. A quarter of the participants preferred attending meetings with computer experts. A possible explanation is that these interviewees' starting level in the use of digital technologies is higher than others'.

The offer provided by electronic shops and telecommunication companies is the best option for 15 and 11%, respectively; this is also considered a good alternative to have access to the latest market trends.

Question C.2.

Do you attend to any offers concerning digital technologies organized by University Programmes (Seniors' College) for Older Adults?

Slovakia		Czech Republic		Germany								Poland		Spain		Sweden	
Bratislava 181		Brno 118		Dresden 160		Chemnitz 82		Magdeburg 69				Wroclaw 153		Alicante 221		Uppsala 143	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			Yes	No	Yes	No	Yes	No
12.7 %	87.3 %	100 %	0%	10%	86.3 %	0%	0%	23%	71%			71.9 %	12.4 %	0%	0%	2.1 %	88.1 %

Table 12: Learning opportunity organized by U3A for Older Adults

C.2. Non-project partners	Austria		Netherlands	
	Vienna - 8		Groningen 40	
	Yes	No	Yes	No
	25%	75%	62.5%	37.5%

Table 12a: Learning opportunity organized by U3A for Older Adults – non project partners

Dresden: Learning opportunities are attended by 10%. It must be borne in mind that there has been a special question of university institutions.

Alicante: The second question in this section enquired about the people's attendance to the offer concerning digital technologies included in university programmes for older seniors. This kind of training is only used by 1 out of 3 of the respondents.

The respondents from **Brno** take to 100% part on the offer concerning digital technologies organized by university programs for older students.

From **Wroclaw** 71.9% attended this learning opportunity, 12.4% say no and 15.7% are without answer.

Magdeburg: While 29% declared to attend lectures and presentations to train in the use of digital devices (C1), just 23% attended such lectures at university-programs for older students. Our experience is, that the number of students visiting 'classical' introductory lessons to digital devices is decreasing. This has certainly to do with the fact, that the 'new' older adults are already familiar with digital devices, but maybe there are some other reasons worth to be analysed (for example the difficulties to react to specific an individual needs during a lesson conceived for a larger group).

Section D, Case of more frequent use of digital technologies

Question D.1. Please indicate which devices you use for the possible uses of digital technologies in the left column

PC → PC /Laptop; S → Smartphone; T → Tablet; N → None (Do not use)

D.1. Frequency of use of digital technologies	Slovakia				Czech Republic				Spain				Sweden			
	Bratislava -181				Brno - 118				Alicante - 221				Uppsala - 143			
(You can choose more than one)	PC	S	T	N	PC	S	T	N	PC	S	T	N	PC	S	T	N
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Information search	**69.6**	19.3	**9.4**	1.7	**81.4**	36	**32.2**	0	49.3	33.9	16.3	0.5	**70**	70	**34**	0
Communication with other people (mails, conversations, messages)	60.2	32.6	5	2.2	54.2	**72**	27	0	18.6	**76**	5	0.5	59	**79**	22	0
Work with photographs	47	34	5.5	13.5	62	44	15.3	0	34.4	57	5	3.6	4	78	6	0
Work with videos	41	22	6	31	31	30	11	0	38.5	42.1	9	10.4	17	12	4	0

Reading publications	52	11	6	31	36	11	14.4	0	38.5	26.2	**28.5**	6.8	39	43	31	0
Office Automation	23.6	1.7	1.7	**73**	25	6.8	11	0	**68.3**	7.7	8.1	15.8	24	6	5	0
E-Commerce	28	5.5	1.7	64.8	52.5	18.6	9.3	0	51.6	17.6	12.2	18.6	43	30	17	0
Banking Procedures	69	12.8	4.4	13.8	69	27.1	13.6	0	60.6	25.3	5.9	8.1	69	50	16	0
Digital medical history and/or other medical procedures or monitoring systems (pedometer, sleep, the period, etc.)	10.4	33	1.1	55.5	23	36	2.5	0	28.5	35.7	3.2	32.6	46	37	13	0
Multimedia playback	48.6	17.7	7.7	26	64.4	52.5	32.2	0	43.9	24.4	14	17.6	30	25	20	0
Geographical Information Systems (Online maps)	47	35	6	12	44	32.2	22	0	24.9	61.5	8.1	6.3	48	58	20	0
Social Networks	29.3	27	4.4	39.3	24	38.1	15.3	0	15.4	63.8	8.6	12.2	29	57	15	0

	PC %	S %	T %	N %	PC %	S %	T %	N %	PC %	S %	T %	N %	PC %	S %	T %	N %
Emergencies	3.3	38.1	2.8	55.8	1.7	3.4	0.8	0	2.7	71.9	0.5	24.9	1	42	0	0
Video conferencing	28	25	5.5	41.5	24	10	13.6	0	29.9	25.8	5.4	**38.9**	18	5	7	0
Calendar and Appointment	21.5	**46**	4.4	28.1	6.8	14	6.8	0	7.7	72.4	4.5	15.4	17	44	10	0

D.1. Frequency of use of DT	Germany												Poland			
	Dresden - 160				Magdeburg - 69				Chemnitz - 82				Wroclaw - 153			
(You can choose more than one)	PC	S	T	N	PC	S	T	N	PC	S	T	N	PC	S	T	N
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Information search	**86.2**	54	**28.1**	0	**77**	49	**22**	4	**78**	**43**	**18.3**	**0**	**73.2**	45.1	**13.1**	0
Communication with other people (mails, conversations, messages)	69	**69**	15	0	67	**65**	14	4	45	71	8.5	0	36.6	**41.2**	3.9	0
Work with photographs	52	35	5.6	0	51	46	6	4	44	43	3.7	0	18.3	2.6	7.2	0
Work with videos	26	17	4.4	0	30	19	3	4	31	27	3.7	0	11.8	2.6	4.6	0
Reading publications	46	17	17.5	0	59	10	20	4	42.5	19.5	15	0	52.3	29.4	14.4	0

Office Automation	18	0.63	1.3	0	28	0	3	4	52.4	7.3	3.7	0	18.9	3.9	3.2	0
E-Commerce	25	7	5.6	0	28	3	22	4	51	13.4	7.3	0	23.5	8.5	3.2	0
Banking Procedures	50	10.6	4.4	0	54	13	19	4	49	11	3.7	0	57.5	7.2	5.2	0
Digital medical history and/or other medical procedures or monitoring systems	3.1	13.1	1.3	0	10	20	1	4	2.4	16	1.2	0	27.4	8.5	3.9	0
Multimedia playback	27.5	11.2	10	0	36	17	13	4	27	17	7.3	0	37.9	25.5	13.0	0
Geographical Information Systems (Online maps)	31	39	10.6	0	36	42	10	4	47.6	75.6	11	0	44.4	32.0	5.9	0
Social Networks	9.4	18	6.3	0	22	30	9	4	8.5	30.5	2.4	0	26.8	18.9	8.5	0
Emergencies	2.5	24	1.3	0	1	36	1	4	2.4	25.6	1.2	0	7.2	9.8	3.9	0
Videoconferencing (Skype)	7.5	3	3	0	**19**	7	7	4	16	12.2	7.3	0	18.3	7.8	3.9	0
Calendar and Appointments	24	33.7	8.8	0	22	36	6	4	15	28	6.1	0	24.2	35.3	4.7	0

Table 13: Frequency of use of digital technologies

D.1. Frequency of use of DT **Non-project partners**	Austria				Netherlands			
	Vienna - 8				Groningen - 40			
(You can choose more than one)	PC	S	T	N	PC	S	T	N
	%	%	%	%	%	%	%	%
Information search	**87.5**	**50**	**12.5**	**0**	**87.5**	55	**62.5**	0
Communication with other people (mails, conversations, messages)	75	37.5	0	0	77.5	**80**	35	0
Work with photographs	62.5	25	12.5	0	72.5	55	25	0
Work with videos	12.5	12.5	0	0	30	27.5	12.5	0
Reading publications	75	12.5	0	0	60	12.5	60	0
Office Automation	12.5	0	0	0	17.5	5	5	0
E-Commerce	0	0	0	0	25	5	7.5	0
Banking Procedures	25	0	0	0	85	35	32.5	0
Digital medical history and/or other medical procedures or monitoring systems (pedometer, sleep, the period, etc.)	0	0	0	0	22.5	15	7.5	0
Multimedia playback	12.5	0	0	0	37.5	15	7.5	0
Geographical Information Systems (Online maps)	12.5	0	0	0	52.5	50	32.5	0
Social Networks	12.5	0	0	0	35	47.5	22.5	0

Emergencies	0	0	0	0	2.5	37.5	2.5	0
Videoconferencing	25	0	0	0	10	10	5	0
Calendar and Appointments	12.5	0	0	0	30	30	15	0

Table 13a: Frequency of use of digital technologies – non project partners

Magdeburg: When we sent the questionnaire the first time it was before pandemic. Then, the use of Videoconferencing was 0%. Now it is 19%. The 'classical' use of digital devices is still the search for information, followed by communication by e-mails, reading publications and carry out banking procedures. *) After the first survey, just 2% declared to use a smartphone for videoconferencing, while at the end we had 17% using the PC/Laptop for Videoconferencing, while 7% declared to use the tablet and 7% the smartphone. This is quite probably an effect of the pandemic

Bratislava: The first question in part D deals with 15 services that can be operated by digital technologies using the devices such PC/Laptop, smartphone, tablet and how frequently they are used or not used. And with replies of respondents, which do not believe in digital technology and do not own a device.
From the survey we can see, that for the services most use is made of **PC/laptop**. These services include information search (69.6%), banking procedures (69%), communication with other people (mails, conversations, messages) (60%), reading publication (52%). PC/laptop offers more convenience for these services, has a more manageable keyboard, the choice of font size and the larger screen. This last is particularly important for the older consumer and provides control and security of the work process.
Nearly half (47%) of the respondents like to use PC/Laptop for their work with the photographs and for work with video (41%). These services give respondents more possibilities for their creative work. For video conferences 28% of respondents take part through PC/laptop. For multimedia playback (48.6%) of survey participants chose PC/Laptop, like the 47% choosing the geographical information systems (online maps). For online maps in the second- place choice is **smartphone** (35%), because people have it with them if they are out and is very helpful on journeys to show desired

route. The smartphone can also make pictures (34%) and keep people in contact, if necessary, for the first aid and emergencies (38.1%). For digital medical history and/or other medical procedures or monitoring systems (pedometer, sleep, the period, etc.) 33% of respondents chose the smartphone. Participants thought smartphone are especially useful for calendar and appointments (46%), for sending messages and communication with other people (32.60%), for social networks (27%) and for video conferences (25%). The smallest percentages chosen by respondents for the use of smartphones were for e-commerce (5.5%) and office automation (1.7%).

The use of **tablets** is relatively small (Figure 10). Only by "information search" the result is 9.4%, another question has percentage between 1.7% till 7.7%.

It is important to note that a large group of respondents **do not use** any of these devices. For e-commerce it is about 65%, for office automation it is 73% of the respondents of the survey. With emergencies (55.8%), and with medical measures (55.5%), respondents have more confidence in personal consultation than with digital devices. Videoconferencing is rejected by (41.5%) because of reduces interpersonal communication. Computer has low relevance to their lifestyle.

Alicante: Concerning the interviewees' frequency of the use of digital technologies, the first question in this section aimed to measure eighteen services than could be accessed through digital procedures and the devices that are employed for that purpose: PC or laptop, smartphone or tablet, or none.

Results indicate that the most popular device is the **smartphone**, especially in the field of communication (76%); a plausible reason is because besides talking they can send emails, messages or chat. The smartphone is also the favourite tool in two situations of special relevance for the interviewees: reporting emergencies and recording appointments and relevant events on their calendar, both ranking 72%. When participating in social networks, seniors do it preferably from their phones (64%). Likewise, when using the GPS (62%), the smartphone is the preferred device. The mobile phone is more than 20 points ahead of the computer when it comes to working with photographs (57%) and, although with a slightly minor difference, when working with videos (42%). Finally, the smartpone also leads the access to clinical histories or other activities related to medical procedures or health control and monitoring, such as pedometer, glucose meter, etc. (36%).

Concerning **PCs and laptops**, more than half of the respondents prefer them when the task requires greater use of the keyboard, for instance when working with word-editors (68%). Economic activities are among those most frequently carried out from these terminals, with 61% for banking services or SeLiD - Senior´s Learning in the Digital Society Survey on the use of Digital Technologies – Spain 52% for online shopping. Almost one out of five seniors resorts to their computer to search for information (49%), and a slightly less amount of respondents play movies, videos, music or other multimedia content on the PC (44%) or attend video conferences (30%).

Those who use the **tablet** do it mainly to access publications (29%), whereas approximately 10% more do it mainly from their computer or laptop (39%). The tablet stands out among gaming fans (17%), nevertheless the majority (54%) do not usually use new technologies for this purpose. Finally, it is important to point out that some participants do not perform some tasks with any of these devices. The percentage does not exceed 50% in any of the cases, except for the aforementioned games; however, almost a third of the surveyed seniors do not watch video conferences (39%), nor do they consult their medical records (33%), nor do they report their emergencies (25%) through technological devices. Conversely, we can find the highest levels of performance in the searching for information and interpersonal communication, where just one person out of the 221 respondents does not use technology for that purpose.

Wroclaw: The most popular digital devices for seniors are PC/Laptops. PC/Laptop is primarily used to search information (73,2%), contact the bank / e-banking (57,5%) reading publications (52,3%), geographical information system / online maps (44,4%).

Smartphones, on the other hand, are primarily used to search information (45,1%) and for communication (41,2%), e-mail, conversations, messenger and 35,3% as calendar.

Chemnitz: PC and smartphone are the most preferred devices.

Dresden: For personal communications of any kind, PC and smartphone are used at the same frequency. Banking activities, reading of publications, e-commerce, office automation, working with photography are mostly done with the PC. The domains of the smartphone are especially emergencies, calendars and appointments, medical issues, social networks, and online maps. The tablet plays a minor role except for the reading of publications.

Question D.2.

Do you use voice input?

Slovakia		Czech Republic		Germany							Poland			Spain		Sweden	
Bratislava 181		Brno 118		Dresden 160		Chemnitz 82		Magdeburg 69			Wroclaw 153			Alicante 221		Uppsala 143	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	No answer	Yes	No	No answer	Yes	No	Yes	No
31%	69%	14%	86%	26.2%	67%	0%	100%	29%	48%	23%	16,2%	1,9%	81,6%	0%	0%	8%	87%

Table 14: Use of voice input
Table 14a: Use of voice input - non-project partners

Austria		Netherlands	
Vienna - 8		Groningen - 40	
Yes	No	Yes	No
0%	100%	0%	95%

Alicante: The second question in this section enquired whether the technological devices were used by voice system to avoid handling the keyboards, to which slightly a third of the interviewees answered affirmatively (34%)

Chemnitz: 28 of the participants reported to use voice command with their technical devices.

Dresden: Voice input is used by almost a third of respondents.

Chemnitz: Only 19% seniors answered this question, 81% of respondents do not need the function of voice

Magdeburg: The voice input device is scarcely used (declared only by 29%).

Section E, SMARTPHONE,
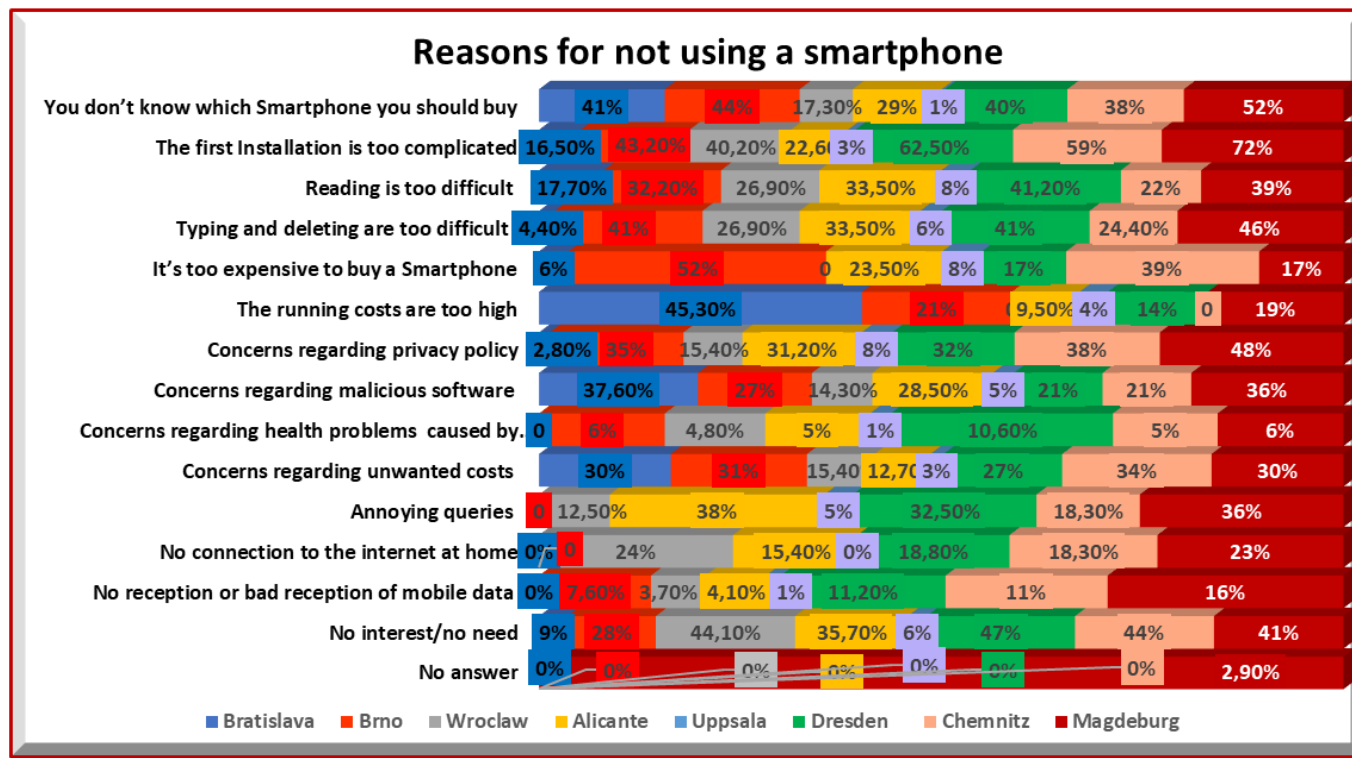
E.1. Reasons for not using a smartphone

Figure 5: Reason not using a smartphone

Question E.1.

What are the reasons for older people for not using/not wanting to use a smartphone? (Multiple answers possible):

Alicante: The survey subsequently enquired about the use of the smartphone. The first of the four questions included in this section focused on older people's reasons for **not using this device**. The respondents could tick several answers among the fourteen proposed.

The main barrier that hinders the use of the smartphone, according to the respondents, is the annoying notices that often appear on the screen, such as advertisements and cookies. This drawback stands out over the rest, with 38% of the responses. Almost the same proportion (36%) does not show any interest in the device or considers it is unnecessary. The following answers highlighted the difficulties in the use of smartphones. Respondents underscored several problems: for example, the difficulty in typing or deleting due to the size of the control panel (33%), or the fact that the screen is not big enough and makes reading too hard (32%). This was followed by their concern for the use of sensitive personal data and the need for maintaining their privacy, both with 31% of the interviewees.

Another concern regarding technical issues is the damage that malicious software can produce in their gadgets (29%). Moreover, it is interesting to notice that when they come to the decision of buying a new smartphone, 29% feel not able to decide about the technical features of the device they need, and they usually give up on it.

The economic issue is also a handicap because the price is a deterrent for 24%, while those who think the running cost are too high reach 9%. In addition to all this, there can be unwanted costs caused by misleading information or mistaken orders that concern over 12%.

Installation and connection discourage some seniors. 23% think that the initial installation of the smartphone is too complicated, and 15% declare to have no wireless network connection at home, which would also force them to consume mobile data from home. In fact, there are 9 out of the 221 people surveyed who have no reception at home or it is not good enough for mobile data. Finally, the impact of on health is a cause of concern for ca. 5%, which entails 11 respondents.

E.1. Reason for not using a smartphone	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	**Brno 118**	**Wroclaw 153**	**Alicante 221**	**Uppsala 143**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**
You don't know which smartphone you should buy (type, operational system)	**41%**	**44%**	**17.3%**	**29%**	**1%**	**40%**	**38%**	**52%**
The first Installation is too complicated	**16.5%**	**43.2%**	**40.2%**	**22.6%**	**3%**	**62.5%**	**59%**	**72%**
Reading is too difficult with the device (the screen is too small)	**17.7%**	**32.2%**	**26.9%**	**32.1%**	**8%**	**41.2%**	**22%**	**39%**
Typing and deleting are too difficult with the device (the control panel is too small)	**4.4%**	**41%**	**26.9%**	**33.5%**	**6%**	**41%**	**24.4%**	**46%**
It's too expensive to buy a smartphone	**6%**	**52%**	**26.9%**	**23.5%**	**8%**	**17%**	**39%**	**17%**

E.1.	Bratislava 181	Brno 118	Wroclaw 153	Alicante 221	Uppsala 143	Dresden 160	Chemnitz 82	Magdeburg 69
The running costs (for example the monthly costs) are too high	**45.3%**	21%	18.3%	9.5%	4%	14%	29.3%	19%
Concerns regarding privacy policy	2.8%	35%	15.4%	31.2%	8%	32%	38%	**48%**
Concerns regarding malicious software (malware, for ex. virus)	**37.6%**	27%	14.3%	28.5%	5%	21%	21%	36%
Concerns regarding health problems caused by radiations	1.1%	6%	4.8%	5%	1%	**10.6%**	5%	6%
Concerns regarding unwanted costs (for ex. for things ordered unwanted costs (for ex. for things ordered caused by mistake)	30%	31%	15.4%	12.7%	3%	27%	**34%**	30%

E.1.	Bratislava 181	Brno 118	Wroclaw 153	Alicante 221	Uppsala 143	Dresden 160	Chemnitz 82	Magdeburg 69
Annoying queries (for ex. cookies), advertisements and so on	2.8%	25.4%	12.5%	**38%**	5%	32.5%	18.3%	36%
No connection to the internet at home (no WLAN)	0%	15.3%	**24%**	15.4%	0%	18.8%	18.3%	23%
No reception or bad reception of mobile data at the domicile	0%	7.6%	3.7%	4.1%	1%	11.2%	11%	**16%**
No interest/no need	9%	28%	44.1%	35.7%	6%	**47%**	44%	41%
No answer	0%	0%	0%	0%	0%	0%	0%	2.9%

Table 15: Reasons for not using a smartphone

Bratislava: The study shows us, that older adults use less or not at all mobile phones for diverse reasons. The largest group of respondents (45.3%) said - the running cost (for example the monthly costs) are too high.

The answer given was because of unwanted costs (for things ordered or for things ordered by mistake) when 30% confirmed, that economic factors are very important for older people and therefore are smartphones not used.

In the second question 41% of seniors explain their decision to buy a smartphone (type, operational system). Some of participants think, that to buy a smartphone is too expensive technological device. Apart from not being able to afford

an expensive smartphone, another factor among the elderly was limited knowledge or lack of interest and the belief that the need for having a smartphone is unnecessary (9%).

37.6% of respondents had concerns regarding malicious software (malware, for example virus) but only 2.8% of respondents had concerns regarding privacy policy. The same percentage about 2.8% had concerns about annoying queries (for example cookies), advertisements and so on.

Results show that the elderly with mild vision impairments (17.7%) have difficulties in using smartphones because the screen is too small, and the reading is too difficult with the device. The same problem we can see also for typing and deleting, both functions are too difficult with the device because the control panel is too small (4.4%). Concerns regarding health problems caused by radiations has only 1.10% of respondents.

For older people who have bought a smartphone (16.5%) the first installation is too complicated, they have problems with the technical language and with advanced functionalities of the device.

It is very interesting to note, that 0% of respondents have no connection to the internet at home (no WLAN) and 0% had no reception or bad reception of mobile data at their domicile.

Dresden: Point 1 only asks why older people do not want to use a smartphone. However, the answers show the problems that seniors have with their smartphones. The first priority is the purchase decision and the first set-up. More than 40% of responses identify difficulties in reading, typing, and swiping. "No interest" is given as a reason by almost 50%.

Chemnitz: The main reasons for not using a smartphone are beside complexity, lack of interest, high acquisition costs, lack of knowledge which smartphone they should purchase and concerns about data privacy.

Wroclaw: In the group are 31 persons who don't use the smartphone (20,3%), the second group of 122 respondents use a smartphone, it corresponds to 79,7%.

E.1. Reason for not using a smartphone	*Austria*	*Netherland*
Non-project partners	**Vienna 8**	**Groningen 40**
You don't know which smartphone you should buy (type, operational system)	**25%**	**47.5%**
The first Installation is too complicated	**75%**	**57.5%**
Reading is too difficult with the device (the screen is too small)	**37.5%**	**42.5%**
Typing and deleting are too difficult with the device (the control panel is too small)	**37.5%**	**52.5%**
It's too expensive to buy a smartphone	**0%**	**27.5%**
The running costs (for example the monthly costs) are too high	**0%**	**10%**
Concerns regarding privacy policy	**12.5%**	**55%**
Concerns regarding malicious software (malware, for ex. virus)	**25%**	**45%**
Concerns regarding health problems caused by radiations	**0%**	**2.5%**
Concerns regarding unwanted costs (for ex. for things ordered unwanted costs (for ex. for things ordered caused by mistake)	**0%**	**7.5%**
Annoying queries (for ex. cookies), advertisements and so on	**25%**	**37.5%**
No connection to the internet at home (no WLAN)	**25%**	**22.5%**
No reception or bad reception of mobile data at the domicile	**12.5%**	**7.5%**
No interest/no need	**75%**	**72.5%**

Question E.2.

I use a smartphone…...   D → Daily; ST → Several times per week; R → Rare; N → Never;
No → No data

E.2.	Slovakia				Czech Republic				Spain				Sweden			
	Bratislava - 181				Brno - 118				Alicante - 221				Uppsala - 143			
(Multiple answers possible)	D	ST	R	N	D	ST	R	N	D	ST	R	N	D	ST	R	N
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
to make calls	**73**	12	3.3	11.7	**49**	25.4	5	20.3	0	**94**	3.7	2.3	65	23	3	0
to compose, send and read text message (SMS) and E-Mails	61	17	10	12	35.6	41	4.2	19.5	0	86	10.7	3.3	**71**	20	2	0
to send voice message	13	8	40	39	0	2.5	59	38	0	34.9	59.5	5.6	10	14	27	15
to photograph	17	**40**	29	14	22	36	21.2	21.2	0	79.1	17.2	3.7	17	**50**	17	3
to send pictures and videos	16.6	33	33.7	16.7	15.3	28	31	26.3	0	76.3	20	3.7	14	39	30	2
to use WhatsApp	42	18	12	28	31	15.3	17.8	36.4	0	**94**	2.8	3.3	10	17	17	32

E.2.	Bratislava - 181				Brno - 118				Alicante - 221				Uppsala - 143			
for video telephony (Skype)	7.7	9.3	33	50	6	15.3	17.8	61	0	14	**71.6**	14.4	1	6	27	**42**
for other social networks	19	14.3	16.7	50	19.5	10	6	**64.4**	0	41.4	46	12.6	19	24	18	18
to listen music or audio books	12.1	11.6	34.9	41.4	6	11	47.5	36	0	38.6	51.2	10.2	10	20	33	13
to navigate (in the car, on foot...)	12.7	19	23.3	45	2.5	20.3	52	25.4	0	47.4	43.7	8.8	6	26	32	13
to install / downloads apps	6.6	14.4	**46**	33	0.8	7.6	**89**	2.5	0	39.5	52.6	7.9	4	34	35	6
for online banking	11	31	17.7	40.3	17.8	37	17	28	0	23.3	67	9.8	10	**50**	16	8
for online shopping	4.4	11.6	37.6	46.4	3.4	11	34.7	51	0	12.1	67	22.3	3	17	**36**	20
for use of the emergency call	4.4	2.8	31	**61.8**	0	2.5	69	29	0	12.1	65.6	22.3	1	2	34	26
Other:	0	0	0	0	30	**47.5**	17	6	0	17.7	26	**56.3**	0	0	1	0

E.2.	Germany													Poland			
	Dresden - 160				Magdeburg - 69				Chemnitz - 82					Wroclaw - 153			
(You can choose more than one)	D	ST	R	N	D	ST	R	N	D	ST	R	N	No	D	ST	R	N
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
to make calls	31.3	22.5	23.1	5.6	32	35	17	8	**36.6**	**46.3**	**19.5**	**7.3**	**12.2**	**69.9**	9.8	0	0
to compose, send and read text message (SMS) and E-Mails	33.1	22	16.3	3.6	27	29	21	16	22	24.4	21	16	16	41.8	29.4	8.5	0
to send voice message	14.4	10	25	15	8	14	40	30	6	11	35.4	29.3	17	5.9	7.2	22.2	44.4
to photograph	13	**34**	29	3.1	8	**52**	22	10	10	22	45.1	11	11	28.1	26.8	**15.7**	9.1
to send pictures and videos	12	24	32.5	5	8	44	22	17	12.2	28	29.3	17.1	12.2	17	**24.2**	10.5	28.1
to use WhatsApp	**37**	24.4	8.8	9.4	**52**	19	2	19	**36.6**	19.5	16	16	11	36.6	10.5	11.1	21.5

E.2.	Dresden - 160				Magdeburg - 69				Chemnitz - 82					Wroclaw - 153			
for video telephony (Skype)	0.63	3.1	19.4	**39**	2	2	29	60	0	10	12.2	50	27	7.8	7.8	6.5	57.5
for other social networks	3.1	1.3	13	34	5	3	16	68	2.4	3.7	8.5	57.3	27	14.4	7.8	7.8	49.7
to listen music or audio books	2.5	8.1	13	32.5	5	8	17	62	4.9	2.4	13.4	51.2	27	11.8	11.8	13	43.1
to navigate (in the car, on foot...)	3.1	13	34.4	14.4	5	22	33	32	1.2	10	46.3	19.5	22	11.1	6.5	9.1	52.9
To install/ downloads apps	4.4	1.3	**44**	11	3	16	**46**	27	0	6.1	36.6	3.7	25.6	13.7	9.1	21	35.9
for online banking	3.1	11.3	9.4	38	2	10	17	63	2.4	18.3	6.1	50	22	4.6	3.2	7.8	64
for online shopping	0.63	2.5	22	34	2	5	24	62	0	8.5	17.1	51.2	22	3.3	2.6	3.9	69.9
for use of the emergency call	1.3	0	19.4	24.4	2	3	22	65	1.2	1.2	17.1	39	40.2	0	0.6	13.1	66
Other:	1.3	0	0.63	3.1	2	2	6	**83**	0	0	0	0	0	1.9	0.0	1.9	**75.2**
No answer	0	0	0	0	8	8	8	8	0	0	0	0	0	0	0	0	0

Table 16, 16a: I use a smartphone…

E.2. **Non-project partners**	*Austria*				*Netherlands*			
	Vienna - 8				**Groningen - 40**			
(Multiple answers possible)	**D**	**ST**	**R**	**N**	**D**	**ST**	**R**	**N**
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**
to make calls	**75**	12.5	**25**	12.5	35	20	32.5	5
to compose, send and read text message (SMS) and E-Mails	50	12.5	0	12.5	42.5	22.5	10	15
to send voice message	37.5	12.5	0	12.5	0	10	17.5	40
to photograph	25	12.5	12.5	12.5	17.5	**35**	32.5	5
to send pictures and videos	25	**25**	12.5	12.5	15	27.5	32.5	7.5
to use WhatsApp	25	12.5	0	12.5	**62.5**	15	0	5
for video telephony (Skype)	0	0	0	25	2.5	10	17.5	45
for other social networks	0	12.5	0	25	10	10	7.5	42.5
to listen music or audio books	0	0	0	25	2.5	7.5	10	45
to navigate (in the car, on foot..)	0	0	0	25	15	17.5	37.5	17.5
to install/downloads apps	0	0	0	25	10	17.5	**40**	15
for online banking	0	0	0	25	15	15	12.5	32.5
for online shopping	0	0	0	25	0	7.5	27.5	40
for use of the emergency call	12.5	0	0	25	2.5	0	20	**50**
Other:	0	0	0	0	0	2.5	0	7.5

Bratislava: In this question about use of the smartphone there were multiple answers possible: daily use, several times per week, rare and never. The study shows us, that for most of the older adults use of mobile phones is limited to basic functions such as making calls (73%) and for composing, sending and reading text messages and E-Mails (61%), while video calls (Skype) were the least used function (50%), which is surprising, because the use of video calls is very important for communication and social interaction among older people. It reduced risk of infection especially during the pandemic. We can remark, that the using of the WhatsApp, compared to Skype, came to 42% of the daily use by our respondents. The other social networks came to only 50% of respondents never using.

The results show that older adults use smartphone daily for sending pictures and videos (16.6%). The use of the camera function (to photograph) several times per week was chosen by 40% relatively high, while (39%) of respondents said they never sent voice message. The participants´ responses showed that 41.4% of them never listened to music or audio books.

As for navigation in the car or on foot…, 23.3% of the older people surveyed said that they rarely used it, while 46% said they rarely installed/ download apps.

Of our respondents, elderly people said they never used services such as shopping (46,4%) and online banking (40.30%), because they saw a risk behind such digital services and hence favour face-to-face transactions.

It is also very remarkable that 61.80% of the elderly adults never use the smartphone for emergency calls.

Wroclaw:
- 100 % owner use the smartphone to call / 69.9% every day, 9.8% several times per week;
- 100% also is used to SMS, e mail / 41.8% every day, 29.4% several time per week, 8.5% rare;
- 70.6% is used to photograph / 26.8% every day, 26.8 several time per week, 15.7 rare;
- 51.7 % is used to send pictures and videos / 17% daily, 24.2% several time per week, 10.4% rare;
- WhatsApp is used in 58.2% / 36.6% daily, 10.5% several time per week, 11.1% rare;
- Large number of seniors use the smartphones for:
  - emergency call (66.6%);
  - online shopping (69.9%);
  - to do e-banking (64.0%).

Dresden: Most often (daily and several times/week) the smartphone will send for WhatsApp, mails/SMS, tele-button, photograph and send pictures. On the other hand, social networks, Skype and online shopping are of minor importance.

Chemnitz: The smartphone is used specially to contact people /WhatsApp, E-Mail, make a call)
The smartphone is less used for online activities (online-banking, online-shopping)

Magdeburg: It is the 'nature' of a smartphone to be a device which incorporates many different devices. This fact is reflected in the different actions a smartphone enables. At the first place, the smartphone is used as a communicational tool, not only to make calls, but also for texting. Another key use is photography and, consequently, the sending of pictures.

Alicante: The following question in the survey dealt with the frequency of use of the smartphone in various activities. Four frequencies had been established: daily, several times per week, almost never and never.

As we have already seen, the smartphone is mainly used for interpersonal communication, but contrary to what might be expected, on a daily basis the elderly use WhatsApp or Telegram applications more often (79%) than traditional calls (71%), possibly due to the fact that they are free and allow to introduce complementary elements to written messages, i.e. photos, videos, etc.
Other services such as SMS and e-mail drop in daily frequency to 64%; perhaps because they are less versatile and because they increase the price of the monthly invoice, as is the case with SMS. Regarding people who never or hardly ever use their mobile phones for any of the above-mentioned activities, the figures are low, between 3 and 11%. Sending voice messages is not very popular among seniors; 60% never or rarely do it.
Finally, with regard to video telephony, although it occupies the last place in the table in terms of daily frequency, it has been used on some occasions by more than half of the respondents (one out of six), a number that has likely increased with the prolonged confinement imposed by the coronavirus pandemic. In relation to the use of social networks, other than WhatsApp and Telegram, more than 45% do not consult them from their smartphone.

After communication, the most frequent activities are those related to image, since over 70% of respondents take and send photographs and videos through their mobile phone on a daily or weekly basis.

Regarding games, it is worth noting that more than one in every four declares that they never use them, and almost a quarter prefer not to answer; therefore, only about 20% state that they play with games daily or weekly. Over half of the respondents never or hardly ever use audio applications to listen to the radio, music or audio books; however, those who do use them, daily or several times a week, exceed 38%. With respect to navigation systems for orientation, more than 47% of the participants use them while driving or walking on a daily or weekly basis.

There are three activities that respondents refer they rarely do from their mobile phones, namely: shopping online (67%); making emergency calls, which registers ca. 66% (with a striking 22% who prefer not to answer); and installing and downloading new applications (53%). Finally, more than a half carry out activities other than those proposed in the survey.

In this survey Alicante did not answer the question about the daily use of smartphone.

Transnational meeting in Wroclaw 2019

Question E.3. What would make your use of a smartphone easier?

E.3. Easier use of a smartphone	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	Brno 118	Wroclaw 153	Alicante 221	Uppsala 143	Dresden 160	Chemnitz 82	Magdeburg 69
Help / Explanations by another person	25%	41%	52.3%	32.1%	6%	47,5%	47.6%	46%
Smartphones especially designed for older people	21.5%	27%	31.4%	11.8%	29%	22%	25.6%	26%
Easy to understand instructions, available as a printed copy	21.5%	22%	19.6%	31.2%	21%	42.5%	44%	41%
Possibility to try a device without the obligation to buy it	23.2%	10%	5.3%	16.3%	20%	16.9%	32%	23%
Other:	8.8%	0%	2%	8.6%	6%	0%	11%	1%
No answer	0%	0%	2%	0%	0%	0%	0%	6%
Nothing is needed	0%	0%	3.2%	0%	0%	0%	0%	0%

E.3. Easier use of a smartphone *Non-project partners*	*Austria* Vienna 8	*Netherlands* Groningen 40
Help / Explanations by another person	**50%**	30%
Smartphones especially designed for older people	37.5%	15%
Easy to understand instructions, available as a printed copy	**50%**	**47.5%**
Possibility to try a device without the obligation to buy it	25%	15%
Other:	12.5%	5%

Table 17, 17a. Easier use of a smartphone

Bratislava: To make used of their smartphone easier, 25% of respondents answered that they need help/explanations by another person by the using the smartphone. When buying a smartphone 23.2% of respondents wanted to try out their skills with the operation of the device first without an obligation to buy it.

Today, the instructions for use of smartphones are directly in the devices, which 21.5% of older people have problems with and therefore find a printed copy more useful. The same percentage of 21.5% of respondents wanted a smartphone especially designed for older people. There are 8.8% of respondents who gave no opinion about "What would make your use of a Smartphone easier"?

Dresden: The use of the smartphone is mainly supported by other people (47.5%) and by means of printed user manuals facilitates (42.5%). Special senior smartphones are only considered by 22% as a help.

Alicante: It seems that adults over 50 have some problems when handling the smartphone, so the following question offered five proposals which could make its use easier. Clearly, help is needed because more than six out of ten people pointed out that it would be useful to have either some explanations by another person or easy printed instructions. 16% think that they would buy a smartphone if they were previously allowed to handle it in order to check if it is suitable for

them. Finally, a smartphone especially designed for older people was demanded by more than 11% of the respondents, despite the fact that 12 out of the 19 people who indicated other reasons claimed that they already used it without difficulty

Wroclaw: The answer "Nothing is needed" is in 4.8%; without answer are 2.9%. There are 52.3% of respondents who believe that help / explanation from other people will simplify the use of smartphone and 31,4% believe that especially designed smartphone for older people would help.

Chemnitz*: According to the participants, all four suggestions mentioned would facilitate the use of smartphone.

Magdeburg: As suggested by the results of E.1, the main strategy to make the use of smartphones easier is an adequate offer for help, mostly through an interaction with another person (46%). Also, a matter of communication, we find the need for easy to understand instructions – easy with regard to the specific target group of older adults. The need for a smartphone especially designed for older people was expressed by 26% of the participants. If compared to the results in E.2, we see that our participants use only a small amount of the different options the smartphone offers. An especially designed smartphone could 'work' in two different directions: a) concentrating on the mainly used options or b) conceive the other options in a way compatible with the use older people make of the smartphone. Another interesting result concerns the possibility to try a device without the obligation to buy it (23%), which sounds reasonable, but probably not so easy to realise.

Question E.4.

What kind of new use possibilities you would like to have implemented in the smartphone?

- The answers are given in the conclusion of each project partner

Bratislava: 0% answers of the survey respondents

Alicante: The last query in this section, only answered by 35% of the survey respondents, was an open question about the new possibilities that adults would like to be implemented in the smartphones. There were a wide variety of responses, some of which insisted on physical features such as the size and comfort of the keyboard, longer-lasting battery, lighter devices or retina displays to read eBooks easily.
Ease of use was another of the most requested aspects, either to access the email, the browsers or to be able to change a device without losing the stored information.
Regarding possible applications, they would like to be able to use the smartphone as a scanner, as an efficient GPS, to take 3D images, for image recognition (plant or animal species), to record audios that later can be transcribed, to communicate emergencies, to plan healthy menus or to have real-time medical advice.
They also demand better guarantees in terms of security and privacy, avoiding that the installation of applications does not involve the installation of unwanted elements too.

Section F, The internet of the things

Question F.1.

When you use an electronic device, how do you prefer to use/control it?

TC → **Traditional control** (buttons, wheels, switches, etc.);

VR → **Voice Recognition** (electronic assistant, Alexa, Siri, etc.)

DI → **Digital Interface** with Internet and Mobile connection.

DU → **Do not used**

F.1.	Slovakia Bratislava - 181				Czech Republic Brno - 118				Spain Alicante - 221				Sweden Uppsala - 143			
(You can only choose one per row)	TC	DI	VR	DU	TC	DI	VR	DU	TC	DI	VR	DU	TC	DI	VR	DU
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Fridge	92.9	5.5	1.1	0.5	95	5	0	0	88.7	7.2	4.1	0	**0**	**0**	**0**	**0**
Washing Machine	90	7.8	2.2	0	87.3	11	1.7	0	**91.9**	3.6	4.5	0	0	0	0	0
Dishwasher	75	5.5	1.1	0	**97.5**	2.5	0	0	91	4.1	5	0	**0**	**0**	**0**	**0**
Microwave	92.3	4.4	1.1	2.2	97	3.4	0	0	**91.9**	3.2	5	0	**0**	**0**	**0**	**0**
Oven	92.4	6	1.1	0.5	93	6	0.8	0	91	4.5	4.5	0	0	0	0	0
Vacuum Cleaner	**93.4**	4.4	1.1	1.1	90	7.6	2.5	0	91	5.9	3.2	0	0	0	0	0

	TC	DI	VR	DU	TC	DI	VR	DU	TC	DI	VR	DU	TC	DI	VR	DU
Lights	90.7	7.1	2.2	0	91.5	1.7	**6.8**	0	83.3	6.3	**10.4**	0	0	0	0	0
Curtain and windows	82	7.1	3.9	7	94	2.5	3.4	0	82.8	8.1	9	0	0	0	0	0
Home Security Systems	49	24	**5**	0	76	22	1.7	0	67	24	9	0	0	0	0	0
Watch	70	27.3	2.2	0.5	89	10	0.8	0	65.6	26.7	7.7	0	0	0	0	0
Health Sensors	46.4	**32**	**4.4**	12.7	68.6	**31.3**	0	0	59.7	33.9	6.3	0	0	0	0	0
Telephone	47.5	47.5	**4.4**	0.5	65	**31.3**	3.4	0	38.5	**54.8**	6.8	0	0	0	0	0
Hi-fi	52	**24**	**6.6**	14.3	85.6	12.7	1.7	0	69.7	20.8	9.5	0	0	0	0	0
Car	62	12.7	**5**	0	87.3	12	0.8	0	71.5	21.7	6.8	0	0	0	0	0

F.1.	Germany												Poland			
	Dresden - 160				Magdeburg – 69				Chemnitz - 82				Wroclaw -153			
(You can only choose one per row)	TC	DI	VR	DU	TC	DI	VR	DU	TC	DI	VR	DU	TC	DI	VR	DU
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Fridge	**95**	1.3	0	0	**90**	**1**	**0**	0	**94**	**1.2**	**0**	**4.9**	78.4	13.7	1.3	0
Washing Machine	94	2.5	0	0	91	1	0	0	95.1	2.4	0	2.4	82.3	9.8	1.3	0
Dishwasher	84	1.9	0	0	84	1	0	0	96.3	1.2	0	2.4	**82.3**	10.5	1.3	0

Microwave	76	0.63	0.63	0	71	3	0	0	93	1.2	0	6.1	64	9.1	1.3	0
Oven	76	3.1	0.63	0	59	4	0	0	84.1	1.2	0	14.6	75.1	17.6	1.3	0
Vacuum Cleaner	91.3	2.5	0	0	90	3	0	0	91.5	1.2	0	7.3	78.4	15.7	0.6	0
Lights	76	6.9	36	0	84	3	1	0	86.6	3.7	4.9	4.9	77.1	10.5	1.9	0
Curtains and windows	76.3	3.6	1.9	0	68	7	0	0	82	2.4	1.2	14.6	69.3	24.2	2.6	0
Home Security Systems	59.4	8.7	1.3	0	48	16	0	0	71	11	0	18.3	59.5	32.7	**2.6**	0
Watch	61.3	20	0.63	0	52	26	0	0	79	11	1.2	8.5	60.8	32.7	1.3	0
Health Sensors	37	18.1	0	0	30	30	0	0	58.5	16	0	25.6	55.5	31.4	1.3	0
Telephone	55	**29**	1.9	0	58	38	0	0	71	24.4	1.2	3.7	43.8	**48.3**	**3.2**	0
Hi-fi	60	11.2	**5.6**	0	33	19	1	0	77	14.6	0	8.5	67.3	24.2	2.6	0
Car	64	11.2	3.6	0	59	28	0	0	74.4	17	0	8.5	67.9	21.1	2.9	0
No answer	0	0	0	0	6	6	6	0	0	0	0	0	0	0	0	0

Table 18: Use of electronic devices

F.1. Use of electronic devices *Non-project partners*	*Austria*			*Netherlands*		
	Vienna - 8			**Groningen – 40**		
	TC	DI	VR	TC	DI	VR
	%	%	%	%	%	%
Fridge	**87.5**	0	0	95	5	0
Washing Machine	75	0	0	**97.5**	2.5	0
Dishwasher	62.5	0	0	90	2.5	0
Microwave	62.5	0	0	92.5	2.5	0
Oven	25	0	0	75	25	0
Vacuum Cleaner	75	0	0	**97.5**	2.5	0
Lights	62.5	0	0	82.5	17.5	0
Curtains and windows	25	0	0	85	10	0
Home Security Systems	12.5	0	0	45	22.5	0
Watch	25	25	0	75	20	0
Health Sensors (cardiac rhythm, sugar measures, pedometer, etc.)	0	12.5	0	32.5	2.5	**2.5**
Telephone	37.5	25	0	60	**30**	**2.5**
Hi-fi	12.5	0	0	82.5	17.5	0

Table 18a: Use of electronic devices – non project partners

Alicante:The internet of things (ioT)

Digital technology has long been established at our homes and it is more and more present in everyday life. Many home appliances can be remotely monitored to make daily tasks easier. Nevertheless, if you do not know how to use it, technology can be more of an issue than an advantage. Therefore, this section contains an analysis of the way seniors use their electronic devices and the kind of control access they value when buying a new gadget.

The first question presents fourteen domestic appliances related to cleaning, cooking, lighting, ventilation, entertainment, communication, health and security, which can be controlled in three different ways: through mechanical systems such as buttons, wheels, switches, etc.; through a digital interface using the internet or a mobile connection; and with voice recognition.

Mainly, traditional control prevails over the other two alternatives, as the responses show: over 90% for washing machine, microwave, dishwasher, oven and vacuum cleaner; between 70 and 90% in the case of fridges, lights, curtains and windows and cars; and more than 50% for Hi-Fi, home security systems, watch and health sensors. There is only one exception, the telephone that, although it is used in a traditional way by nearly four in ten, 55% of the respondents stated that they control it through an Internet connection.

When analysing in detail the responses on the other two options (having a digital interface or a voice-control over the gadgets), it is interesting to highlight that the digital interface has a preference over the voice-control when dealing with vacuum cleaners, cars, Hi-Fis, security systems, or watch and health sensors. Conversely, voice-control takes over the second position in the ranking when using washing machines, microwaves, lights, curtains and windows.

Bratislava: Digitisation is progressing in virtually all areas of life – including household appliances such as washing machines, refrigerators, dishwashers and others. Most consumers know very well how to operate a washing machine in the "analogue way". With the digital technology they have to learn the procedures completely new. However, consumers, often fails at the installation of an appliance if they do not have the description of the household appliance at hand as a printed manual instruction. Further, the installation is only possible with the help of a specially developed application directly in the device.

Most of our respondents chose the first of the three options for all 14 appliances: **Traditional control** (buttons, wheels, switches, etc.) although this varied between 93.4% for the vacuum cleaner, 92.9% for the fridge, 92.4% oven, 92.3% microwave, 90.7% lights, 90% washing machine to 46.4% for Health Sensors.

For using the **Digital Interface with Internet and Mobile Connection** our respondents chose only between 4.4% to 47.5%. Comparison between the first two options: Traditional control and the Digital interface with internet and mobile connection (47.5%), only telephone has the same number of percentage (47.5%).

Digital Interface with Internet and mobile connection was chosen by the respondents more than the third option - **Voice Recognition** (electronic assistant, Alexa, Siri, etc.) which receives the least percentage of older people between 1.1% (2 persons) up to 6.6% (12).

Do not used were represented between 0% to 14.3% by Hi-fi.

Wroclaw:
➢ When it comes to mobile phones 48.3% of respondents see them being able to be used with digital interface with internet and mobile connection.
➢ Also for the cars there are 27.4% of seniors who prefer new technologies / devices / digital interface (radio, air-conditioning, navigation).
➢ 32.7% of seniors would like home facilitation in a modern Home Security system and in the watches.
➢ 31.4% prefer modern Health sensor / cardiac rhythm, sugar measuring, pedometer and others.

Dresden: The vast majority of seniors surveyed prefer the traditional use of appliances in the home. The main exceptions are telephones, watches and health sensors, where about a quarter specify digital user interfaces. Speech recognition is only given for stereo-layers (5%).

Chemnitz: The vast majority of the participants prefer traditional control elements (i.e., switch, buttons and steering wheel).

Question F.2.

When you buy a new device, do you take in consideration if they have the possibility of being controlled by mobile or internet connection or do you prefer a traditional device? (You can choose more than one)

F.2.	*Slovakia*	*Czech Republic*	*Poland*	*Spain*	*Sweden*	*Germany*		
	Bratislava 181	**Brno 118**	**Wroclaw 150**	**Alicante 221**	**Uppsala 143**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**
I prefer a traditional device (no digital or internet interface)	**82%**	**89%**	**53.6%**	25.3%	0%	**62.5%**	**77%**	**62%**
I prefer a digital device with no connection to the Internet	18.2%	51%	42.3%	21.3%	0%	21.3%	13.4%	26%
I prefer a device with mobile and Internet monitoring	23%	32.2%	14.5%	**56.6%**	0%	15.6%	4.9%	10%
No answer	0%	0%	8.5%	**0%**	0%	0%	4.9%	3%

Table 19: Consideration when you buy new devices

F.2.		Austria	Netherlands
Non-project partners		**Vienna 8**	**Groningen 40**
I prefer a traditional device (no digital or internet interface)		**87.5%**	**67.5%**
I prefer a digital device with no connection to the Internet		25%	25%
I prefer a device with mobile and Internet monitoring		12.5%	15%

Table 19a: Consideration when you buy new devices – non project partners

Alicante: As we have just seen, the participants choose traditional ways of use as their main option. Nevertheless, it is remarkable that more than half of them prefer digital interface, internet connexion and voice control when it comes to buy a new device, and that only 21% give still preference to the purchase of a traditional gadgets.

Bratislava: The respondents could choose more than one answer. As we can see from the survey, the majority of participants (148 - 82%) chose a traditional device without a digital or Internet interface when buying a new device. Devices with mobile and Internet monitoring were preferred by 41 people, representing 23% of the respondents.
Only 33 respondents (18.2%) were going to buy a digital device without an Internet connection.

Dresden: The statements when purchasing new equipment are different. Only 62% would opt for traditional bikes without a digital user interface. Digital devices (without an Internet connection) would be purchased by 22% and internet-controlled devices 16%.

Chemnitz: As reported previously, the vast majority prefers a traditional device.
Uppsala: Question not asked.
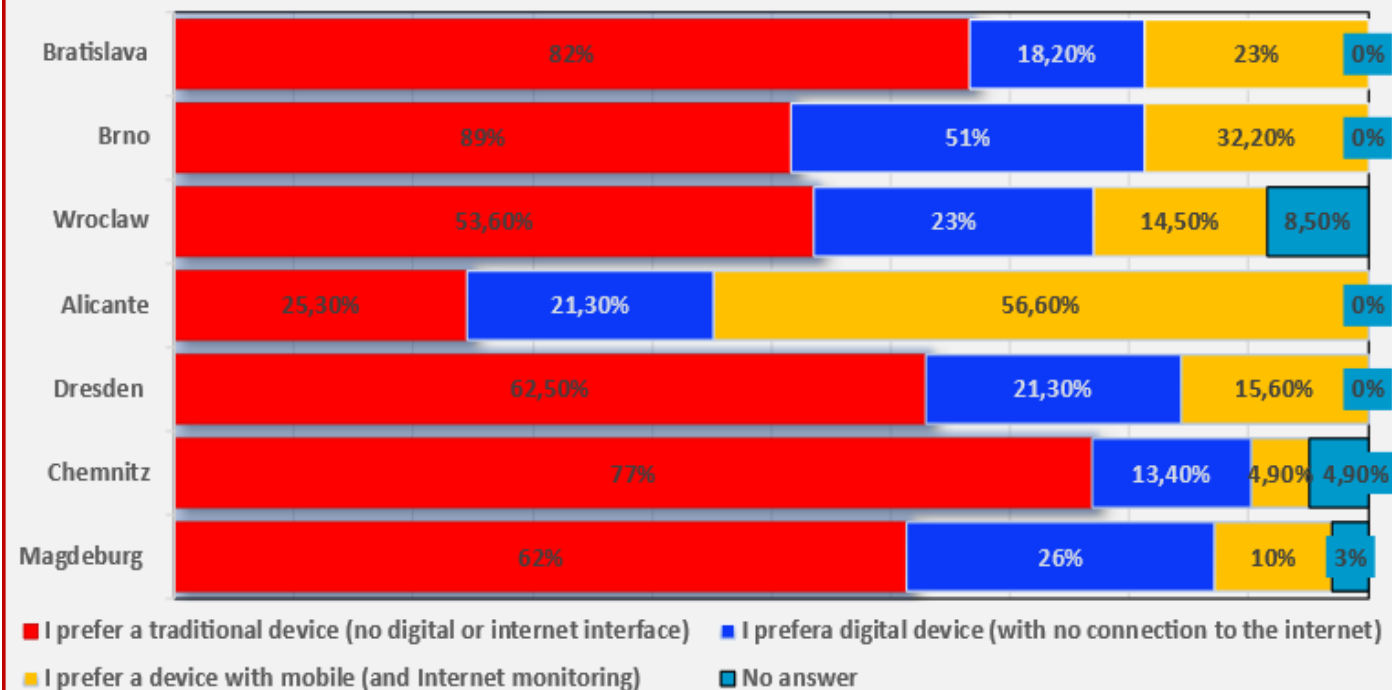
Figure 6: Consideration when you buy new devices

Section G, Main difficulties in the use of digital technologies

Question G.1. Indicate the main obstacles you face when using digital technologies and apps/applications.

G.1.	Slovakia	Czech Republic	Poland	Spain	Sweden	Germany		
	Bratislava 181	**Brno 118**	**Wroclaw 153**	**Alicante 221**	**Uppsala 143**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**
It is too expensive	**27%**	61%	32%	14.9%	3%	11.2%	**38%**	**16%**
I am not interested in it	14%	30%	7.2%	8.6%	8%	32%	27%	26%
Displayed text is difficult to read	9.4%	32.2%	**22.3%**	17.2%	7%	7%	8.5%	17%
They are complicated to use	20%	**76.3%**	30.7%	**40.3%**	7%	**38%**	41.5%	33%
They require a significant time investment	19%	41%	13.7%	30.3%	2%	15.6%	17%	22%
I have nobody who can help me	19%	30.5%	30.7%	11.8%	8%	15.6%	21%	9%
None	23%	4.2%	21%	24.9%	**40%**	0%	6.1%	25%
No answer	0%	0%	7.8%	0%	**0%**	0%	14.6%	3%

Table 20: Obstacles when using new technologies

G.1.	Austria	Netherland
Non-project partners	**Vienna 8**	**Groningen 40**
It is too expensive	12.5%	**5%**
I am not interested in it	25%	20%
Displayed text is difficult to read	12.5%	5%
They are complicated to use	**87.5%**	37.5%
They require a significant time investment	25%	22.5%
I have nobody who can help me	37.5%	20%
None	0%	35%

Table 20a: Obstacles when using new technologies – non project partners

Bratislava: The respondents could choose more than one answer.

The first potential barrier to the use of new technologies by older adults is financial - it is too expensive. This was confirmed by 27% of respondents.

Higher number of respondents (20%) perceived the new technology to be complicated to use. According to the participants (19%), the occupation with the new technology is quite time-consuming. The same percentage of 19% of respondents need help to use the technology but do not have it available.

14% of respondents were not willing to learn how to use new technology, they are not interested in it. 9.40% of respondents have difficulty in reading the text on the display. Surprisingly, 23% of participants know no obstacles in using new technologies.

Wroclaw: 32.0% of respondents believe that using digital technology is too expensive. 30.7% believe that it is too complicated to use and they have no one to help them.

Dresden: An obstacle to the use of IT is a lack of interest, as indicated by 32% of respondents. This is similar to the answer to question E.1. (smartphone). For 38%, use is too complicated, 16% complain of too much time, and just as many have no help with problems.

Chemnitz: The participants reported complexity of use and the high price of the technologies, as the two greatest barriers to digital services.

Alicante: The next two questions analyse the obstacles and risks those seniors find when dealing with digital technologies. Regarding the barriers, a list of seven possibilities was offered, among which the seniors could choose as many as they found suitable. The findings show that the difficulty in the use of digital technologies and applications stands out, with over 40% of the results. Moreover, according to 30% of the respondents, not only is learning about these technologies complicated, but also time consuming. Three answers scored between 10 and 20% of the total: the reading difficulty of displayed texts are, the excessive costs and the lack of personal assistance.
While ca. 9% admit not being interested, a positive fact for the implementation of digital technologies among the elderly is that a quarter of the respondents declare that there is no obstacle when using them.

Questions G. 2.

Specify which apps/applications of digital technologies make you most suspicious of/are most afraid in their use for reasons of loss of privacy, risk of theft or fraud, personal data leaks, etc (4 options prioritized).

G.2.	Slovakia	Czech Republic	Germany			Poland	Spain	Sweden
	Bratislava 181	**Brno 118**	**Dresden 160**	**Chemnitz 82**	**Magdeburg 69**	**Wroclaw 153**	**Alicante 221**	**Uppsala 143**
I have no concerns	0%	0%	0%	**0%**	**16%**	0%	0%	**0%**
Information search	23%	54.2%	23%	**4.7%**	**25%**	24.2%	34.84%	**0%**
Personal communication	10.5%	68%	25%	18.3%	20%	12.4%	35.26%	0%
Working with photographs	7.7%	11%	7%	0%	7%	10.5%	21.69%	0%
Working with videos	3.3%	6.8%	5.6%	0%	7%	9.1%	14.05%	0%
Reading online publications	3.3%	17.8%	7%	0%	3%	10.4%	16.36%	0%
Office automation	5.5%	9.3%	5%	4.7%	1%	3.9%	9.55%	0%

E-commerce (Online-Shopping)	**39%**	60%	57%	56%	46%	**22.8%**	**83.25%**	0%
Administrative or banking formalities (Online-Banking)	25%	**89%**	**61%**	77%	54%	15.7%	69.65%	0%
Digital Medical History and/or other medical formalities	17%	59,3%	29.4%	40%	39%	16.3%	43.02%	0%
Multimedia reproduction	2.2%	17,8%	5.6%	0%	4%	8.5%	9.05%	0%
Geographic Information Systems (On-line maps)	3.3%	15,2%	5.6%	1.2%	7%	3.2%	11.85%	0%
Application procedure with public authorities, online communication	20%	30,5%	18.8%	45.1%	30%	32%	44.36%	0%
Other	4.4%	11%	2.5%	1.2%	4%	12.4%	6.81%	0%
No answer	0%	0%	0%	4.7%	4%	13.7%	0%	0%

Table 21: Risk in use of digital technologies

G.2.	Austria	Netherlands
Non-project partners	**Vienna 8**	**Groningen 40**
Information search	25%	37.5%
Personal communication	12.5%	27.5%
Working with photographs	12.5%	5%
Working with videos	25%	2.5%
Reading online publications	12.5%	0%
Office automation	0%	7.5%
E-commerce (Online-Shopping)	**75%**	**75%**
Administrative or banking formalities (Online-Banking)	62.5%	50%
Digital Medical History and/or other medical formalities	37.5%	32.5%
Multimedia reproduction	0%	5%
Geographic Information Systems (On-line maps)	25%	10%
Application procedure with public authorities (online communication)	25%	22.5%
Other	0%	0%

Table 21a: Risk in use of digital technologies – non project partners

Bratislava: In our survey we asked the participants, if they could specify which apps/applications of digital technologies made them most suspicious of/are most afraid in their use for reasons of loss of privacy, risk of theft or fraud, personal data leaks, etc. The digital technology can collect and store vast amounts of data. It can be very difficult to keep this

data safe. The digital technology offers a wide scope for the users to hide their identities for the purposes of scamming and defrauding.

Nowadays it has become a habit to do many activities online. Of the respondents 39% saw risk in online shopping, 25% in banking formalities via online banking, 23% in searching for information, 20% in the application procedure with authorities as (online communication)- and 17% in digital medical history and/or other medical formalities.

People can make contacts and communicate through digital devices rather than through physical contact. More often than not, e-mail addresses are created that have the real name of the participant, which means that there is a risk that personal data can be accessed, say 10.5% of respondents. Photos, videos, online reading publications, online maps, multimedia reproduction and other can be found on numerous devices such as mobile phones, tablets, laptops and portable hard drives. Individual items can be hard to find, easily or accidentally deleted or lost. Participants believe that the risk of personal information being stolen or sold ranged from 7.7% to 2.2%.

Wroclaw:
The most discouraging and annoying thing about the use digital technology is for 32.0% respondents the correspondence with offices.
For 34.2% it is looking for information and 22.8% believes that it is shopping / e-commerce line.
The least annoying thing is the geographic information system (3.2%) and office automation (3.9%).

Chemnitz: The participants become most suspicious of online activities (bank activities, e-commerce, digital patient file) involving private date.

Dresden: In addition to the problems with IT usage, there are the risks associated with online banking and online shopping (approx. 60%) be seen. Users also have security concerns when it is used for digital medicine, personal communication and information search, albeit to a lesser extent (20 to 30%).

Alicante: The following question assessed the kind of applications that make seniors reluctant to the use of digital technologies because of dangers related to the loss of privacy, the risk of theft or fraud, personal data leaks, etc. In this

question they were requested to choose a maximum of four options in order of priority. The apps they fear the most are those related to online shopping.

Although as a first choice this response just reaches 37%, it exceeds 83% if we consider global results. The same applies to online banking, the second cause for concern, with values above 10% in the four rankings and a total of almost 70%.

Procedures with public authorities and medical formalities are both in the 40% range, although they register lower percentages as first and second options.

As for the rest, no application seems half as worrying as the first two. Personal communication, information search and working with photographs are in the 20 to 40% range; and even below that are online publications, working with videos, geographic systems, office automation, multimedia reproduction and others.

Transnational meeting in Wroclaw 2019

Transnational meeting in Dresden 2021

Section H. Perception and attitude towards digital technologies

Question H.1. Indicate if you feel identified with the following statements: Yes – Y; No - N

H.1.	Slovakia		Czech Republic		Germany						Poland		Spain		Sweden	
	Bratislava 181		Brno 118		Dresden 160		Chemnitz 82		Magdeb urg 69		Wroclaw 153		Alicante 221		Uppsala 143	
	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
The use of new technologies has given me new friends	37.6	**63.5**	55	45	18	**66**	74.4	10	17	80	30	**64**	41	**59**	17	**70**
Thanks to the Internet I have recovered contact with some people	75	25.4	67	30.5	44	44	29.3	50	45	52	49.7	44.4	74.7	25.3	45	45

H.1.	Bratislava 181		Brno 118		Dresden 160		Chemnitz 82		Magdeburg 69		Wroclaw 153		Alicante 221		Uppsala 143	
With the new technologies I can keep in touch with my classmates outside the classroom	84	16	78	22	35	33	46.3	41.5	52	45	81.7	12.4	**85**	15	36	45
With new technologies I have improved the communication with friends and family	80	20	91.5	8.5	**76**	15	63.4	63.4	72	25	**85**	9.1	78.3	21.7	**65**	27
No answer	0	0	0	0	0	0	0	0	3	3	**5.8**	5.8	0	0	0	0

Table 22: Perception and attitude towards digital technologies

H.1.	Austria		Netherlands	
Non-project partners	Vienna - 8		Groningen - 40	
	Yes	**No**	**Yes**	**No**
The use of new technologies has given me new friends	25%	**75%**	15%	**85%**
Thanks to the Internet I have recovered contact with some people	37.5%	50%	42.5%	55%
With the new technologies I can keep in touch with my classmates outside the classroom	**62.5%**	25%	42.5%	45%
Thanks to new technologies I have improved the communication with friends and family	50%	50%	**67.5%**	30%

Table 22a: Perception and attitude towards digital technologies – non project partners

Bratislava*:* The last section is about perception and attitude towards digital technologies and consists of two questions. In the first question the majority of participants (84%) said that with the new technologies they can keep in touch with their classmates outside the classroom. 16% of respondents denied the statement.

80% of the participants thought new technologies had improved the communication with friends and family. 20% of participants disagreed with this statement.

More than half (75%) of the participants said that thanks to the Internet they have recovered contact with some people; 25.4% said to this statement no.

A moderate 37.6% of respondents said that they had made new friends through the new technologies. However, a high percentage of participants (63.5%) denied this statement.

Wroclaw: *How digital technology affect our contacts with family and friends.* 130 (85.5%) respondents improved their contacts with family and friends,
25 (1.7%) can stay in touch with their colleagues not only during the U3A classes. There are only 76 (49.7%) of respondents recovered contacts with some people and for 46 (30.0%) use of new technology allowed to meet new acquaintances.

Dresden: On question H.1. there are clear statements.
The new technologies will improve contacts with family and friends. The new technologies do not lead to new friendships.

Chemnitz: The participants reported that the digital technologies are helpful in communicating with others.

Alicante: The last part of the survey, which covers four questions, deals with the perception and attitude of the elderly towards digital technologies. In the first place, the participants were given a closed question about four possible scenarios resulting from the use of digital technologies. Over 85% think that technology enables them to keep in touch with classmates outside the classroom; 78% think that technology improves the communication with family and friends; and it has allowed them to recover contact with some people (74%). When it comes to making new friends, results show a slight difference of 8 points between those who have made new friends and those who have not (41% versus 59%).

Question H.2. **You consider that the use of digital technologies is...:** (You can choose more than one)

H.2. Use of DT is	Slovakia	Czech Republic	Germany			Poland	Spain	Sweden
	Bratislava 181	Brno 118	Dresden 160	Chemnitz 82	Magdeburg 69	Wroclaw 153	Alicante 221	Uppsala 143
Entertaining	35%	78%	49%	**50%**	**54%**	27.5%	41.6%	56%
Manageable	26%	27.1%	16.9%	25.6%	13%	17%	34.4%	44%
Unnecessary	0%	10%	5.6%	14.6%	3%	0.6%	2.3%	1%
Pleasant	35%	57.6%	45%	56%	47.1%	28.8%	38%	56%
Efficient	35%	86.4%	44%	28%	26.8%	47.1%	63.8%	67%
Complicated	4.4%	74.6%	19.4%	2.4%	45.7%	26.8%	10.9%	16%
Educational	51.4%	52.5%	49.4%	36.6%	52.3%	45.7%	36.2%	40%
Practical	**57.5%**	80.5%	**77.5%**	74.4%	45.1%	**52.3%**	**81.9%**	**87%**
Important	14%	**95%**	38%	44%	1.3%	45.1%	50.7%	41%
Harmful	1.7%	27.1%	4.4%	4.7%	4%	1.3%	0.9%	1%
Boring	1.7%	1.7%	0.63%	4.7%	1%	0%	1.4%	3%
No answer	0%	0%	0%	1.2%	1%	15.7%	0%	0%

Table 23: Use of digital technologies is…

Dresden: The benefits of digital techniques are considered useful by a large part of the participants. Few exceptions call it unnecessary, harmful or boring. About 20% find digital techniques complicated.

Bratislava: The last question of the survey was: **What do you think about…**
The 57.50% of the respondents thought that the use of digital technologies for everyday tasks is practical and but only 14% of participants thought it important. 51.40% of the participants said that use of digital technologies is educational. The answer as pleasant, efficient and entertaining has the same percentage of 35%.
26% of older adults find working with digital technology manageable. For 4.40% of respondents the use of digital technologies was seen as complicated.
1.40% consider the work and use of digital technology as harmful and the same percentage of 1.40% as boring. No respondents thought digital technologies were unnecessary.
Wroclaw: This question shows, *how the respondents perceive the use of new technologies.*
  ➢ 52.3% respondents believe that new digital technologies are practical;
  ➢ 47.1% think that they are efficient;
  ➢ 45.1% see them important and practical.
  ➢ Over 20% believe that although they are complicated, they are still pleasant and entertaining.

Alicante: The next question proposed eleven adjectives to qualify the use of the technologies. The participants were requested to choose as many options as they liked, and more than a half agreed that technology is mainly practical (82%), efficient (64%), and important (51%). It is relevant that all the negative aspects are concentrated in the lower part of the table, scoring lower than 11%: c. 11% described technologies as complicated, 5 out of the 221 respondents believed they are unnecessary, 3 chose boring and 2 harmful.
Magdeburg added one more question to the questionnaire during the corona pandemic: "Did the pandemic increase your use of digital devices?" The answers:

YES	12	44%
NO	15	56%

Question H.3.

Please add any further comment related to the use of digital and Internet-connected devices:

Alicante:

Then, an open question encouraged the participants to add some comments about the use of digital and internet-connected devices, only 25% did. The options were grouped in several blocks according to their topic.

On the positive side, seniors mainly valued the possibilities of information and communication with the rest of the world. According to respondents, the internet and smartphones are the suitable tools for breaking down barriers, discovering other cultures and being updated. In addition, they connect users to family and friends, and make them feel they are an active part of the society. They also believe that digital technology improves people's lives and, therefore, its use is necessary, unstoppable and irreversible. Some even wonder why other people of their age do not give it the importance it deserves.

On the other hand, there are some interviewees who complain about the difficulties they experience when using technologies because of the lack confidence or because they are discouraged when they fail to handle digital devices in an adequate way. However, they also believe that their skills could improve with a proper training and that technologies should be available to older people.

As a last thought, digital technologies generate two notable concerns: the lack of security and privacy derived from the transfer of personal data required to access applications, and the addictive behaviours that can be generated by an abusive use of network resources.

The questionnaire is closed with a specific question for Spanish participants about the kind of courses or workshop they would like to be offered. On one hand, some respondents think that currently there is a suitable offer, complemented by Euconet, a club hosted by the Permanent University to help senior to use the Internet. On the other hand, basic-skill courses (text-edtion, mail handling, net surfing, etc.) are demanded by those who do not have any technological knowledge or skills. Specialized courses (e.g. photo

and video edition, online-bank, digital currency, smart contracts) are a request from the most advanced pupils.

The interviewees also showed interest in specific devices, such as tablets, smartphones, home automation, and certain applications, for example, social networks, GPS, Skype, or the Drive.

Finally, there are some people who want to have online courses related to other topics, such as history, arts, literature, geology, etc.

Magdeburg

1. Preliminary remarques

The Questionnaire was sent two times to students attending the further education program "Studieren ab 50" at the OVGU Magdeburg (Germany). The first try was in February 2020. The main target was to reach meanly students with little knowledge in the use of digital devices. Therefore, we chose from our database primary those students – 180 – without an e-mail address.[1] We printed the questionnaire, which was sent by post. Additionally, we chose a random group of 70 students with an e-mail address and sent them the questionnaire as an e-mail attachment. We sent the questionnaire altogether 250 people. It was planned to get the completed questionnaires back during the registration phase, which however was cancelled due to the pandemic. Since we got less responses than expected – only 42 –, we decided to make a second try. So, we sent in February 2021 the questionnaire again to 230 students (avoiding those who already got it the year before), this time only by e-mail. The Questionnaire was mainly the same, we added just the question H3. at the end, asking if there has been an increase in the use of digital devices due to the pandemic. This second attempt as well was not quite successful, getting only 27 responses. All in all, we had 69 responses, all of them with Germany as country of residence (A 3).

Dr. Annika Felix and Jasmin Dabitz, M.A. (Otto-von-Guericke-Universität Magdeburg, Lehrstuhl für Hochschulforschung), together with a group of older students, developed in the winter term 2020/21 a larger survey concerning the program "Studieren ab 50" in general. This survey was carried out during the summer term 2021, reaching more than 800 students. Mr. Freymark, Mr von der Heide, Mr Weikert and I were in a constant exchange with Annika Felix and Jasmin Dabitz, discussing a special section

on digitalisation with specific questions concerning the differences between the time before and during the pandemic. The results of the survey will be presented in December 2021, a separate evaluation of the section concerning digitalisation will be made available to the SeLiD-Project.

The background is as follows: If there is no e-mail address in our database, then because the corresponding student has no such address, due to the little knowledge about the use of digital devices. Nevertheless, there are some few cases where the students simply didn't want us to have the personal e-mail address.

10.2. CONCLUSIONS FROM THE PROJECT RESEARCH

ALICANTE

Universidad Permanente de la Universidad de Alicante, Spain

To begin with, the survey was conducted among people over 50 years of age, mainly (70%) in the 60-70 age range. Almost all of them are students of the Permanent University, have a university degree, and declare to have acceptable, good or very good computer knowledge. They are regular and frequent users of smartphones, computers and tablets, and except for four people, the rest have an Internet connection at home; nevertheless, they know how to connect their devices to the network when they are away from home. Therefore, it is worth highlighting that the data must be interpreted with caution because the results cannot be extrapolated to the elderly population in general.

When they need specific training in digital issues, mostly resort to workshops and courses, or as a second option, they seek support from family and friends, and more than half are even able to search for information on the Internet on their own.

Regarding technological devices, the most appreciated is the mobile phone, which more than three quarters of the respondents use mainly to communicate, but also to have their calendar always available and to report emergencies. That does not mean that smartphones are preferable to the

traditional phone, ca. 50% of the respondents still use the conventional phone. Computers stand out when using text-edition, e-commerce and banking, and they are so, because they are associated with a higher level of security (90% are able to use the PC or laptop). Tablets are more related with leisure and used for reading and games.

After a detailed analysis of the reasons for not using the smartphone, it has been detected that three are the most relevant, with similar scores in the results: pop-ups and cookies, lack of interest/necessity and difficulty in writing and reading. This does not prevent almost all respondents from using Whatsapp or calling on a daily or weekly basis from their smartphone; although they would use the device more often for other purposes if they had outside help or easy printed instructions.

When it comes to improve their smartphone use, their demands are already available on some devices, while in others they are also possible by modifying the configuration, improving the connectivity or downloading the appropriate applications; such is the case for recognition of plant species, efficient GPS or transcription of audios. The implication is that they need to explore or be trained in the possibilities of the devices they have.
Regarding the internet of things, most of the participants prefer the traditional control, based in buttons, wheels or switches for their appliances, but it is remarkable that over 50% of them consider the mobile and internet monitoring when it comes to buy a new device, versus 21% who would choose the traditional one.

Continuing with the ioT, while four out of ten think that technological appliances are difficult to use and time consuming, a quarter of the respondents do not find any obstacle.

Finally, according to most of the interviewees, digital technology is a practical, efficient and important tool; moreover, it helps them to stay in touch with colleagues, family and for half of them it has even helped to make new friends.

BRATISLAVA

Univerzita Komenského v Bratislave, Bratislava, Slovakia

The aim of this questionnaire study was to gain an understanding of what technologies people are using or not using, and what factors influence their experience. A significant amount of information was gathered in relation to these factors, in particular regarding experience and acceptance of technology, supporting social interaction and intergenerational usability of household devices.

For the question about using or not using the smartphone, the elderly thought the major barriers are financial restrictions, vision impairment and lack of knowledge in using smartphone functionalities.

In our questionnaire the respondents had the possibility of giving their comments to the questions. One of these comments referred to the question

"There is discrimination against citizens who do not own this device, and which do not use a smartphone for the services of state bodies, banks, services, etc.."

Another answer: "This activity goes with the time; without them I can no longer imagine my existence" but also "a lot of information and instructions and links are in English; the older generation usually does not speak English". (It means digital technologies.)

Some of their answers were positive as e.g.: "Smartphone help me in lot of situations in my life, I actually learn a new language, improved my English, helped me to take notes of my friends and write to them later, to win time on better stuffs, I think it's basically about controlling the technology, if the smartphone was limited in some things, it would be much more helpful".

"Since I am already living alone, it is in my interest to maintain my socio (my social life) in an appropriate form. I have this duty not only for myself, but also for my children and grandchildren. Through technology, I enjoy their school and sports success almost daily. Thanks to them, I managed this level. I know I still have gaps and I'm looking forward to new challenges." and:

"It is a problem for older people to maintain their PC or laptop and phone in terms of installing ordinary software, or various updates, antivirus, etc. If they don't have anyone in the family to help them, they don't want to use it. In

addition, older people have problems with vision and fine motor skills; they have less sensitive and agile fingers, which are needed when using these technologies. Therefore, they prefer different buttons and knobs, e.g., on the electric oven, the old man prefers to turn the knob, because he knows e.g., that if he turns the knob 180 degrees, he has set the oven temperature to XY ° C and does not have to look for glasses to see what he has set."

Use of the new technologies is very important, especially for elderly people for increased feelings of security and to be reachable for the family, friends, etc. It gives the opportunity to connect with family and friends around the world. Disadvantage is that it requires internet (Wi-Fi).

According to the results of the questionnaire, we can conclude that the majority of respondents have a positive attitude towards digital technologies and are willing to overcome the difficulties of using the equipment. Therefore, we believe that older people who have doubts about the necessity of the smartphone would be most likely to accept it if they found the smartphone not only easy to use, but also beneficial to themselves. This also applies to other digital devices that can bring a lot of relief to older people in their daily lives.

Transnational project meeting in Alicante 2021

BRNO

Vysoké učení technické v Brně, Brno, Czech Republic

This report offers relevant information for the next part of the project: enlargement of the seniors' ICT skills.

Most of the respondents of the survey were women (82 %). About 46 % of the surveyed respondents were situated between 71 and 80 years of age, 40 % were 61-to 70-year-olds, the remaining 14 % corresponded to people between 50 and 70 years.

All respondents have at least secondary education.

Concerning their computer literacy, about 29 % of respondents consider their skills are low or very low, 42 % acceptable, 29 % good or very good.

Smartphones are used by 73 % of respondents. Almost all respondents use a personal computer (97 %).

Seniors mostly uses access to the Internet at home or at the University of the Third Age.

Respondents usually prefer support provided by relatives or friends, workshops and lessons in the classroom.

Only 14 % of respondents use voice input.

Although the goal behind the Internet of Things (IoT) is to have devices that self report in real-time, improving efficiency and bringing important information to the surface more quickly than a system depending on human intervention, almost all respondents prefer traditional control of the devices.

According to the results of the questionnaire, we can conclude that the majority of respondents have a positive attitude towards digital technologies and are willing to overcome the difficulties of using the equipment.

Nowadays ICT cannot be separated from their daily needs.

Because digital technologies have a great impact on seniors' lives, during the upcoming computer courses implemented within the SeLiD project, our special goal is to attract seniors' attention to the most popular IT devices and to the artificial intelligence issues.

Transnational project meeting in Alicante 2021

DRESDEN

Dresdner Seniorenakademie für Wissenschaft und Kunst, Germany

The questionnaires for this survey were prepared jointly by the project partners from six countries and are used in the same text - in each case in the national languages - by all participants.

At the beginning of 2020, 200 questionnaires were printed and distributed in German in Dresden. The look down in the spring of 2020 abruptly ended the survey. 160 questionnaires were evaluated, all of which were answered **before** the Corona crisis.

95% of the participants are over 60 years of age, 20% older than 80 years. The level of education, as measured by higher education or technical college qualifications, is twice as high as in the average population.

The self-assessment of computer skills (each 10% very good or very bad) correlates with the technical equipment: 9% do not have a smartphone, 6% do not have a PC. The tablet is relatively rare, PC and smartphone are most used. The smart phone mainly uses WhatsApp and other forms of

communication. In addition to communication, the focus is on PC use for banking, commerce and reading publications. Note the large number of "No Interest" responses of 50% and 32% respectively. Also, the safety concerns especially with our project topics banking and digital medicine cannot be neglected.

Several question complexes (points C, E, G and H) show that 15 to 20% of the survey asks need help with the use of digital techniques. This proportion of listeners can be expected to be used for the necessary learning formats that should be offered by the Seniors Academy. Distance learning does not matter.
A survey is always a snapshot. In this case, it is significant that it was carried out before the Corona Pandemic.

CHEMNITZ

Technische Universität Chemnitz, Seniorenkolleg Chemnitz, Germany

Comments from survey participants on the use of digital technologies (1)
• "Digitization offers excellent opportunities to improve and make life easier, especially for us older people, but it is also associated with dangers. A lot of self-control is necessary to keep usage within normal limits. Too frequent and constant use of digital devices can also become a curse."

• "Digitization makes things possible that we could only dream of in the past, e.g., in the areas of education, entertainment and making contacts. With intensive use of digital technologies, the non-digital should not be forgotten, e.g. personal relationships between people. Both areas in a balanced relationship to each other!"

• "Digital technologies enable livelier life through virtual togetherness. Previously contacts mainly via landline telephony, now WhatsApp with many options (video telephony; information and photo exchange, voice messages, etc.)"

• "Digitization also makes life easier for us older people. Anyone who has already started using digital devices, e.g. PCs, for professional reasons can deal with them more easily than other older people. Simple, easy-to-use digital devices with legible font size and short versions of operating instructions in simple, easy-to-understand language, technical terms explained, clear pages in legible font size are particularly important for them."

Comments from survey participants on the use of digital technologies (2)
• "It is impossible to read operating instructions digitally in the device and at the same time perform actions on the device; Printed brief instructions required, use simple terms, technical terms or terms explained in English in an understandable way!"

• "For me, using digital devices means increasing the quality of life, which gives me a wide range of information, communication, entertainment and educational opportunities. Self-discipline is important in order to avoid exaggeration and negative consequences, including for health."

• "The problem is e-commerce! E-mail addresses and personal data are traded. It's hard to keep up with. It is often not known who passed on data and when."

• "Many elderly people often only have their mobile phones or smartphones for emergencies and no other use. I use my smartphone for a variety of other applications, e.g. for parcel tracking, games and weather forecasts. Smart TV for multimedia playback is also important to me."

• "With the rise in branch closures, online banking is becoming an increasingly important way of doing business, although I have security concerns. Also, only possible via the hotline. There is a lack of personal contact."

Comments from survey participants on the use of digital technologies (3)
• "The use of digital devices could be made easier with short operating instructions for the most important functions. Older people are deterred by foreign terms and technical terms, mostly in English. Explanations are urgently required."

• "Seniors are often unsure when to follow prompts to type ("Do this or that!"). Don't know whether you need it and whether it could have negative consequences for you (viruses, data theft, malware, wrong orders, etc.)."

• "Many older people interested in smartphones only have basic knowledge and can therefore only make limited use of the various offers."

• "The use of digital technologies is essential for people with disabilities in particular. As a wheelchair user, I can actively participate in many areas of public life. My apartment is well equipped with a wide range of digital devices that are closely networked and enable me to have entertainment, information and contact with other people, e.g. also via video telephony and smart TV for multimedia playback. This is vital for me, especially now in the pandemic time."

MAGDEBURG

Otto-von-Guericke-Universität Magdeburg, Studieren 50, Germany

Due to the small number of responses, it's not easy to formulate elaborate results. Nevertheless, the survey has given an interesting insight into the way our students use digital devices. Furthermore, it identifies some central points which should be analysed more accurately, especially the problems raised in the questions D.1, E.1, E.3, G.1, G.2, and H.3. The next step is to include those topics in our program. In the forthcoming winter term 2021/22 we are planning for example a newly conceptualised smartphone-course (more practically oriented), some courses on how to interpretate information properly in internet-research, the political impact of digital media (media and new fascism), and the construction of models of reality through computational simulation. There will be also discussion groups as a reaction to the results of our survey and the survey designed by Annika Felix and Jasmin Dabitz, with the intention to define key problems of general interest. The results of the survey are basically positive: they show a good handling of digital devices and a general curiosity towards new technologies, even if not for every single device. There is a particular problem awareness concerning the use and misuse of personal data and the risks concerning e-commerce.

UPPSALA

Senioruniversitet Uppsala, Sweden

The project started in September 2019 and one of the first activities of Uppsala U3A has been to carry out the enclosed survey among our students to find out facts about their present digital skills and how they look upon digital aids, the use of them and ways of learning more.

The survey was carried out as a questionnaire with the same content in all the eight participating universities, with some adaption to the special situation in each country. When the questionnaire was in place in January 2020 it was translated to Swedish and adapted to the situation in Sweden in this field and ready for being handed out in February. This was just when the Corona pandemic reached Sweden and the questionnaire was handed out in the very end of February during an ordinary lecture for Senior students. The majority of the respondents return the document at the end of the lecture and the others at the next lecture in a couple of weeks. As there was a limited time for the respondents a decision was taken to skip a few of the questions which were considered less important.

143 seniors answered the questions. They are probably quite representative for the senior student population of about 4 500 students at Uppsala U3A. There is about the same distribution in general between male and female students at Uppsala U3A as the "lecture" sample. The same goes for age as the average age of our students is 74 years. It has to be noted, though, that there might be a bias in that this specific lecture probably attracted many seniors with a background in the health sector.

The questionnaires were first counted and put into an excel file and then summarized in the enclosed first project report from the Uppsala U3A project team.

EASIER AND MORE FUN TO DO IT DIGITALLY

App, SMS, BankID, e-Mail, SVT-play, the web, social media, zoom, Google and internet banking are words we constantly hear. In shops, we can sometimes read signs with the text that they no longer accept cash but credit cards or Swish. Of course, for some what all this stands for and how

it works, while others feel more insecure or perhaps completely outside the digital world.

Uppsala Senior University

Uppsala Senior University joins seven other European senior universities in the organization EFOS (European Federation for Older Students at the Universities) in an EU-funded project called SeLiD (Senior's Learning in the Digital Society), whose purpose is to investigate how to reduce seniors' possible exclusion in the digital society. The following article is based on the results of various surveys that have been distributed to USU members on three separate occasions and which are precisely about the members' relationship to the digital world. We will in the future call them *The Letter Survey*[2], *The Circle Survey*[3] and *The Tuesday Survey*[4], respectively,

Why learn more about the digital world?

We who work with the SeLiD project want to show that things can be easier when using different services online. During the ongoing pandemic, the need has also grown compared to before, when, for example, you can no longer pay for a bus ticket on board. Meetings that previously took place physically are now being launched online. Many have discovered that you can order medicine, food and maybe a bottle of wine online.

Easier but also more fun

In the letter survey, many express joy at being able to communicate with children, grandchildren, relatives and friends online. Seeing your loved ones while talking gives something beyond the traditional phone call. Nearly half of the respondents also appreciate that it is so easy to take photos with their mobile phone and then be able to pass the pictures on to others. Almost half of the respondents say they benefit from various digital services and believe

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[2] *The letter survey*. A questionnaire together with a stamped reply envelope was sent in October 2020 by post to those USU members who did not have an e-mail address in our member register.

[3] *The Circle survey*. All teachers and participants in USU's distance learning circles were invited in the autumn of 2020 via e-mail to answer a web-based survey.

[4] The so-called *Tuesday questionnaire* was distributed to the participants at one of USU's Tuesday lectures in February 2020. The purpose is to map the needs for education and support. A similar survey was conducted at all senior universities included in the project.

that they mean new opportunities for seniors, but more than a third feel anxious or uneasy about the digital development and they feel excluded. We want to help overcome that feeling!

Digital study circles work well even if the social is lacking

The participants in digital study circles in the autumn of 2020 had very limited technical difficulties and in the cases where they occurred, it was mainly at the start of the course. A quarter of the participants perceived the audibility as better compared to in the room, but about as many believe that it is better in the room and half that it is equivalent. About half of the participants believe that dialogue and learning do not differ between digital circle and meetings in the room. Avoiding access to premises is considered important by a third of the participants. On the other hand, a clear majority believes that social cohesion in connection with the circles is important. In a weighted assessment of audibility, dialogue, learning and convenience, two thirds of the participants prefer meetings in the room.[5]

Practical, efficient and entertaining are the three keywords you express in the Tuesday survey

Almost all respondents stated that they had a university education. A large majority stated that they had a so-called smartphone and almost all had access to the Internet at home. The most popular things you could do with your phones, tablets and PC were to google, do banking, communicate with friends and relatives and take photos. 40 percent did not see any obstacles to their computer use. In summary, the respondents from Tuesday's lecture were largely "inside" the Digital Society!

Why important with BankID?

Other things that are highlighted in the surveys are that those who are not in the habit of using e-mail do not have a BankID either. If you do not have a BankID, you are automatically excluded from many services: communicate with healthcare, order goods, book tickets, Swish, Internet banking and more. You also do not like to google but use encyclopedias and thus miss current events, new ways of presenting the answer such as sound and film, which characterizes modern search engines. Identification via BankID means that you can also access many new services via the network offered today. Frequent use of these services provides an ever-increasing skill,

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[5] See also Member Magazine January 2021, pages 10-11

which means that you can take advantage of services that you did not know before or that did not yet exist.

Earlier digital experience from working life…

Is not entirely safe of use. A lot is different. Computer management is simpler now but also much more potent and useful for seniors. In addition, you avoid many discipline-demanding chores. You do not have to keep a book of personal finances, insert pension information, declarations, insurance statements and more in bulky folders. The feeling of discomfort when placing a physical address book or almanac is gone. The monitors become larger and easier to handle for stiff fingers and for blurred vision. You can control a lot with the voice like "Wake me up at 08:15!". More in that way is on the rise. It is just a matter of accepting lifelong learning, which you can enjoy a lot and which compensates for insidious disabilities and limitations. But you need to constantly practice your skill. Knowledge is a moving goal - BUT everything just gets less difficult and easier to use for more and more things!

Exclusion

Some results of the surveys are that some respondents feel a kind of exclusion. We have identified these on a scale from red to green. On the red side are those who, for various reasons, cannot take advantage of the Digital Society's services. But they may be able to get help from more knowledgeable relatives, neighbours or friends whom they can certainly trust when they help over the kitchen table with e-identification or e-mail. Then the situation for those who cannot master a smartphone will be so much better. But it is everyone's own responsibility to start this fairly simple process from exclusion before it's too late.

Where are you?

1. Complete exclusion. Does not have a computer / tablet / smartphone. Does not use the Internet and has no ambitions to do so.
2. Some exclusion. Have a PC, tablet or smartphone but do not dare to use them for financial transactions.

3. In the border country. Has e-mail that is rarely used and uses internet banking without BankID. Can receive SMS.
4. Inside the Digital Society (DS). Has BankID. Uses email. Can google to some extent. Send and receive SMS / MMS. Has an ambition to learn more in the field.

5. Advances in the DS. Uses BankID for an increasing number of different services. Communicates via email, text message and social media.
6. Full inside the DS. Uses Kivra, My government post. Has BankID. Uses e-commerce of various kinds (can book, order, pay, etc). Have a habit of acquiring new knowledge through various search engines. Has accepted lifelong learning in the field. Masters Casting, Bluetooth, SVT Play, YouTube, government and various organizations' chat functions.

Courses

In April, we will offer a pilot course for some beginners in "smartphone use". Based on that course, we want to acquire knowledge of how to best teach the new technology, without going the detour via conventional personal computers. Here we take help from the organization "SeniorNet". We will return later with results from the evaluation of the course structure and our continued work in the area.

EFOS – When Europe open up

During the pandemic, the SeLiD project has only had digital meetings, but now we hope to be able to conduct them as physical meetings and also in connection with EFOS meetings. As a USU member, you are always welcome to participate in these meetings at your own expense, which usually consists of two days of deliberations and lectures as well as half a day of cultural experiences in the area.

In future exchange trips with other European senior universities, it will also be possible to exchange experiences in the digital area as well. We will return with more information here in the Member Magazine.

WROCLAW

Uniwersytet Wroclawski, Uniwersytet trzieciego wieku, Poland

The survey results can be divided into 3 groups:

1. What digital devices, communicators do they have and what they use.
2. What kind of equipment would they like to see in a household.
3. How they describe operation and use of these.

Ad 1: **What digital devices, communicators do they have and what they use.**

The most used digital devices are smartphones and are mostly used for:
- information search
- communication/ e-mails, conversation, messenger
- calendar
- geographical information system/ maps, GPS

Laptop and desktop computer are primarily for:
- information search
- e-banking
- reading publications
- online maps / GPS/

Ad 2**: What kind of equipment would they like to see in a household.**

In the household seniors would most likely have classic devices with a /buttons, wheels, switches/ not connected for further control.
The exceptions are:
- telephones
- homes security system
- watches
- health monitoring devices

Ad 3**: How they describe operation and use of these.**
Modern digital apparatus is for most seniors:
- complicated first of installation
- often too expensive
- often seniors have no person to help them handle
- the operating manual is incomprehensible

Most often it is annoying:
- communication with offices
- online shopping

The last two options require a lot of times, especially because there are many offers and comparing them is time-consuming.
Sometimes is it difficult to decide what to choose based on the description and appearance on the computer. There are many offers, comparing is difficult, sometimes the hidden truth or understanding is bitter.

Undoubtedly, however, smartphones, laptops, and tablets made it easier for seniors to communicate with family or friends, which is especially important during a pandemic, where the limitation of leaving home, shopping and meetings influenced the psychology.

A large group of seniors believe that new generations devices are:
- practical
- efficient
- educational
- important

Usage of digital technologies is sometimes complicated but also pleasant and can be entertaining.

Transnational project meeting in Wroclaw 2019

11. GOOD PRACTICES OF THE INSTITUTIONS AND INNOVATION OF THE STUDY OFFER FOR SENIORS

Good practices – concrete examples

11.1. Universidad Permanente de la Universidad de Alicante, Spain

Accessible resources, accessible technologies, accessible apps, long-life learning.

Author/s	Permanent University of the University of Alicante and Student Support Centre of the University of Alicante (CAE)
Title	Technology at your Side: Implementing Accessible Technology to support long-life learning
Key words	Accessible resources, accessible technologies, accessible apps, long-life learning.
Context – location and impact	The Permanent University of the University of Alicante in Spain provides training to over-50s to favour personal development and promote active citizenship as a way to improve quality of life and healthy ageing. It additionally seeks: to stimulate older adults who are no longer professionally active to reorient their lives to make them feel more valuable at a family, community and country level, thus strengthening their collective participation and social integration rates; to promote, recognise and enrich the experiences acquired by the older adults throughout their life; to encourage people who have accumulated personal and professional experiences to reflect on their activity within a theoretical-practical framework, which will allow them to play a more prominent role in the development of society. The Student Support Centre of the University of Alicante (CAE) is dependent on the Student Support and Employability Secretariat, which is a unit of the Vice-Rectorate for Students and Employability. Its mission is to offer specific attention to students at the University of Alicante in

	order to guarantee their full university participation, following the principles of equal opportunities and universal accessibility. The centre counts with a multidisciplinary team of technicians who offer support, advice and resources to students, lecturers and instructors working and studying at the University of Alicante. The university programmes for older adults are aware of the difficulties some older students have at a very advanced age to follow the courses offered in the institutions. As age advances, certain capabilities are reduced, which can create a barrier for the students to continue attending university lessons. The collaboration with the CAE support centre has highlighted certain technologies that can help these students and their teachers adapt their courses to be more accessible. This project focuses on defending new technologies as friendly resources for older adults. The project's expected impact in the long term is the expansion of the offer of fully accessible courses to all students over 50 years of age at the Permanent University. The prospect is that students will extend the time they may enjoy long-time learning despite a likely decline in their capacities. Ultimately, we expect to provide our students with universally accessible knowledge, using technologies as supporting tools.
Start date	01/10/2021
Institution	Permanent University of the University of Alicante (UPUA)
Addressee	a) Older adults: Students enrolled at the UPUA b) Teachers and instructors of the UPUA
Thematic area	Accessible technology, friendly technology, universal access to knowledge, long-life learning, active ageing.
Justification	Some pupils' abilities are affected as they get older. At first, they try to find their own adaptations, but if the situation worsens, they may drop out of lessons at older-adult university programmes for they may

feel unable to follow the classes and activities properly. This is a problem in institutions that try to foster long-life learning and active ageing, as the rate of dropping outs increases as students' physical conditions decline.

Dropping learning activities in old age affects older students in many different ways. Attending lessons at third-age universities brings numerous benefits that would disappear if attendance is discontinued. These benefits are physical, psychological, cognitive and social, but if the students cease these activities, the adverse effects could seriously affect their normal lives:

- They may reduce their social circles as they do not meet other students.
- Their physical activity diminishes as they do not need to attend lessons and other extra-curricular activities.
- They are less aware of opportunities, activities, and resources.
- They reduce their cognitive functions, as they are not required to acquire new knowledge.
- They diminish their brain activity as they reduce the complex cognitive tasks that are activated when learning.
- They lose track of society and society developments.
- They may feel more isolated, lonely and useless.
- They may reduce their social participation.

Overall, older adults who do not continue attending the programmes lose opportunities for further action and development. Actual ageing and decay really start when people cease to participate and stop developing new strategies, knowledge, social and physical activity. Therefore, it is crucial to resort to technologies when necessary to support older adults and grant them the opportunity to continue learning. Implementing this type of aiding and friendly technology can play a crucial role in deterring the adverse effects of old age.

	Hence, education becomes essential for the fight against ageing, but it is also critical when fighting against social exclusion. Older adults who follow courses and learn new things feel more connected with their communities. They can track the progress and the development of society and even participate in the changes. Therefore, striving to ensure that every individual will receive education throughout their lives is capital to assure a long good healthy life.
Objectives	The main objective of this action is to foster awareness about the necessities of older adults regarding the reduction of their physical and psychological capabilities in very advanced age. The most relevant point is that older adults realise that the weakening of certain abilities could result from a natural ageing process, but this should not mean that they must drop their usual activities. Some accessible technologies can help them continue with their normal lives. Secondly, it is crucial to involve teachers and instructors in the project as students are sometimes reluctant to confess their situation or may be unaware that they can be helped. Therefore, teachers are usually the ones who can alert about the specific necessities of a group and offer some advice and guidance. All in all, the project intends to give support to students who have specific supporting needs through a three-legged plan: (1) the promotion of friendly accessible technology, (2) awareness-raising campaigns and (3) training on digital accessible technologies among teachers and learners. The objectives of the project are as follows: - To promote the knowledge of new technologies. - To raise awareness that new technologies do not pose barriers for older adults. Conversely, they can become valuable allies to help students continue their long-life learning activities. - To train older students to use new technologies to diminish the adverse effects of ageing.

	• To fight against isolation in old age. • To foster active, healthy ageing. • To promote the knowledge of accessibility among teachers and instructors. • To raise awareness of the necessities of older-aged students. • To raise awareness of the need of providing universally accessible learning. • To train instructors and teachers about accessible technologies. • To evaluate the implementation of accessible technologies.
Experience and results	The plan for the implementation of accessible technologies has three phases: Phase 1: Awareness Campaign An awareness campaign aimed at teachers and students has been implemented during the first months of the academic year. On the one hand, the campaign tried to give information and support to students with specific needs. On the other, it informed teachers about the necessity of designing universally accessible courses, especially considering the particular requirements of older adult students. The awareness campaign consisted of two brochures, one for teachers and another for students, informing about accessible technologies specifically designed for learning which the CAE Support Centre recommended. Among the accessible and free applications developed by the CAE which were aimed at people with disabilities, the following stand out: - Ability Connect: this app with advanced visualisation features allows the contents to be adapted to the needs of different groups, such as people with hearing impairment, low vision, or dyslexia. - Listen all: for mobile devices with Android and iOS operating systems capable of recognising voice and transcribing it into text.

It is specially designed so that people with hearing impairment can read the transcription of a conversation on their device, or people with mobility impairment can write dictated texts. ListenAll also structures the content, allows you to customise the size and contrast, and to store, edit and share the text.

Aplicaciones accesibles desarrolladas en la Universidad de Alicante

La Unidad de Accesibilidad Digital de la Universidad de Alicante, dependiente del Vicerrectorado de Transformación Digital, tiene como objetivo la promoción, concienciación y formación en materia de accesibilidad digital y tecnologías accesibles.

Ability Connect

Se trata de una aplicación para dispositivos móviles que permite la comunicación en tiempo real de varios dispositivos a través de bluetooth, sin necesidad de una conexión a internet y con características avanzadas de visualización de contenido, como un modo de lectura 'palabra a palabra'. [Más información]

ListenAll

Aplicación para dispositivos móviles de reconocimiento y transcripción de voz a texto en tiempo real. Diseñada para facilitar la integración de ciertos colectivos de personas con discapacidad, como por ejemplo con déficit auditivo o motriz.
- Permite leer en un dispositivo la transcripción de la voz de otra persona o de una conversación, incluso de textos propios.
- Da la posibilidad de elaborar documentos de texto mediante dictado sin necesidad de emplear ningún tipo de teclado. [Más información]

... y muchas más.
No dejes de visitar su página web:
https://web.ua.es/es/accesibilidad/

The brochure also offered links to other resources that allow teachers and students to configure their devices according to their needs. The objective is that users could profit from the accessibility resources on offer.

Phase 2: Training

Both teachers and students needed some training to use the recommended applications and technologies. Therefore, it was necessary to provide some training at the same time we launched the Awareness Campaign.

In the first stage, a list of tutorials was provided so that users could learn how to implement the recommended technologies. The brochure also offered supplementary links for teachers with resources and tips for developing accessible electronic documents.

Teachers can also resort to templates for documents and interactive presentations that are perfect examples of universally accessible materials.

	An example is a tutorial on how to use Power-point with subtitles so the students with hearing difficulties could easily follow the lessons. Phase 3: Assessment The final stage is to evaluate the implementation of the project by means of a survey about the use of accessibility technologies in our centre. The project has just been implemented during the 2021-22 academic year, so it is very soon to offer actual data regarding the results that this purposeful Awareness Campaign has yielded.
Future perspectives	The aim is to train UPUA teachers to be aware of the technology and its possibilities to make courses more accessible so that the centre can ultimately achieve a fully accessible academic offer. In addition, the organisation will raise awareness of the technological resources available to enable learners to use them in a personalised way. During the implementation of the project, it has been proved necessary to activate new procedures for the determination of accessibility needs. So far, there is no procedure for registering students' accessibility necessities. It is essential to get more information about our students' needs. We intend to continue working on this track to facilitate the flow of information and offer a fully accessible service to our students and academic staff.
Remarkable facts	Brochures have been designed to raise awareness of accessible technological resources among teachers and students. The teacher-training courses offered in the coming academic years will

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	incorporate training teachers in technology-oriented resources towards universal accessibility. On the webpage https://web.ua.es/en/upua/proyectos/acciones-formativas/formacion-continua-en-el-marco-de-proyectos-de-investigacion.html, the Permanent University has published information to improve accessibility aimed at different types of users
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Webpage	https://web.ua.es/en/upua/permanent-university-of-the-university-of-alicante.html
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Transnational project meeting in Alicante 2021

11.2. Univerzita Komenského v Bratislave, Bratislava, Slovakia

Online café, Online university – University of the Third Age – UTA

Author/s	Dana Havranová, Nadežda Hrapková
Title	Online café, Online university – University of the Third Age - UTA
Key words	Open learning, online round tables
Context – location and impact	UTA at Comenius University in Bratislava, Slovakia. **Online open learning** of 261 senior students / 206 women with the involvement of 86 lecturers/teachers. The program offered 130 lectures in 13 subjects (Archaeology, Art therapy, Astronomy, Ethnology, History of the clothes, Law, Marketing and media, Museology, Philosophy Psychology, Regeneration of the strength of seniors, Gardening). **Online café, roundtables** on the flexible combination subjects. Both programmes

	include possibilities for blended learning which combines online educational materials and opportunities for interaction online with traditional place-based classroom methods. The offer consisted of 4 themes (Nordic walking, Flowers on the balcony, Digital photography, Battle of Hastings). 150 seniors participated in the program of online café. **Study offers** in the study year 2021/2022. **Presence learning combined with Online UTA** – University of the Third Age –enrolled by 655 seniors / 576 women, study offer of 32 study subjects on many different specializations.
Start date	January 2021 – June 2021; September 2021 – April 2022
Institution	Comenius University in Bratislava
Address	Centre for Continuing Education, Comenius University in Bratislava, Slovakia
Thematic area	Many different subjects for online learning and discussions on the chosen themes offered for seniors
Justification	It was necessary to meaningfully fill the time of seniors during the pandemic. The mail goal was to keep continue learning and help seniors to be in good mental condition.
Objectives	Open new possibilities for learning in the time of COVID-19 and innovation of the study offers according to the new conditions. Learning, how to use digital technologies for online learning besides e-learning by seniors
Experience and results	Satisfaction of seniors with online learning: the questionnaire showed satisfaction in 97,4% and 91,3% testified, that online learning helped them to fulfil their free time in a high quality
Future perspectives	If it is needed and requested, the online learning will be utilised again in the future
Remarkable facts	These forms substituted the traditional face to face learning programs for seniors. In both programs

	have participated together 411 seniors in the spring courses.
	In the autumn 655 seniors entered the hybrid courses at the UTA.
	In online learning offer participated 1066 seniors.
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Transnational project meeting in Dresden 2021

11.3. Vysoké učení technické v Brně, Brno, Czech Republic

Computer Literacy Courses

Author/s	University of the Third Age Brno University of Technology Czech Republic
Title	Computer Literacy Courses
Key words	Information technology, MS Windows, MS Office, world wide web, communication, search engines, digital photo processing, Zoner X
Context – location and impact	Computer courses realized at the University of the Third Age at the Brno University of Technology
Start date	September 2020
Institution	University of the Third Age Brno University of Technology Czech Republic
Addressee	Older students of the University of the Third Age Brno University of Technology
Thematic area	Computer literacy courses for seniors, digital photo processing
Justification	For seniors, learning computers and internet skills is not only for accessing information. It is the tool for keeping in touch with their family members, for presenting their life achievements. Besides, this course sets out basic skills relating to the ability to understand the basic principles underlying digital photos and to use an image editing application (Zoner X) to enhance images, apply effects, and prepare an image for printing and publishing.
Objectives	Through computer literacy courses students should learn basic principles of using MS Windows operation system and basic text processing skills. They are able to find and evaluate information on the web and to know about the basic principles of

	using digital images and understand graphic format options and colour models. They are able to prepare images for printing, publishing or sharing with their family members.
Experience and results	We use more pictures and fewer words in the handouts. We say the steps out loud and demonstrate on the projector for seniors. Many of the most popular applications can be enjoyed without reading or writing, just clicking or saying (search engines, translators etc.). Classes include ten two-hours lessons (per semester) and may also include interactive demos, quizzes and assignments. Main results: Greater life satisfaction, develop an intuitive sense how computers work and how they can be used to make seniors life more efficient.
Future perspectives	To continue with new computer courses focused on new IT trends (Internet of Things, artificial intelligence, cloud technologies etc.). To build new interdisciplinary courses (information technology & architecture)
Remarkable facts	More than 80 seniors enrolled to the computer courses each semester.
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11.4. Dresdner Seniorenakademie für Wissenschaft und Kunst, Germany

Good practice case on the subject Online Banking

Author/s	Dieter Seyfarth, Rudolf Hensel, Frank Füchtner, Hans Schröter
Title	Best practice case on the subject of Online Banking
Key words	Security on the Internet, Online banking, Course in the Computer Cabinet, learning by doing on the computer
Context – location and impact	Learning in PC-schooling room with practical application
Start date	August 2021
Institution	Dresdner Seniorenakademie Wissenschaft und Kunst
Addressee	inexperienced senior citizens
Thematic area	Training course in internet security and online banking
Justification	Concerns about banking on the internet, Senior citizens in particular need security in online banking
Objectives	Seniors should learn to use the internet safely. Secure passwords, virus protection, emails with attachments are examples of this. Secure internet is the prerequisite for working with online banking programs.
Experience and results	In August and September 2021, we trained seniors from the Dresden Senior Citizens' Academy in a 2-hour event on the subject of online banking. The training was carried out by two experts from Deutsche Bank AG and took place in the training rooms of the Chamber of Commerce and Industry in Dresden. This location is equipped with one PC for each single participant, this allows independent

processing of the respective tasks. The two speakers gave the participants all the help needed while executing the exercises.

Topic of the first part of the training was "Internet security" and the associated effects on online banking. Sub-areas such as the functions of the BSI Federal Institute for IT Security, the problem of passwords and the allocation of a "strong" password, what is meant by a browser in "secure" mode, what risks threaten from phishing and fishing and how the opening of links should be handled.
With the help of a demo account, the participants in the second part of the training were shown on the PC how to log into online banking and how to enter which password correctly. After the correct handling of the login process, the participants were then able to evaluate account balances on different key dates (up to 180 days back), make money transfers, return debit charges, make security transactions and track back credit card payments, as well as the balances of sub-accounts and accounts at Third-party institutions.

The function of a virtual smart phone was also clearly explained, which allows the participants to generate a photo tan for legalization of the transactions. Also, the importance of a correct log out to ensure the properly ending of the whole banking process was explained. In addition, the speakers pointed out that the necessary TAN can also be generated with a reader provided by the bank or by sending an SMS.

Through the practical instruction and intensive training on the PC, the inexperienced senior citizens were relieved of a certain initial anxiety of the medium and any reservations or fears when using digital tools were noticeably reduced. In

	particular, the important information about the high security standards in online banking may have contributed to the increased acceptance among older people.
Future perspectives	Online banking is constantly being changed and improved. For seniors, constant training is therefore necessary.
Remarkable facts	Many senior citizens do not want to use online banking and cannot be convinced of the advantages. Therefore, participation in training courses is not high. So far, 32 seniors have participated in the training courses.
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Transnational project meeting in Dresden 2021

11.5. Technische Universität Chemnitz, Seniorenkolleg Chemnitz, Germany

Senior's Learning in the Digital Society (SeLiD) - Use of Digital Technologies by Older People

Author/s	Technische Universität Chemnitz, Professur Angewandte Gerontopsychologie und Kognition, Prof. Dr. Georg Jahn; Seniorenkolleg, Prof. Dr. Roland Schöne
Title	Senior's Learning in the Digital Society (SeLiD) - Use of Digital Technologies by Older People
Key words	Senior's learning, smartphone courses, business cooperation, online lectures
Context – location an and impact	1. Carrying out a survey among older people on the use of digital technologies (questionnaire and telephone interviews) 2. Implementation of smartphone courses at the Senior College and in the Multigenerational House in Chemnitz - Fostering interest, trial course - Beginner course - Advanced course - Smartphone get-together 3. Development of a 4-part online lecture series "Science Interactive" as a video conference (zoom) and subsequent discussion with the speaker Lecture 1 + 2: How many people can the future take? Lecture 3: Future technical developments Lecture 4: Innovative applications of fungi in nature, technology, in construction, and in art 4. Cooperation with company Emporia GmbH Linz, Austria (producer of special smartphones for the elderly, accompanying educational measures) - Advising Emporia in development and

	optimization of smartphones and special software for the elderly
	- Participation of members of the project group in online training for course leaders and multipliers at Emporia
	- Advice to the company Emporia on the design of the new homepage (smartphone producer is interested in our experience from smartphone courses, would like to achieve better usability for the target group of older people)
	- Introducing new ideas for the best possible use by older people and findings from surveys on the use of digital technologies
	- Technical support by Emporia in providing a case with 10 smartphones including a training manual and teaching material for use in the trial course
	- Preparations for joint presentation and presence at the "Seniors' Day" in Hannover that was canceled due to the pandemic, unfortunately
	5. Cooperation with company Komsa AG Chemnitz (distributor and service provider with a focus on mobile communication technology)
	- Komsa cooperates worldwide with partners in the field of mobile communication technologies, e.g. with Emporia Linz
	- Support by providing a WLAN router for course implementation
	- Advising the company in development and optimization of digital technology (especially smartphones) and services for older people
Start date	September 1st 2019
Institution	Technische Universität Chemnitz, Professur Gerontopsychologie und Kognition,Seniorenkolleg
	Cooperation partners Emporia GmbH Linz, Austria and Komsa AG Chemnitz
Thematic area	Tapping the potential of technology for older people.

	Development and implementation of educational offers for the use of smartphones. Cooperation with companies in the field of smartphones and digital technologies.
Justification	- Our digital society requires knowledge and skills in dealing with the corresponding devices and technologies in order to benefit from the new possibilities for making life easier, enrichment, and compensation of impairments. This also applies increasingly to the group of older people in order to be able to continue to actively participate in social life, to receive and exchange information, to enjoy education, and to maintain social contacts in a virtual way (e.g. via video conferencing, photo exchange, voice messages). - This applies in particular to those who live alone in order to develop and maintain relationships with other people and thus counteract loneliness in old age and the possible health disorders associated with it. (Very important especially during the corona-virus-pandemic!) - It is necessary to expand the elderly user group through targeted educational offers on the use of smartphones. The target audience for the smartphone courses are: - Older people without their own smartphone and without experience, motivation and purchase advice required (fostering interest, trial course) - Older people with their own smartphone but lacking skills for use or with knowledge deficits (beginners' course) - Older people with their own smartphone who want to gain more knowledge about the smartphone and its possible applications (advanced course) - Older people who want to regularly exchange experiences with other users, also for the blind and visually impaired (smartphone regulars' table)

Objectives	- Developing and improving the skills of older people in using digital technology - Design of appropriate educational offers and support services, in particular for the use of smartphones, in cooperation with companies
Experience and results	1. Experience from smartphone courses: Beginner courses - Strong interest to use digital technology - Participants have different older smartphones – mostly given by their children - with very few operating instructions - The participants often have fears (afraid of mistakes) - Common problems are understanding the English technical terms - Basic knowledge about the internet is sometimes completely lacking - The participants' needs were inquired about and the content and method of the courses were then designed accordingly Advanced courses - Participants already have a smartphone, there is a need for new knowledge ("thirst for knowledge") - The courses provide the participants with increased confidence in using smartphones Smartphone get-together - For interested participants with good knowledge and skills in using the smartphone - The challenges for course instructors are the very different types of smartphones used by the participants with different software (partly outdated versions that can no longer be updated) - Often very specific questions and problems, all of which could be resolved so far - There is still a great need for smartphone get-togethers - Recommendations for new purchases of smartphones were requested, Emporia devices or other devices with the Emporia-App were tested

	Other desired content for smartphone courses are: - Coupling with external devices, e.g. PC, tablet - Printing photos - Payment at the cash register and on the Internet with a smartphone - Online banking rather difficult because of differing bank details and then insight of instructors in personal data is necessary - Buying tickets with smartphone (events, tickets ...) - Finding suitable keywords for search on the Internet voice input navigation with a smartphone - Using the Corona-App and using the Luca-App (sign-in to events and venues for tracking contacts) 2. Experience from online training for course instructors at the cooperation partner Emporia - Gaining knowledge for the planning and implementation of new courses - Important exchange with other multipliers For individual results, see the final report in the brochure and project website
Future perspectives	- Expansion of the digital educational offers combined with the reduction of reservations and fears about digital technology - Simplification and expansion of the options for voice input when using smartphones (especially for the growing number of visually impaired very old people) - Consideration of emergency call function with GPS information in the development and production of new smartphone types (analogous to Emporia smartphones) - Use experiences from other European countries, also in combination of hybrid educational offers and offers for older people on public television who do not have digital devices and internet connections (as a result of growing old-age poverty and possibly a lack of interest)
Remarkable facts	Most of the participants in smartphone courses are women

Bibliographic references	See brochure
Contact Details	
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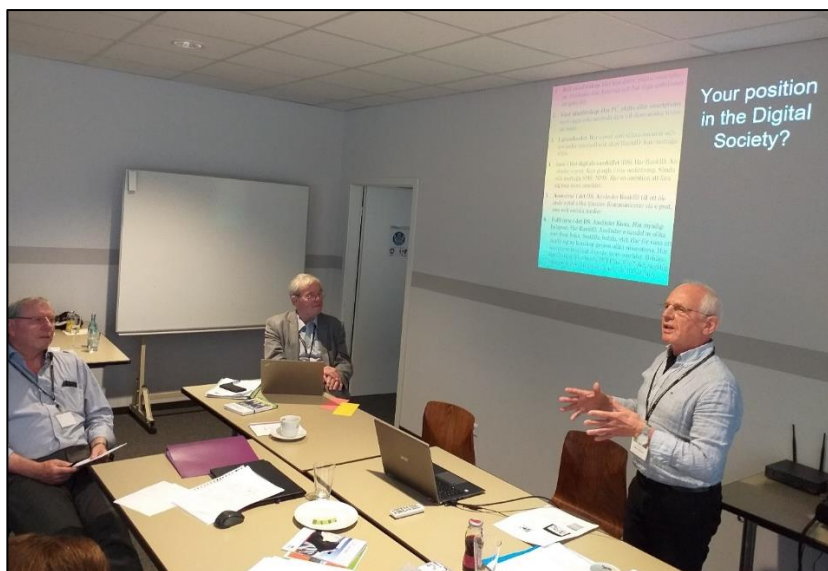
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11.6. Otto-von-Guericke-Universität Magdeburg, Studieren 50, Germany

Smartphone-Course

Author/s	Maik Pecenka
Title	Smartphone-Course
Key words	Smartphone, guided self-exploration, learning by doing
Context – location and impact	We live in a world of digital networking with the smartphone as an interface. Just as the complexity of the digital increases, so does the complexity of using smartphones. The seminar should teach participants how to use this device without overwhelming them with the complexity. It's about guiding them to explore the smartphone on their own. In the event of resistance, the person in charge should support the students, help to resolve the problem, and remove the resistance in order to introduce new topics of use. This will create a certain dynamic between exploration and learning and improve the use of those devices. A part of the seminar consists also in short excursions focused on the concrete use of helpful application in the city (public transportation, parking fees, tickets, etc.). The students will move in small groups accompanied by the instructor.
Start date	2019
Institution	Otto-von-Guericke-University Magdeburg
Addressee	Senior students with interests in use of smartphones
Thematic area	Android-Smartphones
Justification	Open to all participants of lifelong learning 50+
Objectives	Mastery of the basics of smartphone use, acquisition of skills to use smartphones dynamically in everyday life

Experience and results	Understanding the use of smartphones and Reduction of resistance to the use of smartphones, learning together
Future perspectives	Recognize the development of smartphones and establish a connection to other contexts, e.g. education, organization, health, etc.
Remarkable facts	Very heterogeneous participants, both in terms of experience with using smartphones and active participation in the seminar.
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Transnational project meeting in Alicante

11.7. Senioruniversitet Uppsala, Sweden

Introduction of pilot courses for digital beginners.

Author/s	Brittmari Ekholm Uppsala Senioruniversitet
Title	Digital course based on the Zoom program
Key words	Zoom program, smartphone, digital knowledge, digital abilities, level of social exclusion, support in digital matters
Context – location and impact	The course was announced in the Uppsala U3A magazine as well as at the U3A website. Contact with the County Administrative Board. Finally, it is of great interest to tell that the President of the Uppsala U3A took the initiative to propose to the Uppsala County Administrative Board start a cooperation project to work for digital inclusion of seniors in Uppsala and the neighborhood. Consequently, in December 2021, a meeting took place with heads of divisions in charge of the administration of issues for seniors in the region of Uppsala. The meeting was a success, and a decision was taken to continue cooperation between the Region of Uppsala and the Uppsala U3A.
Start date	In the spring of 2021, a pilot course – a digital course based on the Zoom program – was organized in the framework of the SeLiD program. Based on good experiences from this first course the decision was taken to arrange two more courses in the autumn of 2021, this time as physical or class-room courses.
Institution	Senioruniversitet Uppsala, Sweden
Addressee	Senior citizens, Older students - seniors
Thematic area	In order to be admitted the students had to use the same kind of smartphone, in this case an iPhone and they had to be true beginners in the digital world. Students, applying for the course, were

	interviewed by the teacher to assure that they all had about the same level of digital knowledge.
Justification	The participants of the courses were all very satisfied with what they had learnt. One participant at the age of 87 said that it was like a vitamin injection! Now, she said, "since I have followed this course, I dare to do things I couldn't do before in using my phone and I feel much safer now in handling my iPhone".
Objectives	Students were asked to grade their digital abilities according to a certain scale set up by the teacher (from the SeniorNet – see below) in contact with members of the SeLiD group. To be accepted for the course students had to belong to level 1 or 2. 1. Total exclusion 2. Partly excluded 3. In the border line 4. Inside the Digital Society (D.S.) 5. Advances in the D.S. 6. Fully inside the D.S.
Experience and results	In April 2021 a long article was focused on the SeLiD project concerning three surveys that had been carried through in the framework of the project. Consequently, three questionnaires were distributed to U3A members in the beginning of the project. The first one was sent to members with no digital mail addresses. The second one was given to teacher and student participants in the U3A study circles, which were offered in digital form through the Zoom program in the Autumn of 2020. It turned out that the majority of respondents to the inquiry had no problems being taught digitally. The third inquiry was distributed in February 2021 to participants in one so-called Tuesday lecture, the aim of which was to get a survey of the needs of education and support in digital matters. A similar questionnaire was carried through in all the other U3As of the SeLiD project.

Future perspectives	It is interesting to know that the majority of the respondents of the Study Circle inquiry had very limited technical difficulties in following the teacher. However, a majority found that the social connection in study circles is important - and two thirds of the participants preferred classroom teaching for various reasons. It was planned to organize one or two more courses in the spring of 2022 but unfortunately, these courses had to be postponed because there were no teachers available.
Remarkable facts	The Uppsala U3A edits a magazine for members. Issues of digital matters have been treated several times in the last few years and Information about the SeLiD project was taken up in the beginning of 2020.
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11.8. Uniwersytet Wroclawski, Uniwersytet trzieciego wieku, Wroclaw, Poland

On-line Learning in COVID Time / challenge for instructors and senior students how to get around in time of pandemic/

Author/s	University of the Third Age in University of Wroclaw, Poland
Title	On-line Learning in COVID Time /challenge for instructors and senior students how to get around in time of pandemic/
Key words	e-seniors, ICT, Computer, Laptop, Smartphone, Internet for household and official use.
Context – location and impact	U3A in UWr has send information about this project to several U3A in Lower Silesia in order to include those seniors in this Project. Many of the U3A have suspended their activity during the COVID-19 pandemics. 1. U3A in Nowa Ruda has joined actively to the project Senior's Learning in the Digital Society. They have completed 1/3 of the project questionnaires all of 153 regarding the usage and possession of digital technology and equipment. Also, those seniors gave their opinion of usage of this equipment and technology past the age 60+ 2. Cooperation with the Wroclaw Senior Center and Wroclaw Center for Seniors Development. 3. Our aim was to include in the project as many seniors as possible for on-line-learning, since this was only way to learn and be active. The start was difficult: our first classes for usage of laptops and Smartphone were based on telephone contact. Example: how to connect to certain services online Thanks to those activities we have encouraged those seniors that were excluded from daily needs / to pay bills, shopping/ to help everyday life.
Start date	September 2019

Institution	University of Third Age in University of Wroclaw University of Third Age in Nowa Ruda Seniors Center in Wroclaw Wroclaw Center for Seniors Development
Addressee	Addressed to Seniors incorporated in U3A in Lower Silesia, WCS, WCRS, and non incorporated 1. Those that do not have a Laptop or Smartphone but willing to buy this equipment and learn how to use it 2. Those that have digital equipment and willing to learn more how to use it to widen the range of activity and skills is a MUST of the XXI age and COVID period
Thematic area	New technology gives freedom to seniors to get around in usage of digital society, e-banking, shopping, medical appointments, and others.
Justification	Our mission was to show basic possibilities to use digital technologies in time of home closure in the time of COVID / limited family <u>and friends contacts / e-banking, and shoppi</u>ng on-line, medical and utility's needs. To give yourself a chance not to be lonely and be left out. Many of the seniors 60+ do not have family.
Objectives	To break the resistance to use Smartphone only to communication or e-male. To use the advantages of digital technology should be useful and pleasing for the user. Learning on-line and the advantage of giving information and knowledge. Until now we were all used to learning in class environment. Many of us did not know other learning methods such as learning in class.
Experience and results	Learning and classes on-line. Preparing presentations on screen / from Smartphone, Laptop and learn on desktop / Such presentation were welcomed by senior's and gave them easy way to understand, also could repeat at

Experience and results	home. Consultation. Repetition of the same subjects day after day gave seniors a better chance to master the computer skills and practical use of learned subjects. Way to search and use of information. Safe use of network How to Login, in a safe way to banking on-line, institution, and gather information.
Future perspectives	Above projects are of great need to the seniors and shows how much they need them. Numerous phone-calls and e-mails show the need for senior learning skills. 1. Free, no fee classes for digital learning organized by U3A and Seniors Clubs 2. The need to train educators suitable for older people 3. Step by step learning process of digital skills 4. To create a Fee-free-state paid Kiosks / Exp. Public Libraries/ to assist seniors in use of digital technologies
Remarkable facts	Since September 2019 to October 2021 in our online classes participated 1715 senior students, not only from U3A in UWr, but from other organisations and any seniors needing help. We did 74 coaching courses for seniors including consultations
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12. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Changes in society bring to the life of Seniors and older adults in general new situations and conditions, for which older persons are not sufficiently prepared. These are mainly digital tools and environment which are generally not well known by Seniors. Therefore, their needs should be recognised and supported to help Seniors to become more flexible in a new digital society. The depth of the problem could be seen more deeply when the pandemic of COVID-19 started. Many social groups, communities and societies were not sufficiently prepared for using digital technologies in daily life. It was visible in many areas and especially in the educational environment, learning processes and within social contacts. Older adults have been actively involved in learning activities at the universities and academies of the third age. In the time of the pandemic, they needed more special teaching and training programs.

The SeLiD (Seniors Learning in the Digital Society) project was for the older adults and created a partnership to focus strongly on the needs of older students and the conditions under which they can learn and train their digital skills. In the time of the pandemic many new situations and conditions have appeared which had to be addressed and solved. Therefore, we can say, that for the partnership of the project was really well timed and focused. The project began just when the Corona pandemic reached our countries and allowed us to find new possibilities for the promotion of senior digital literacy. The project wanted to encourage older people to strengthen their digital learning, train them to be prepared for an independent life in the digital society and reduce the number of low-skilled adults.

Especially in the time of the pandemic, access to internet and social connection is very important. Digital technology can help older people to avoid exclusion and loneliness, so they can be fully included into society and use these tools to avoid discrimination. We don´t want one Senior left behind so we must develop many ways for bringing in new technologies, for example in housing for people with disabilities as well for the diversity of people in rural areas. For these tasks, older people need to make themselves as decision- makers more visible.

At the beginning of the project a questionnaire was created to get a view of the opinions of older persons and senior students in the target groups on their

needs for digital technologies. Their input was of major importance and was used for the development of the learning innovations, support of digital skills and description of good practices. A multi-methods approach was used for the realisation of the project tasks and analysis with a predominance of quantitative techniques to focused groups of seniors. These sought to verify the goals that were achieved, the digital competences acquired, the innovations of the learning programs and the training activities in IKT and DT.

The total number of respondents involved in the research was 1175, of which there were 736 women (62,6%). In Dresden, Chemnitz and Magdeburg, the gender distribution was almost balanced, which means that the group of respondents in Germany was the most equal. The age of the surveyed respondents ranged from 61 to 70 years of age (Bratislava, Alicante, Wroclaw, Magdeburg) and from 71 to 80 years of age (Brno, Dresden, Chemnitz, Uppsala). Only 55 respondents were aged between 55 and 60 years from the total of 1175. Regarding their education level, most of the respondents have a university degree. Another big group of respondents have a College/Graduate Higher School degree.

When we asked the respondents to rate their computer literacy and their ability to use the computer, except for Brno and Alicante, 22.1% - 41.4% of respondents of the other project partners rated it as 'good' and 31.5% - 43% rated it as 'acceptable'. Amongst the respondents who were interviewed, the most frequently used technical devices were PC/Laptop (58.5% - 97%), Smartphone (63.4% - 95%) and printer (50% - 74%). Most of the respondents had an internet connection at home – and 93% of them used it.
The most popular form of help for the respondents in learning to work with digital technologies was support provided by relatives or friends. Lessons in the classrooms or seminars were also highly valued by the respondents from Brno and Alicante. Self-study as a means of looking for information and help via the Internet was also highly rated by respondents from Brno, Wroclaw, and Magdeburg.

Although PC and laptops were the most preferred devices of respondents, smartphones were primarily used for some "quick works" such as searching for information, communication, e-mails and conversations via Apps and using of the calendar application. Although it could be thought that of the technological devices, respondents most appreciated the mobile phone but very often they also mentioned that the smartphones were not preferable to the traditional phones and they still used the conventional phone. Adults over 60 years have

some problems when handling smartphones. Respondents said they needed help in using it, pointing out that it would be useful to have either some explanations by another person or easy printed instructions.

The most obvious needs of the older people are:

- help in better understanding of social, financial and economic changes in the digital society and its digital services;
- integration of Seniors into the digital society and minimalization of feelings of social inadequacy through personal encouragement;
- help in preserving personal agility, interests, self-reliance, self-fulfilment and inclusion in the digital environment;
- finding out about learning ICT programs, their training possibilities and the ways of enrolment and participation in them;
- exchanging and sharing skills and knowledge with other older people in many different countries; comparison of the conditions and results;
- acknowledging new innovative curricula and learn about new practices and programs;

The most obvious challenges for lecturers/ tutors:

- the differentiation of digital competence levels inside groups of Seniors poses practical challenges to both lecturers/tutors and to Seniors as participants;
- the collection of the best practices for the exchange of knowledge and skills for two main target groups: lecturers and seniors.
- practical utilisation of the collected and shared good practices from other institutions and personal training, with the goal of creating the responsible citizen.

One of the barriers to the use of new technologies by older people is their own financial background, because technical equipment is sometimes very expensive. As the new technologies are complicated to use, developers should take into consideration older people's needs and design age-appropriate devices.

Digital skills make it possible to expand and update one's knowledge in the fast-changing world. It is a fact that many older people do not even know the benefits of digital technology. For some, their digital skills are not sufficiently well-developed and they do not believe in digital technology because of e.g., fake news. Despite the risks, the new technology opens a new world for users in

different areas of life. The seniors, after their digital learning and training, will be more flexible in their daily life in using the digital equipment in their own home, in using banking digital tools and the digital services of the municipalities, e-shopping, personal material-technical equipment and computer security. Practical use of digital technologies will help elderly people to become more integrated into their society and to maintain connections to their relatives and friends. According to the above results from the project research, we can conclude that most respondents have a positive attitude towards digital technologies and are willing to overcome possible difficulties in using equipment.

Recommendations

1. Because digital technologies have a great impact on Seniors' lives, during the upcoming computer courses implemented within the SeLiD project, **our special goal is to attract Seniors' attention to the most popular IT devices and to the issues around using artificial intelligence**. Nowadays ICT cannot be separated from their daily needs.

2. Seniors mainly value the possibilities of information and communication with the rest of the world. According to respondents, the internet and smartphones are the most suitable tools for breaking down barriers, discovering other cultures and being updated. In addition, they connect users to family and friends, and make them feel they are an active part of the society. Therefore, **we should encourage older persons to use ICT more frequently and break down their barriers and their limitations.** It can be achieved during meetings between companies, providers and sellers with Senior groups and communities.

3. Older persons believe that digital technology improves people's lives and, therefore, its use is necessary, unstoppable and irreversible. Some even wonder why other people of their age do not give it the importance it deserves. Therefore, **we should convince the governments to give support in LLL to develop the digital literacy of older persons and creating national programs of active ageing.**

4. S**ome Seniors complain about the difficulties** they experience when using technologies because of their lack of confidence or because they

are discouraged when they fail to handle digital devices in an adequate way. However, they also believe that **their skills could improve with proper training and that technologies should be available to older people**.

5. Digital technologies generate two notable concerns: fears about the lack of security and privacy derived from the transfer of personal data required to access applications; the addictive behaviours that can be generated by an abusive use of network resources. **Peer learning is a very good way and practical method to see the practical advantages of using digital technologies.**

6. For some respondents there is no e-mail address in our database because, we assume the corresponding student had no such address. Nevertheless, there were a few cases where respondents simply didn't want us to have their personal e-mail address. But we know that use of **the new technologies is very important, especially for older people to have increased feelings of security and to be accessible by family, friends, etc.** Therefore, we believe that older people who have doubts about the necessity of the technologies would be most likely to accept it if they found, for example, the smartphone **not only easy to use, but also beneficial to themselves**. This also applies to other digital devices that can bring a lot of help to older people in their daily lives.

7. Anyone who has already started using digital devices, such as PCs, for professional reasons can deal with them more easily than other older people. It is particularly important for Seniors to have s**imple, easy-to-use digital devices with legible font size and short versions of operating instructions in simple, easy-to-understand language,** technical terms explained, clear pages in legible font size. Printed brief instructions must use simple terms, technical terms or terms explained in English in an understandable way.

8. Some older people thought the major barriers facing them are financial restrictions. Giving **special financial benefits to Seniors** from the digital companies and providers would be welcome.

How can we reduce Seniors' possible exclusion in the digital society? We can see that things can be easier when using different services online. During the COVID-19 pandemic, many daily things have changed. For example, we can no longer pay for a bus ticket on board a bus, we had to use online payments for services and products, and planned meetings had to be moved to the online space. After two years, Seniors can see the benefits from various digital services and believe that they offer new opportunities for them. Many Seniors expressed a joy at being able to communicate with children, grandchildren, relatives, and friends online, but some feel anxious or uneasy about digital developments and they feel excluded. If you do not have a Bank-ID, you are automatically excluded from many services, such as communicating with healthcare, ordering goods, booking tickets, Swish, Internet banking and more.

We have made good progress with Senior's communities, but there is still a lot more to do ahead of us. Digital technologies are changing very quickly, and Seniors need to know that it is necessary to keep in step with the changes in their societies by developing higher levels of digital skills through moving from the pilot courses for the beginners to the advanced courses.

13. SUMMARY

The project Erasmus+ SELID (Senior´s Learning in the Digital Society) has been approved for two years and started in September 2019. The emergence of the new situation caused by the pandemic COVID-19 also influenced the project program, so we are glad that the project could be extended by eight months to the end of April 2022. The Strategic and Learning partnership of the SELID project consisted of 8 educational institutions for Seniors as well as other voluntary cooperating partners. The partnership was created from 6 European countries (the Czech Republic, Germany, Poland, Slovakia, Spain, Sweden). Three other countries (Austria, Great Britain, the Netherlands) cooperated in the project activities and project research. During the project period we have realised within the partnership about 80 mobilities with the participation of all partners' institutions. Other institutions and older adults have been involved voluntarily in the project activities.

The project has planned five transnational project meetings, combined with workshops on many practical themes. We achieved four transnational project meetings personally as well as other five online project meetings and seminars. One of the meetings was realised as a hybrid meeting, when the pandemic

situation didn´t allow all project groups to travel abroad and the situation was not secure for all countries and partners. During the project period the eight project teams regularly have met to discuss their project approaches, realisation of the project tasks, ways of the communication with the respondents as well as to give presentations of the project findings and results. The final conference and transnational project meeting was organised by the partner at the Otto von Guericke University in Magdeburg.

All project meetings have been dedicated to the presentation of the project's work, coordination of the results, summarisation, analysis, and evaluation of the project progress in order to assign tasks for the next working phase. During the project period the face-to-face meetings focused on the themes:

- ➢ What are new technologies in seniors 'daily life, how to live with them (meeting in Wroclaw).
- ➢ New methods and programs in ICT learning for the older adults (meeting in Dresden).
- ➢ Needs and wishes of the elderly in the digital society. *Internet of things, social media, and digital security (meeting in Alicante).*
- ➢ Solving problems in the digital society. Responsible seniors in digital agency and at home, support of digital skills of older people (conference and meeting in Magdeburg).

The most valuable results are the practical results and research results, which are very important for the practical lives of Seniors. Further, the results can be used for the future educational planning and creation of training programs to meet the needs of older adults, which have been involved as the respondents in the project study.

The project booklet describes the project research as well as the theoretical framework, working methods and possibilities for innovations. Chapter 9 is devoted to the description of good practices as chosen examples for using information technologies and digital devices. The project partners have described 8 practices, but some partners did work on other innovations too. Encouraging initiatives within the good practices include:

- ➢ Accessible resources, accessible technologies, accessible apps, long-life learning
- ➢ Online café, Online university for seniors
- ➢ Computer Literacy Courses
- ➢ Good practice case on the subject Online Banking
- ➢ Use of Digital Technologies by Older People

- ➢ Smartphone-Course
- ➢ Introduction of pilot courses for digital beginners.
- ➢ On-line Learning in COVID Time / challenge for instructors and senior students how to get around in time of pandemic/

For the project dissemination we have created the project website (*http://selid.efos-europa.eu/*), we prepared four Newsletters and a project flyer; everything in English and German version with some other versions in national languages (Spanish, Slovak and Polish). We also published 1 booklet as a collection of the project results. Thanks to the Erasmus+ programme of the European Commission we have been able to carry out this research on lifelong learning in the field of Digital technologies and devices which are used by Seniors in their daily lives. The project's participants and the respondents have been contacted by the Universities of the Third Age (U3As) and Senior Academies in Europe, which are very often on the edge of public interest and need to draw more attention with new information that can be presented, disseminated and discussed.

The project Booklet with the content of the project research and collection of the Good practices will be available on the project website and describes important findings from the group of 1175 Seniors who were respondents.

<div align="right">
Nadežda Hrapková, project coordinator
Comenius University Bratislava, Slovakia
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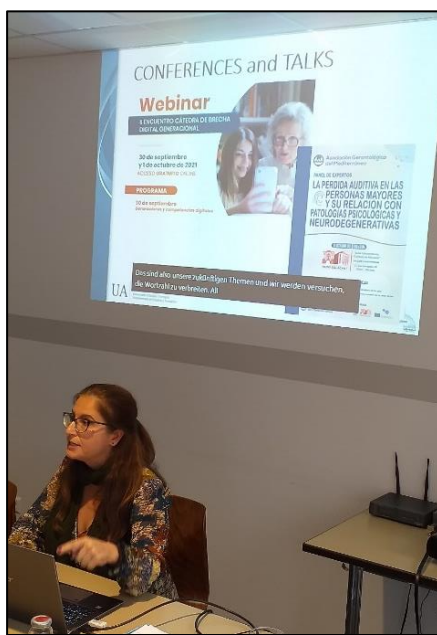
Transnational project meeting in Dresden 22. - 25.9.2021

Online project meeting on 4. December 2020

Transnational project meeting in Dresden

Transnational project meeting in Alicante 2. – 4.12.2021

Seniors´ Learning in the Digital Society
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