DISK

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DISK: “Digital skills for an Aging Europe”
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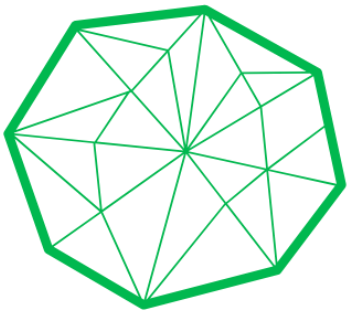
DISK Policy recommendations



DISK

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Contents

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1. Executive summary

Project DISK is an Erasmus+ project funded by the European Commission. The project is implemented in 6 countries France, Italy, Belgium, Spain, Greece, Macedonia, by eight project partners.
Loneliness, isolation and social exclusion are important risk factors that can lead to poor health in older people, especially in the absence of family networks or insufficient family support. The DISK project seeks to address the following issues, based on a general observation of the situation in Europe.
The main goal of the project is addressing these problems through the promotion of active aging, encouraging seniors to adopt a range of good practices to preserve their mental health through digital technologies.
Policy recommendations document is part of our Intellectual Output 4 “Guide and Advocacy” - which presents the final version of the project - and includes a policy recommendation and the Guidelines on the future use of the paths created for the seniors.
A policy recommendation represents policy advice for the stakeholders: government (depending on the political structure of the country) and ministries, organizations responsible for social and adult education, social services, NGOs, associations. The recommendations are based on the feedback collected in the test and validation phase and partners' inputs on the relevant questions included in the policy recommendation document.
The purpose of the policy recommendation also is to assess the current supply and demand of digital skills in the countries of the DISK consortium and to contribute to the development of a digital skills strategy that will meet adult citizen needs and contribute to further growth of the digital economy and digital society. Its objective is to offer a set of explicit and implementable recommendations, so that we can provide public authorities a better understanding of the problems and needs of older people with regards to active aging. They will have the possibility to contribute to the development of the model proposed by the project, which will guarantee an easier adaptation of the latter by the public authorities in the future.
Policy recommendation serves to inform decision-makers about a policy issue. However, a policy recommendation document goes further than a briefing note, providing both a more in-depth analysis of the options and a policy recommendation. Policy recommendations are the key means through which policy decisions are made in most levels of government.
It begins with an issue. A **general issue**, a matter on which a policy decision is required. Specifically, in this project it refers to digital skills for seniors, digital content for seniors, digital inclusion and active aging post pandemic,
Policy recommendations also, of course, includes **specific recommendations** come out thanks to the target feedback during the testing and validation phase and partners’ inputs from their country specific analyze in the topic.
In between, the issue and the recommendation was the **policy analysis, country specific information on national and EU level.** A policy recommendation may have other pieces, but those three parts—issue, analysis and recommendation—needs always to be there.

One reason for this structure is that writing policy recommendations is basically a process of problem solving. Specifically, the recommendations follow this structure:

- identify and clarify the policy issue
- research relevant background and context
- identify the alternatives
- carry out required consultations
- select the best policy option
- prepare policy recommendation document for approval

To produce the IO4 documents, partners implemented the following activities:
Activity 1 Definition of a common Framework for the document;
Partners developed a common structure that will be evenly used during the implementation of the policy recommendations, for the sake of accuracy, consistency and reliability of research, research results and analytical findings.
Activity 2 Contents creation
This activity was closely connected with the testing and validation phase. As a matter of fact the recommendations is the direct consequent result of this step created thanks to feedback form and partners inputs consisted of set of questions relevant for the topic.
Indeed, the partners consolidated the results of the test and validation in the document that analyzed and consolidated the feedback collected from all target groups involved in training (organizers, trainers, participants) and defined precise policy recommendation and guidelines for future training.
Activity 3 Policy recommendation Fine-tuned. It consists of the final revision in the contents and graphic of the document.
Policy recommendations impact:
Public authorities will have an increased understanding of the problems and needs of the older people with regards to active ageing; will have the opportunity to contribute to the development of the model, which will ensure an easier adaptation of the model by the public authorities if they want to implement the model in the future in their own setting and context.

2. Project DISK

Project DISK is an Erasmus+ project funded by the European Commission. The project is implemented in 6 countries France, Italy, Belgium, Spain, Greece, Macedonia, by eight project partners.
Loneliness, isolation and social exclusion are important risk factors that can lead to poor health in older people, especially in the absence of family networks or insufficient family support. The main goal of the project is addressing these problems through the promotion of active aging, encouraging seniors to adopt a range of good practices to preserve their mental health through the use of digital technologies. DISK training improves the cognitive capacity and health of seniors and slows the decline in memory and cognitive capacities. In addition, the great flexibility of the technological tools allows the content of the training to be varied by adapting to individual learning needs (e.g. foreign language vs. daily services, etc.).

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Digital Skills for an Ageing Europe (DISK) adopted an intersectoral and gender sensitive approach and capitalizes on the valuable experience of the project partners (eight organizations from six different countries) to provide the elderly with innovative and tailored training opportunities.

Project objectives are reached by carrying out the following activities:

1. Creation of dedicated OER Platform accessible to all, free of charge, in full Open Access mode and in multilingual versions (EN, FR, GR, IT, MK, ES) where all the content produced is published.
2. Highly interactive e-learning courses, developed to improve the memory and learning skills of the elderly, help them familiarize with practical services such as online shopping, and bookings, etc. with a view to improving their cognitive abilities and health, as well as preventing skill decline and dementia.
3. Guidelines to facilitate the uptake of Digital Skills for an Ageing Europe to sustain project results beyond Erasmus co-financing and widen its range of impact.

DISK OER and all training courses in the OER are available in six languages: English, French, Italian, Spanish, Greek and Macedonian language.

2.1 PROJECT PARTNERS

E-SENIORS: INITIATION DES SENIORS AUX NTIC ASSOCIATION, France

Società Cooperativa Sociale Fuori dal Sommerso, Italy

IDP SAS DI GIANCARLO COSTANTINO (ITALIAN DEVELOPMENT PARTNERS), Italy

INSTITUT DE HAUTE FORMATION AUX POLITIQUES COMMUNAUTAIRES (IHF), Belgium

ASOCIACION IT SOLUTIONS FOR ALL, Spain

MATHEMAGENESIS IDIOTIKI KEFALAIOUCHIKI ETAIREIA, Greece

PISTES SOLIDAIRES, France

Community Development Institute – CDI, North Macedonia

2.2 Aims of the project

ICT has severely contributed to change our life and has turned letters to email, market shopping to on-line shopping, apps and automatic replies to human technical customer support, and in particular in the field of culture a great deal of contents are now available online, free to be used and enjoyed, yet the lack of skills and online awareness often impede adult users to benefit from online cultural offers.
The Internet has speeded our life conditions but it has also a dark side if we consider malware, hacking, phishing, denial of service attacks, click fraud, invasion of privacy, violation of digital property rights, etc.
In an increasingly IT-driven society with an ageing population who is plodding through it, Digital Skills for an Ageing Europe (DISK) adopted an intersectoral and gender sensitive approach and capitalize on the valuable experience of its partners (eight organizations from six different countries) to provide the elderly with innovative and tailored training opportunities.
The DISK project seeks to assist senior citizens by encouraging them to use new technologies to adopt a variety of good practices in order to preserve their health and have a flourishing old age.
To support these goals, a free online platform that brings together various training courses to improve senior citizens memory, attention, perception and executive skills, as well as to familiarize them with practical internet services, was implemented. DISK consortium developed cognitive training content uploaded to the online platform in order to train the mind and prevent skill decline and dementia. Concretely, project partners created games and quizzes for cognitive training that are part of a complete package. These exercises can be practiced online on the project's platform and are designed to stimulate the cognitive abilities of the seniors. DISK training is aimed to improve the cognitive capacity and health of seniors and slow the decline in memory and cognitive capacities. In addition, the great flexibility of the technological tool allows the content of the training to be varied by adapting to individual learning needs (e.g. foreign language vs. daily services, etc.).

2.3 Target groups

1. Primary target group: ICT low-skilled adults, seniors, organizations working with seniors, social services.
- “Young seniors” between 65 and 74 years’ old

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2. Stakeholders and local/regional/international representatives, institutional stakeholders, journalists, organizations, companies, etc.
3. General public: the general public that is affected by and interested in digital inclusion, digital skills and competences.
In accordance with the project application, created deliverables were tested with the project target groups in the 6 countries of the 8 partners.

This pilot phase allowed partners to test and validate the training courses created in the IO3 and to identify any deficiencies in the correctness, completeness and reliability of the IOs development.

The Test & Validation Phase answered the questions: Did the didactic modules created satisfy the needs identified by the Target Groups? Did the teaching modules respond perfectly to the project objectives?
Project partners delivered the DISK Training in the IO3 activity to a total of 91 participants. The training sessions were held online and face to face.
The Pilot phase with target group representatives provided input, feedback and comments on the contents, the structure, the versatility, etc. of teaching materials. The majority of feedback was positive, indicating that participants rated the content of the training and modules as very good or excellent, the educational content informative, educational, stimulating, motivating. The platform was indicated as user-friendly, easy to navigate, welcoming, explanatory and detailed as possible in order to be used by all types of users.
Thanks to the results obtained in the piloting (T&V) activities, a series of lessons learnt have been collected allowing the partners to further fine-tune and improve contents and materials of the DISK project in its final version.

2.4 PROJECT RESULTS

=> IO1: Platform Free Educational Resource: providing free access to all teaching and training materials that are uploaded to the online platform (including e-learning courses for all the different key players, the community engagement guide, etc.).
=> IO3: Content Development & Training: IO3 consists of the creation of cognitive training content uploaded to the online platform. Following the capacity gap analysis, and following the models, tools, and defined means all partners developed in detail the contents of 10 training courses and game instructions in the four main areas of cognitive abilities: Memory, Executive functions, Perception, Attention.
=> IO4: Guide and Advocacy (Recommendations): IO4 represents the final version of the project and includes a policy recommendation and the Guidelines on the future use of the paths created for the Seniors. Guidelines refer more to the target group and represent a tool on how to get the most of the DISK training along with OER functionalities and recommendations provided by the trainers, educators. A policy recommendation represents policy advice for the stakeholders: government (depending on the political structure of the country) and ministries, organizations responsible for social and adult education, social services, NGOs, associations. The recommendations are based on the feedback collected in the test and validation phase and partners' inputs on the relevant questions included in the policy recommendation document.

3. WHY DISK?

Digital skills nowadays are seen as a key factor in the digital transition of countries, necessary for its success. Strengthening digital skills has therefore become an integral part of national digital transformation strategies. Digital skills allow people to generate and share digital content, connect and cooperate, and address challenges for effective and creative realization in private and professional life.

Since the outbreak of the COVID-19 pandemic, digital development through digital transformation has become ever more important. Enhancing the availability of products and services and empowering citizens, workers, and students in their daily affairs and needs during the lockdown has become a clear priority for all countries, and the ability to take advantage of the progress made in the digital sphere has become an important factor in determining sustainability.

According to UNESCO, digital skills are defined as a range of abilities to use digital devices, communication applications and networks to access and manage information. They enable people to create and share digital content, communicate and collaborate, and solve problems for effective and creative fulfillment in life, learning, work and social activities in general.
These skills are increasingly seen as necessary, both in personal and professional life, as the society sees its services, both public and private, to become more and more digitized and dematerialized.
Romance, information, entertainment, shopping, traveling, political participation, public services and civil affairs there is hardly any aspect of our everyday lives that is not permeated by digital technologies. Computers and smartphones open doors to new worlds, connect people all over the globe, and facilitate many daily activities.

Although the share of older people who use the internet has increased steadily, older people are still among the largest group affected by digital inequalities. We cannot ignore the fact there is (still) a vast amount of older people who involuntarily lack sufficient skills and confidence for adopting the digital technologies necessary to participate in society. Digital inclusion of older people has been recognized as a pressing issue on many fronts, and has to go beyond merely providing the technological infrastructure.

DISK project assists senior citizens by encouraging them to use new technologies to adopt a variety of good practices in order to preserve their health and have a flourishing old age.

To support these goals, a free online platform that brings together 10 training courses to improve senior citizen's memory, attention, perception and executive skills, as well as to familiarize them with practical internet services, was implemented. Open Educational Resources is a valuable tool that allows flexibility and adaptability to individuals, regardless of their age, gender or socio-economic status. In addition to the affordances of the OER, diskproject.eu has additional accessibility features that will create a better visual experience for site visitors with different needs.

4. DISK Training - Courses overview

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DISK courses are the most important outcome from the DISK project. The outcomes and content are carefully selected based on the key needs for the project target groups. DISK OER and all training courses in the OER are available in six languages: English, French, Italian, Spanish, Greek and Macedonian language. IO3 consists of the creation of cognitive training content uploaded to the online platform. Concretely, the consortium created games and quizzes for cognitive training that are part of a complete package. These exercises can be practiced online on the project's platform and are designed to stimulate the cognitive abilities and brain plasticity of seniors. Following the capacity gap analysis, and following the models, tools, and defined means all partners developed in detail the contents of 10 training courses and game instructions in the four main areas of cognitive abilities: Memory, Executive functions, Perception, Attention. Games accompanying each DISK training course are very important for the assimilation of knowledge. They are an excellent method and need to be encouraged for its value in terms of education, as it is an enjoyable way to learn new skills.

DISK Courses can be taken in Face to Face, online and blended mode – according to the participant/group preferences and possibilities / limitations.

DISK – Available Training Modules:

	Training Module Title	Category
1	Presentation of the different types of memory	Memory
2	Train your brain	Memory
3	Preview – Question – Reread – Study – Test: the PQRST exercise	Memory
4	Scenario making and problem solving: a safeguard for your cognitive abilities	Executive functions
5	How to improve your deductive reasoning skills?	Executive functions
6	The different types of perceptions and ways to improve your interaction skills	Perception
7	Presentation of cognitive stimuli	Perception
8	Working on your mental fitness: focus and attention for seniors	Attention
9	How art and meditation improves attention	Attention
10	Finding Waldo: Remaining sharp in your older age	Attention

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4.1 DISK Test & Validation activities, findings and summary of the users feedback

All project partners delivered pilot training in their respective countries according to the methodology agreed and validated by each partner. The proven methodology helped to have unique and equal conducted pilot trainings and responses that can be compared and deduced in terms of training and the quality of training, with a view to improving their quality according to the needs of the target groups.

Partners promoted and delivered the DISK courses according to their internal schedule, so as to ensure the maximum number of courses delivered and low skilled adults trained. Target groups' representatives were trained in the countries represented in the partnership. Feedback was collected from the participants involved in the test and validation activities at the end of each training course.

Project partners delivered the DISK training to a total of 91 participants through face-to-face and online piloting activities.

DISK test & validation activity was successfully implemented by all project partners. The inputs and feedback obtained within the piloting phase are considered as highly valuable and useful. All modules are tested and the numbers promised in the project application for this activity are overreached.

Among the many comments made by the participants were that this project was both useful and highly valued, they pointed out that gamification, practical examples are very important for knowledge assimilation, and they are very interested in all topics of the training. The games allowed many participants to practice their mental skills in a fun and easy way.

The overall impression from the test and validation activities is that the partners produced learning resources with good quality, interesting as they hold the audience's attention, the courses' themes are relevant regarding the acquiring the knowledge, and participants liked the contents and easy navigation through the DISK Platform.

DISK T&V was a very useful and effective way for the project partners to get feedback directly from the project target group and, according to the findings, to adjust or fine-tune the created modules. This will have a positive impact because the produced e-learning materials were checked if they are relevant for the target groups, easy to use, understandable and an interesting contribution to increased future use of the DISK learning resources.

Based on the consolidated pilot trainings feedback from the DISK T&V, the Guidelines for future training were produced. This document refers both to practical and organizational aspects and to

purely pedagogical issues, such as guidelines for trainers, structure and content of the workshops, simulations, etc.

Feedback on the learning materials obtained from the participants involved in the piloting phase is valuable and highly appreciated and will be used as a reference for fine tuning of the DISK Modules (Courses).

5. Policy analysis, country specific information on national and EU level - the importance of active aging and improvement of digital skills

The 21st Century is characterized by increasing digitalisation. As more and more everyday services move online, 'offliners' risk being excluded in an era that embraces fast-changing innovation in digital technology. This predominantly concerns older persons who are less digitally connected than youth who were born into the digital age. Digital skills nowadays are seen as a key factor in the digital transition of countries, necessary for its success. Strengthening digital skills has therefore become an integral part of national digital transformation strategies. Digital skills allow people to generate and share digital content, connect and cooperate, and address challenges for effective and creative realization in private and professional life. They range from basic knowledge (such as knowing how to use a computer) to more advanced skills (such as those related to the development of specific software).

The situation regarding the active aging and improvement of digital skills in the project partner's countries is presented with country specific information, provided by the project partners:

Macedonia:

The Republic of North Macedonia is an upper-middle income country that has made great progress in reforming its economy over the past decade. The government of North Macedonia has made ongoing efforts to ensure economic growth and a higher standard of living for all, but special attention must be paid to skills development, knowledge creation, and effective policies that enable growth. Special attention should be paid to the development of digital skills as one of the main factors for accelerating economic growth. Thus, the country should continue to develop technology, innovation and skills for further improvement. Digital technologies provide opportunities for inclusive and sustainable economic growth in all sectors of the economy and society.

Since the outbreak of the COVID-19 pandemic, digital development through digital transformation has become ever more important. Enhancing the availability of products and services and empowering citizens, workers, and students in their daily affairs and needs during the lockdown has become a clear priority for all countries, and the ability to take advantage of the progress made in the digital sphere has become an important factor in determining sustainability. Eurostat 2019 data shows that 32% of the population had a basic or average level of digital skills, compared to 56% in the rest of the EU-28.[1] Only 29% of Macedonian citizens used the Internet to interact with public authorities, less than half of the EU average (64%).[2] In 2020, 79% of households in North Macedonia had access to the Internet. This is a decrease of 3% over the previous year.

[1] https://ec.europa.eu/eurostat/databrowser/view/isoc_sk_dskl_i/default/table?lang=en

[2] https://ec.europa.eu/eurostat/databrowser/view/isoc_ciegi_ac$DV_515/default/table?lang=en

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In statistics from 2020, it is shown that about a quarter of Macedonian population are over 65 and the number of people aged between 65 and 80 will grow to nearly 40% of the Macedonian population between 2010 and 2030. Therefore, compelled by circumstances, the need for older people to develop skills in the use of the Internet and ICT is essential. For non-users, age is the principal factor with around two thirds of Macedonians aged 65-74 and about half of those aged 55-64 having never used the Internet. When asked about their reasons for not having an Internet connection, lack of interest, motivation and attitudes is the most cited reason. However, research suggests that older people tend to face different barriers and challenges to access, such as cost and economic factors, demographic and social factors, skills and ability, disability, concerns about security and privacy, the lack of time to use it, many people simply do not recognize the relevance of these technologies for themselves. Disabilities, as well, can hinder people from actively engaging in the use of information technology. For the usage of online services, the most important disabilities to consider are visual handicaps, cognitive defects and limitations of motor skills. Despite all this, we believe age itself is not a barrier to using digital technologies, and they can offer great potential benefits to this section of the population. Therefore, the digital age divide must be prevented, by adapting services and technologies to the needs of the elderly population.

Spain:

According to the Digital Economy and Society Index, 43% of the Spanish population lacks basic digital skills, which is a problem to be addressed through policy interventions. Although informal learning networks exist in Spain, where older people teach other older people, this is not enough to ensure that the ageing population has the necessary digital skills to carry out their daily tasks with ease. For example, banking is mostly done through mobile apps, but older people do not have the necessary skills. The National Plan for Digital Skills aligns with the objectives of the European Commission's Digital Education Action Plan, which sets out three priorities: (1) making better use of digital technology for teaching and learning, (2) developing key digital competences and skills for digital transformation and (3) improving education systems through data analysis and forecasting processes.

Specifically, the strategic objective of the National Plan for Digital Skills that best fits with the DISK project itself is the first one: to guarantee digital inclusion, leaving no one behind in the digitalization process and advancing in the development of basic citizen competences.

Italy:

According to AGID, the Agency for Digital Italy, digital skills in the Italian framework can be connected to DigComp, the European Digital Competence Framework.

Following the same structure, digital skills can be qualitative and quantitative determined in five (5) area of competences:

- Information and data literacy;
- Communication and collaboration;
- Creation of digital content;
- Safety;
- Problem solving.

According to AgendaDigitale.eu, In general, in 2022 Italy has 46% of the population with at least basic digital skills, and a distance of around 8% from the EU average (in 2019, the distance to the EU average was more than 16%), in fourth to last position.

Unfortunately, however, with respect to the 65-74 age group, the share of Internet users lags significantly behind the EU

average.[3] A statistic that suggests that digital skills enhancement (e.g. information and data) for this age group is urgently needed.

France:

According to the Ministère de la Transformation et de la Fonction Publiques, 80% of "essential" procedures are accessible online. These transformations have accompanied the increasing use of digital devices by the French, as well as their diversification: According to a study by INSEE, in 2017, 93% of households had a mobile phone, compared to 69% in 2006. Similarly, 62% of households have a laptop, compared to 11% in 2007. Finally, while digital technology and the internet are closely linked, 84% of households had an internet connection, a twofold increase compared to 2006.
The French are increasingly connected. In 2020, there were 53.5 million Internet users, or 85.4% of French people aged 2 and over. Moreover the average time spent on the internet was 2.45 hours per person per day.
To enable the French citizens to acquire a minimum level of skills in this field, digital courses have been integrated into the school curriculum: In 2016, learning the code, mandatory, was introduced into high school programs (even if its teaching is still mainly theoretical). The aim of digital education at school is to train pupils in the use of digital tools, to give them the skills needed for their future working life.

Greece :

In Greece, as in the rest of Europe, the well-being of the aging population and their active participation in social life, has indisputable links with their digital skills. Even though the importance of Digital Skills are acknowledged and the Greek State has recognized the need for digital literacy in elderly while encouraging activities for the digital skill education, according to latest Eurostat reports on digital literacy, in Greece, 49% of the population has low average digital skills, and only a mere of 9% of senior citizens (ages 55 and more) have basic or above average digital skills, which is significantly less than the European average (24%). Therefore it can be said that Greece comes behind in important themes of the European Union's digital agenda.
Considering also the fact that the elderly (those over the age of 65) are projected to be more than 45.0 % of the general population in Greece by 2050, the importance of directives on digital literacy of the senior citizens becomes more apparent.
When it comes to teaching senior citizens how to use technology, in recent years, Greek policies have been geared toward promoting active healthy aging.
For several years, Greece's National Health and Social Solidarity System has been undergoing modernization, which includes a variety of political and operational interventions, as well as concrete recommendations for Active and Healthy Aging procedures.
Greece has implemented a number of programs aimed at improving the quality of life for the elderly while also protecting them.

EU:

To understand the state of play of digital literacy in Europe, the very first thing we should look into is the Digital Economy and Society Index (DESI, https://digital-agenda-data.eu/datasets/desi/visualizations), an aggregate index that summaries

[3] https://www.agendadigitale.eu/cultura-digitale/competenze-digitali/competenze-digitali-litalia-comincia-a-migliorare-i-dati-eurostat/

how each Member States performs in terms of Connectivity, Human Capital, Use of Internet, Integration of Digital Technology, Digital Public Services. Northern countries perform way better than Mediterranean and Balkan countries under all parameters, and by a wide margin and for laggards there is also a large internal disparity between rural regions and industrialized urban areas.

The reasons and motivation of this gap can be recognized upon the human factor exclusively (digital culture, proficiency of general population in ICT, no. of graduates in STEM fields, etc.). Most of member states, even for those occupying the two opposite poles of the chart, the values of connectivity, use of internet and digital public services are somehow standardized and relatively similar, the real discriminant is how people approach digital technologies and how this are integrated into societies, the informed use that people make of the opportunities stemming from ICT, and how they react to digital education in general.

A common feature even among digitalised countries, and much more evident in laggards, is that the female population seem struggling the most with digital education / digital literacy compared to its male counterpart. The reason might be of sociological nature, and related to specific trends of the market labour. On average, the female population is employed on labor-intensive industries, the male population is employed on capital-intensive industries: labor-intensive industries are much less data driven compared to capital ones, and are in need to absorb much less IT talents due to the specific scale and scope of the tasks leading to the generation of value for the organisation that operates in it. Education and healthcare absorb much of the female working population, and imply occupations and responsibilities that do not need robust IT literacy to be performed.

Digital skills allow people to generate and share digital content, connect and cooperate, and address challenges for effective and creative realization in private and professional life. Technological advances lead to significant changes in the skills needed in the labor market. The future requires a certain set of digital skills, indispensable for economic development and prosperity of society in any country. Hence, any gaps and deficits in these skills can be seen as a challenge to further progress.

Project DISK is contributing in addressing digital skills awareness through the promotion of active aging, encouraging seniors to adopt a range of good practices to preserve their health by new technologies. More specifically, it aims at improving the memory and learning skills of older people, as well as to familiarize themselves with practical services related to online shopping, various bookings, etc., through the OER platform that brings together various training courses to project target groups. DISK training improves the cognitive capacity and health of seniors and slows the decline in memory and cognitive capacities. In addition, the great flexibility of the technological tools allows the content of the training to be varied by adapting to individual learning needs (e.g. foreign language vs. daily services, etc.).

6. Active aging post pandemic - how can digital skills and digital resources improve active aging?

Digital skills nowadays are seen as a key factor in the digital transition of countries, necessary for its success. Strengthening digital skills has therefore become an integral part of national digital transformation strategies. Digital skills allow people to generate and share digital content, connect and cooperate, and address challenges for effective and creative realization in private and professional life.

Education provides a foundation for development, the groundwork on which much of our economic and social well-being is built. It is the key to increasing economic efficiency and social consistency. A good education makes an individual develop personally, socially as well as economically. Education helps us to acquire new skills and knowledge that

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will affect our development in life.
Lifelong learning can enhance our understanding of the world around us, provide us with more and better opportunities and improve our quality of life. There are two main reasons for learning throughout life: for personal development and for professional development**.**
Today, it is believed that having strong digital abilities is essential for a nation's digital transition to be successful. As a result, developing digital skills is now a crucial component of national digital transformation programs. People with digital abilities can create and share digital material, connect and work together, and overcome obstacles to effectively and creatively realize their goals in both their personal and professional lives. The abilities required on the job market have undergone significant change as a result of technological advancements. A specific set of digital skills will be necessary for society's success and economic progress in the future, regardless of the nation. Therefore, any gaps or deficiencies in these skills can be perceived as a barrier to advancement.

For what concerns the policy dimension specifically, we wish to highlight three pieces of reference that cross-intersect the three policy axes of the project: digital education, adult learning and active aging. These three documents contributed to set the past, current and future landscape of adult learning in all its shapes and manifestations, both from a policy and practice perspective.
The accelerated digitalization during the COVID-19 pandemic has further emphasized these inequalities, as many older persons struggled to access essential goods and services - from online vaccination appointment registrations, to pensions, food and medication during lockdowns - if they could not access them online.
However, there is still a need to increase interventions and actions aimed at bridging the digital divide among the elderly population, and to increase the importance of the role of active ageing through digital technologies as a tool to improve the independence and quality of life of older people.
The COVID-19 pandemic has exacerbated the integration of technology into the lives and physical environments of people globally, while it has highlighted the disparities and digital inequities within our society. Technology use reinforces classical inequalities between rich and poor, majority and minorities, old and young. This in turn for some people has resulted in mixed experiences since 2020, they have been able to work from home, be more productive, while for many more, the sense of loneliness, and social isolation has increased greatly. Post-pandemic digital realities re-shape the discussion on the overcome ability and the belief in a successful adoption of the digital technologies later in life, also about the obstacles and challenges associated with the sustained use of technology, as for example the techno stress and issues regarding privacy and surveillance. For older adults in particular the new digital spectrum raises issues regarding attitudes and technology awareness, self-trust and the mitigation between online and offline activities. Understanding people's digital repertoires in a pandemic scenario is focused on the vulnerable social groups – those already described as having higher technostress and difficulties to engage with the latest communication technologies, as for example older adults. Improving digital skills at such groups is presented as an emergent call for action.

7. Policy recommendations – digital skills, digital inclusion active aging

Seniors, elderly people are particularly exposed to certain risks or situations that may present a particular difficulty, which could affect their use of digital technology. More than a third say they are worried about having to carry out their administrative procedures online, and some are obliged to use specific services, in town halls for example, to have access to assistance services dedicated to e-administration.
Therefore, support should be coordinated on these topics, whether it is the example of e-government, online safety,

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disinformation and the fight against fake news, or data security and protection. Specific training courses exist, but they are not yet sufficient to enable seniors to use digital tools with ease and without fear.

Over the past few years, there has been a significant increase in the number of people who engage with digital technologies. However, there is still a need to increase interventions and actions aimed at bridging the digital divide among the elderly population, and to increase the importance of the role of active ageing through digital technologies as a tool to improve the independence and quality of life of older people.

A specific set of digital skills will be necessary for society's success and economic progress in the future, regardless of the nation. Therefore, any gaps or deficiencies in these abilities can be considered as a barrier to further development.

Even though the numbers are not always encouraging, the attention is increasing at policy level, with the adoption and implementation of initiatives targeted to Education (both formal and non-formal), Public Administration and Enterprise, aiming at the enhancement of digitalization as a means for an improved quality of life and addressed also to the adult population.

The reasons and motivation of this gap can be recognized upon the human factor exclusively (digital culture, proficiency of general population in ICT, no. of graduates in STEM fields, etc.). Most of member states, even for those occupying the two opposite poles of the chart, the values of connectivity, use of internet and digital public services are somehow standardized and relatively similar, the real discriminant is how people approach digital technologies and how this are integrated into societies, the informed use that people make of the opportunities stemming from ICT, and how they react to digital education in general.

Therefore, the actions to be planned urgently are:

-enhancing and disseminating all initiatives actively involving seniors as peer tutors in the digital and functional literacy of their peers;

-develop training contents for the over 60s who want to become digital facilitators for the elderly and senior citizens also using remote collaboration platforms;

-explore the needs of the less self-sufficient elderly to offer personalized and engaging technological responses;

-map and share experiences using technologies, including advanced ones (immersive reality, artificial intelligence, robotics, etc.), for the well-being and care of the elderly.

- Developing a corpus of training courses to enable seniors and adults to train independently, or to facilitate the work of digital learning support groups.

- Offering more digital training in specific areas identified as obstacles or barriers to digital learning.

- Ensuring access to IT tools for all. Develop digital awareness and encourage adults to learn about digital issues.

Continue to act proactively, by helping employees to acquire more digital skills, and help companies to make their digital transition. Helping seniors maintain their independence for as long as possible. There is a strong demand from senior citizens to stay at home as long as possible. This could be made possible by learning and using technological tools to help seniors stay independent, for example through remote communication tools, connected devices for home help, which would be able to alert quickly in case of problems, and solutions for active ageing. With the dematerialisation of some parts of the public services, being able to complete administrative paperwork online could make life easier for seniors, especially those living in rural areas or having difficulty getting around.

Specific recommendations:

I. It is important to approve a national framework law on the promotion of active aging that deals with defining various parameters, including a minimum level that all regions should guarantee, and ensuring the full integration and

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participation of older people in society.

II. Approval and implementation of regional laws on the organic promotion of active aging among its various fields, or similar regulations.

III. Incorporating the concept of active aging into regional laws and policies aimed at the elderly, in social services policies it is still an unripe and underdeveloped concept.

IV. Creating synergy between the education sector and the social services sector in the field of older people.

V. Do not focus only on the care component, but on the concept of active aging.

VI. Promote e-skills interventions by increasing the resources made available

VII. It is necessary that all long-term instruments for analysis, planning, implementation and monitoring in the field of active aging, to be envisaged both at national and regional/local level (observatories, tables, groups or councils) as well as representatives of policy-making government bodies, include all relevant stakeholders (**from the third sector** and civil society, the academic-scientific world, networks/partnerships already implemented by central government, etc.) at all stages, for the purpose of co-planning and co-decision-making, to ensure bottom-up (bottom-up) participation mechanisms.) at all stages, for the purposes of co-planning and co-decision-making, to guarantee bottom-up participatory mechanisms.

VIII. Strengthening the role of Third Sector organizations in ensuring the integration and participation of older people in society and in promoting initiatives to facilitate the digital inclusion of senior citizens to enable them with skills and tools compatible with the needs of everyday life.

IX. Regarding the issue of digital education for the elderly, it is considered desirable to design and implement a major plan for the digital literacy of the senior population with the involvement of young people through a renewed intergenerational agreement.

8. Final remarks & Conclusion

Digital skills nowadays are seen as a key factor in the digital transition of countries, necessary for overall well-being of the European citizens. Strengthening digital skills has therefore become an integral part of national digital transformation strategies. Digital skills allow people to generate and share digital content, connect and cooperate, and address challenges for effective and creative realization in private and professional life. Technological advances lead to significant changes in the skills needed in the labor market. The future requires a certain set of digital skills, indispensable for economic development and prosperity of society in any country. Hence, any gaps and deficits in these skills can be seen as a challenge to further progress.

Since the outbreak of the COVID-19 pandemic, digital development through digital transformation has become ever more important. Enhancing the availability of products and services and empowering citizens, workers, and students in their daily affairs and needs during the lockdown has become a clear priority for all countries, and the ability to take advantage of the progress made in the digital sphere has become an important factor in determining sustainability.

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According to UNESCO, digital skills are defined as a range of abilities to use digital devices, communication applications and networks to access and manage information. They enable people to create and share digital content, communicate and collaborate, and solve problems for effective and creative fulfillment in life, learning, work and social activities in general.

These skills are increasingly seen as necessary, both in personal and professional life, as the society sees its services, both public and private, to become more and more digitized and dematerialised. Romance, information, entertainment, shopping, travelling, political participation, public services and civil affairs – there is hardly any aspect of our everyday lives that is not permeated by digital technologies. Computers and smartphones open doors to new worlds, connect people all over the globe, and facilitate many daily activities.

Although the share of older people who use the internet has increased steadily, older people are still among the largest group affected by digital inequalities. We cannot ignore the fact there is (still) a vast amount of older people who involuntarily lack sufficient skills and confidence for adopting the digital technologies necessary to participate in society. Digital inclusion of older people has been recognized as a pressing issue on many fronts, and has to go beyond merely providing the technological infrastructure.
Strengthening digital skills has therefore become an integral part of national digital transformation strategies. Special attention should be paid to the development of digital skills as one of the main factors for accelerating economic growth. Thus, the country should continue to develop technology, innovation and skills for further improvement. Digital technologies provide opportunities for inclusive and sustainable economic growth in all sectors of the economy and society. Digitalization is the main driver of competitiveness, economic development and employment growth. The development of digital infrastructures includes ensuring that all citizens regardless of their location or place of living can use digital opportunities without any technical, organizational and financial restrictions or difficulties.
This predominantly concerns older persons who are less digitally connected than youth who were born into the digital age. The accelerated digitalization during the COVID-19 pandemic has further emphasized these inequalities, as many older persons struggled to access essential goods and services - from online vaccination appointment registrations, to pensions, food and medication during lockdowns - if they could not access them online**.** Our dependence on digital technologies during the pandemic has therefore focused policy attention on the importance of digital inclusion.
Lifelong learning can enhance our understanding of the world around us, provide us with more and better opportunities and improve our quality of life. There are two main reasons for learning throughout life: for personal development and for professional development**.**
Even though the numbers are not always encouraging, the attention is increasing at policy level, with the adoption and implementation of initiatives targeted to Education (both formal and non-formal), Public Administration and Enterprise, aiming at the enhancement of digitalization as a means for an improved quality of life and addressed also to the adult population.
Motivation in the learning process is essential. Participants should be self-motivated while they self –enroll in the courses, and be supported and motivated by the educators and trainers while using the blended learning model.

DISK's project can generate a positive impact on multiple dimensions, such as effect (Enhancing and reigniting sense of initiative, interest in culture, civil society, democratic life, "learning to learn" and also contributing to healthier societies). Providing elderly friendly user interfaces, the development of good learning materials on the use of computers, the creation of public Internet access points and computer literacy training to increase the skills of elderly people, grants

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to provide more senior citizens with computers, as well as free Internet access at local libraries or comparable centers, are some of the suggestions that can be implemented, in order to overcome the digital divide in project partners countries. But, for all this it is necessary to have different pedagogical approaches and teaching strategies that are adequate to the specific context, especially considering the functional transformations that come with age. Nonetheless, increasing awareness of the benefits of the Internet will not necessarily transform a nonuser into a user. The need to continue to improve the accessibility and functionality of hardware and software from the elderly people's point of view, and to continue to develop applications and design materials which are significant and attractive to older people, are some of the things that some of the partner countries have been trying to achieve through the past years. In order to provide independent living for the aging population, this whole process requires continuous direct forms of influence, free access using specific time periods, training and education, including websites with services for the elderly and online trainings for the elderly, given by students. Undoubtedly, ICT must be reformed to better address the needs and lives of older adults so that they are encouraged to use it.

More about project DISK
www.disk.eu

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