BOOMER

Booming digital literacy among elderly population

Work Package 5

BOOMER Adoption Suite: A practical manual for future use in AE

Final Version

CONTENTS

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1. Overview of the BOOMER project: relevance and objectives

In recent years, the social inclusion of senior citizens has become one of the most urgent priorities for EU policymakers. Negative demographic trends and the increasing use of digital technologies in almost all areas of human life have made the elderly population (seniors) one of the most vulnerable and disadvantaged social groups. In this context, digital literacy can no longer be seen as an advantage but a necessity for the ageing population.

The BOOMER project is a strategic initiative co-funded by the Erasmus+ Programme of the European Commission and aimed at addressing the growing concern of digital and social exclusion among the elderly population. As digital technologies become increasingly pervasive, older adults are often left behind, facing challenges that hinder their active participation in society. This exclusion is exacerbated by competence and skills gap, making BOOMER crucial to bridge the generational divide and promote social inclusion. The core objective of BOOMER is to empower older citizens by equipping them with the necessary digital skills and knowledge to navigate the digital world confidently.

The BOOMER consortium is coordinated by the University of Dubrovnik and consisting of 8 representatives from seniors' associations, HEIs, SMEs and NGOs from 5 different European countries (Croatia, Belgium, Germany, Italy and Spain). Partners developed tailored analysis, training materials, operational guidelines and tools that enable seniors to perform everyday activities in an online environment. The consortium includes almost the entire ecosystem of those relevant to the digital empowerment of the elderly population.

The BOOMER project has a very clear and concrete objective: to help bridge the generation gap, enable active participation in the daily lives of older citizens and promote the social inclusion of digitally vulnerable social groups. The outcomes of the project are innovative and ensure the provision of practical, real-life applicable knowledge and skills for digitally isolated older people. It empowers older people in the areas of information and data and e-health literacy, communication and collaboration, digital wellbeing, cyber security and problem solving.

In contrast to many narrative projects that focus on individual dimensions of digital inclusion, BOOMER takes a comprehensive approach that provides a range of applicable tools. This enables the target population to stay informed, access a wide range of services necessary for daily life, protect themselves from security risks in the digital environment and, above all, be able to solve problems that arise in their daily interaction with digital technologies without being dependent on others. By targeting one of the most digitally sensitive parts of the population, the project reduces the generation gap and bridges social divides. It also enables older people to play an integrated and active role in the transformation of society, even at an advanced age.

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BOOMER's innovative approach includes the development of a multi-functional **Virtual Corner**, mainly representing a learning space offering a series of micro-training fiches in five different languages (English, German, Spanish, Croatian and Italian). It enables the elderly population to develop their digital skills in an open and accessible way. This digital space not only serves the core target groups but is designed to be sustainable, fostering the exchange of news, knowledge and experiences among various stakeholders (digital community space). In this way, the sustainability and development of the project is ensured long after its completion.

BOOMER's outcomes are relevant in reducing the digital divide, ensuring that seniors can contribute to and benefit from the digital transformation of society.

This overview highlights the relevance of the BOOMER project in addressing a critical societal challenge and sets the stage for the detailed guidance provided in this Adoption Suite.

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2. A brief introduction to the BOOMER adoption suite

The BOOMER Adoption Suite, part of Work Package 5 (WP5) of the BOOMER project, is a key deliverable strategically designed as a comprehensive guide to ensure the effective exploitation of the project's outcomes among a wide array of stakeholders within Adult Education (AE) sector.

The primary objective of the BOOMER Adoption Suite is to facilitate the widespread integration of the project's outputs, thereby addressing the growing need for digital literacy among the elderly population. As digital technologies continue to permeate every aspect of life, the digital divide becomes more pronounced, particularly affecting older individuals who may lack the necessary skills to navigate this rapidly changing landscape. The BOOMER project was designed with this challenge in mind, aiming to empower seniors by providing them with the digital competencies required to actively participate in society.

To achieve this, the BOOMER Adoption Suite outlines a clear and actionable strategy that aligns with the broader goals of the European Union's digital inclusion agenda. The suite not only presents the tools and resources developed during the project but also offers a roadmap for their adoption across various educational contexts. This is particularly crucial for ensuring that the project's outcomes are not limited to the duration of the project itself but have a lasting impact on the AE ecosystem.

The anticipated benefits of mainstreaming the BOOMER initiatives are substantial. By integrating these tools and practices into AE programmes across Europe, educational institutions and organisations can significantly enhance the digital skills of their elderly learners. This, in turn, will contribute to reducing social isolation, improving access to digital services and fostering a more inclusive society. The long-term effects of this initiative are expected to include a narrowing of the digital divide and the creation of a more digitally competent older population, better equipped to engage with modern technologies.

The Adoption Suite also includes practical recommendations for the uptake and utilisation of the BOOMER project outputs. These recommendations are based on the experiences and feedback gathered during the project's pilot and validation phases, ensuring that the strategies proposed are both effective and adaptable to various educational settings. The document is structured to guide stakeholders through the process of integrating BOOMER's tools into their programmes, with clear steps on how to adapt these resources to meet the specific needs of their learners.

Furthermore, the BOOMER Adoption Suite emphasizes the importance of sharing and disseminating the project's achievements with a broader audience, both via online and offline. The document provides insights into effective dissemination practices, encouraging stakeholders to share their experiences and successes, thereby fostering a community of practice that can drive further innovation in the field of digital literacy for seniors.

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The BOOMER Adoption Suite is divided into several key sections:

- **Overview of the BOOMER Project**: This introductory section provides a foundational understanding of the project's objectives and relevance. It outlines the challenges faced by the elderly population regarding digital and social exclusion and describes how the BOOMER project aims to address these issues by equipping seniors with digital skills

- **Introduction to the BOOMER Adoption Suite**: This part serves as a roadmap for disseminating and adopting the BOOMER project's outcomes among AE stakeholders. It emphasizes the importance of enhancing digital skills in the elderly population and offers a recap of the final exploitation document for mainstreaming the project's initiatives across the European Union

- **EU-wide Skills and Competences Audit**: This section offers an in-depth analysis of the BOOMER project's methodology for assessing and validating skills and competences during the first steps of implementation. It includes details on the needs analysis approach, the process for identifying innovative models and the validation process based on the Digital Competence Framework for Citizens (DigComp2.2)

- **Navigating BOOMER Training Content**: Here, the content guides users on how to interact with and utilise the BOOMER training materials, ensuring they can effectively integrate the content into their educational practices

- **Feedback and Findings from the Delivery and Validation Phase**: Here, the findings from the validation phase of the BOOMER project are presented, which include feedback from various stakeholders and participants involved in the project's pilot phase

- **Interacting with the BOOMER Virtual Corner**: This part provides instructions on how to use the BOOMER Virtual Corner, a digital platform designed to facilitate access to the project's resources and support materials

- **Promotion and Valorisation of BOOMER Results**: This section discusses strategies for promoting the BOOMER project's outcomes, ensuring that the results are widely disseminated and adopted within the AE community

- **Final Recommendations**: The suite concludes with recommendations for future use of the BOOMER project's materials and strategies, aiming to maximize the project's impact and sustainability in the AE sector

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3. Key evidence from an EU-wide skills and competences audit

The BOOMER model is grounded in a robust methodology that includes a combination of qualitative and quantitative research approaches in a multi-staged analysis: both primary and secondary. The core components encompass the preparation of reports (both at country and EU levels) and the conduction of in-depth tailored interviews. Specific country (Croatia, Belgium, Germany, Italy and Spain) reports and EU-report involve comprehensive analyses of national strategies, legislation and educational programmes aimed at increasing digital literacy among the elderly.

In-depth interviews include qualitative surveys conducted with associations of seniors and AE-linked stakeholders to gather insights into their experiences and needs on adult digital education. The mapping model consists of several dynamic elements that interact to provide a comprehensive assessment. Data collection involves gathering information from public authorities, research communities and NGOs to ensure a broad and reliable information base. Data analysis follows, identifying trends, strengths, weaknesses and unique national approaches to digital literacy. These findings are then summarised in detailed specific reports and thematic analyses.

A critical aspect of the BOOMER Model is understanding the learning needs of the elderly. This involves identifying learning outcomes using the DigComp2.2 – The European Digital Competence Framework for Citizens – as a framework, which focuses on key competencies such as Information and Data Literacy, Communication and Collaboration, Safety and Problem Solving. Validation is also crucial, ensuring that the identified outcomes align with the actual needs and experiences of the elderly, gathered through interviews and surveys.

The implementation of the BOOMER assessment model may encounter several challenges and opportunities. Potential roadblocks include resistance to new technologies, limited access to digital devices and varying levels of prior digital knowledge among the elderly. On the other hand, opportunities arise from increasing awareness and interest in digital literacy, the availability of funding for educational programmes and the potential for collaborative efforts with various stakeholders.

After examining various digital literacy programmes for older adults in the involved countries, several key takeaways have emerged. Common themes include the importance of policy frameworks, the need for tailored and comprehensive digital skills training and the role of international collaboration. Germany has a well-established policy framework emphasizing intergenerational learning and involving multiple stakeholders. Italy uses a decentralised approach, integrating digital skills development into lifelong learning and addressing specific barriers to digital inclusion. Spain's policy framework includes initiatives targeting older adults, emphasizing non-formal education and community-based approaches. Croatia's policy framework is relatively weak, highlighting the need for comprehensive surveys, expanded international collaborations and a wider range of digital skills in edu programmes.

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In-depth interviews with adult education providers in Spain, Italy and Germany reveal specific challenges and opportunities in delivering effective digital skills training. Germany shows growing interest among older people to learn digital skills, supported by various organisations and initiatives. Italy faces challenges like uneven distribution and disparities in access to technology, addressed by government initiatives. Interviews in Spain indicate that lack of prior knowledge and resources contributes to difficulties in adapting to digital technologies, emphasizing the need for adaptable training programmes and increased support for digital literacy.

The Croatian survey reveals that seniors are frequent internet users who feel comfortable and capable of using internet content independently, indicating their willingness to adapt to the digital landscape. Most respondents reported supportive relationships with relatives and friends, suggesting strong community and intergenerational support in embracing technology. Many seniors are open to using digital media and actively incorporating it into their daily lives.

From the qualitative surveys and in-depth interviews, several key learning outcomes and digital skills for the elderly were identified. Basic digital skills include sending emails, using word processing software and internet browsing, which are essential for daily communication and accessing information. Advanced digital skills, such as programming, troubleshooting and using advanced software, are crucial for seniors who want to engage more deeply with technology. Practical digital literacy encompasses online banking, using communication platforms and managing digital identities, helping seniors perform daily tasks more efficiently and securely. Social media and communication skills facilitate social interaction and help seniors stay connected with family and friends. Safety and security skills are vital for understanding online safety, protecting personal information and recognising scams. Problem-solving and critical thinking skills help seniors solve technical issues independently.

Final deliverables and findings from the assessment process are freely consultable at this specific section (**BOOMER Skills Audit**) of the BOOMER Virtual Corner.

To ensure the accuracy of the findings, the validation process employs cross-validation and triangulation methods. Cross-validation involves comparing findings from different data sources - interviews, surveys and document analysis - to confirm consistency and accuracy. Triangulation further enhances reliability by using multiple methods or sources of data to cross-check and corroborate the results. This approach minimizes biases and increases the robustness of the conclusions. The validation process ensured that the BOOMER assessment model produces reliable and relevant findings, providing a solid foundation for developing effective digital literacy programmes for the elderly.

To effectively replicate the BOOMER assessment process in diverse AE settings, it is essential to consider contextual adaptation, stakeholder engagement and continuous improvement. Contextual adaptation involves tailoring the assessment model to fit the specific needs and contexts of different adult education environments. Stakeholder

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engagement is crucial, involving relevant stakeholders such as educational institutions, policymakers and community organisations in the adaptation process. Continuous improvement requires regularly reviewing and updating the assessment model based on feedback and new insights. Ensuring the relevance of content is vital, making sure that educational material addresses the specific needs of the target population. Accessibility is another critical consideration, ensuring that educational programmes are accessible to all participants, including those with limited digital skills or resources. Additionally, providing adequate support mechanisms, such as training for educators and technical assistance for participants, is essential to facilitate effective learning.

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4. How to navigate the BOOMER training content

The BOOMER project has developed a comprehensive training curriculum aimed at enhancing digital literacy among the elderly population, tailored specifically to the needs of Adult Education (AE) learners and practitioners. This section provides detailed guidance on how to navigate and integrate the BOOMER training content into existing educational practices, ensuring that the knowledge gained can be effectively used to empower seniors and bridge the digital divide.

The development of the BOOMER training content – direct access **here** – was deeply informed by the insights and data gathered from the multi-level analysis in WP3, from both the desk research's findings and feedback from the interviews. The collaborative process involved extensive discussions among project partners, leading to the identification of key training areas and topics that align with the specific digital competences required by seniors, based on EU official frameworks. These topics were further refined based on the findings from the needs analysis conducted across various European countries and through consultations with external experts, stakeholders and associated partners, ensuring relevance and applicability in diverse contexts.

Key training areas were pre-identified as critical for enhancing digital literacy among the elderly. These include:

- **Communication and Collaboration**: Using digital tools to communicate and collaborate effectively
- **Information and Data Literacy**: Understanding how to search, evaluate and manage digital information
- **Problem Solving**: Addressing technical problems and using digital tools creatively
- **Safety**: Protecting devices, content, personal data and privacy in digital environments

These areas were translated into specific courses and learning objectives, which were integrated into the training curriculum developed by the project partners. Here are the summarised titles and brief description for the training courses:

- **Safe and Smart Online: Managing Your Digital Identity and Interactions**
  Learn to manage your digital identity, communicate responsibly and collaborate effectively in the online world
- **Sharing Made Easy: Essential Skills in the Digital Age**
  Master the art of safe and effective online sharing, using popular tools while avoiding common risks

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- **Online Data Management (Finding, Storing and Retrieving Information)**
  Discover how to efficiently find, store and organise digital information for easy retrieval

- **Navigating the World of Disinformation**
  Equip yourself with critical thinking and fact-checking skills to identify and combat online disinformation, misinformation and fake news

- **e-Health Literacy for the Promotion and Maintenance of Health**
  Enhance your ability to find and evaluate online health information, focusing on e-health literacy

- **Personal Finance in the Digital Environment**
  Gain knowledge in digital financial services, manage risks and protect your financial well-being online

- **Online Safety: Do's and Don'ts**
  Learn essential online safety practices, including secure connections, password management and avoiding scams

- **Cybersecurity for Seniors: Tools for Safe Navigation**
  Understand cybersecurity basics, recognize threats and protect your personal information while navigating the web

Each course / module includes a variety of instructional materials designed to be both engaging and interactive. These materials consist of downloadable PowerPoint presentations (also available in PDF format), an audio version, introductory demo videos, quizzes for self-assessment and crosswords that incorporate gamification as a learning method. Additionally, the modules present clear goals and learning outcomes, along with keywords, glossaries and a final feedback section. These resources are crafted to help seniors retain information effectively and apply it in real-life situations.

The curriculum also includes integrated checklists to help instructors ensure that all necessary topics are covered and that learners are meeting the defined learning objectives.

One of the central strategies of the BOOMER project was the successful embedding of the DigComp2.2 framework into the training curriculum. This European framework for digital competence provided a structured approach to defining the necessary skills and competences for seniors. Each learning outcome was carefully mapped against the DigComp2.2 categories, ensuring that the training content not only addressed immediate digital literacy needs but also aligned with broader European standards.

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For instance, Information and Data Literacy modules were designed to help seniors critically evaluate online content, a skill directly linked to the DigComp2.2 competency area. Similarly, the Safety module focused on equipping seniors with the knowledge to protect their personal data, adhering to the competences outlined in DigComp2.2.

The process of developing the BOOMER training content was iterative and participatory. It involved formal and informal rounds of feedback and validation, both from experts in adult education and from the elderly learners themselves. This ensured that the content was not only educationally sound but also user-friendly and accessible to the target audience and practitioners. The training materials were created with flexibility in mind, allowing AE practitioners to adapt them to the specific needs of their learners. This adaptability was a key consideration during the development phase, as it ensures that the content can be easily integrated into various educational settings, regardless of the learners' prior knowledge or experience with digital tools.

Customisation is a core feature of the BOOMER training content. Recognising the diverse needs of the seniors, the curriculum allows for significant flexibility. Instructors are encouraged to adopt, use and tailor the content to address specific challenges faced by their learners, whether it be overcoming a lack of prior digital experience or addressing particular interests such as online banking or social media use.

Throughout the development of these content, valuable lessons and best practices were identified. One key takeaway is the importance of a learner-centered approach, which places the needs and experiences of seniors at the forefront of the educational process. By involving seniors in the development and validation of the content, the project ensured that the training materials were both relevant and accessible.

Another best practice is the use of a variety of instructional tools and methods, which cater to different learning styles and preferences. For instance, videos and interactive quizzes were particularly effective in engaging learners and helping them to apply what they had learned in practical scenarios.

The BOOMER project adopted an agile approach to content development, where feedback from pilot sessions was used to refine, improve or confirm the materials continuously. This approach not only enhanced the quality of the final training content but also ensured that it met the real-world needs of AE practitioners and their learners.

In conclusion, the BOOMER training content offers AE practitioners a comprehensive and flexible resource for enhancing digital literacy among seniors. By following the guidance provided in this section, instructors can effectively integrate these materials into their educational practices, thereby contributing to the broader goal of bridging the digital divide for the elderly population.

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5. Feedback and findings from the delivery and validation phase

This section examines the effectiveness of the BOOMER training programme during its practical implementation phase, focusing on the key factors that influenced its success and the lessons learned from pilot sessions. The insights gathered from trainers, learners and other stakeholders during this phase have been critical in understanding how to optimise the delivery of the training and ensuring that it meets the needs of all participants.

The BOOMER training validation was characterised by a blend of interactive and visual learning materials that significantly enhanced participant engagement. The use of visually appealing PowerPoint presentations and supporting documents from the project website played a crucial role in maintaining participants' interest. These materials, combined with the trainers' efforts to foster an informal and welcoming atmosphere, were instrumental in encouraging active participation.

Communication strategies were adapted to ensure the inclusion of all participants, particularly those who might be less familiar with digital technologies. Early communication efforts focused on building rapport through direct contact and ice-breaking activities, which helped to ease participants into the learning environment. These strategies were particularly effective in reaching out to the elderly, who were the primary target group for the training. The importance of tailored communication and engagement cannot be overstated, as it directly influenced the learners' motivation and participation levels. The trainers emphasised the need for continuous communication throughout the training sessions, which helped in maintaining a high level of engagement and ensuring that all participants felt supported.

Learners' motivation was sustained through the practical relevance of the training content, which was closely aligned with their daily needs and interests. Topics such as internet safety, misinformation and cybersecurity were particularly well-received, as they addressed real-world challenges faced by the participants. The trainers played a pivotal role in keeping learners motivated by creating a supportive learning environment that encouraged questions and facilitated discussions.

Classroom management strategies were adapted to cater to the diverse needs of the participants. The trainers employed a mix of individual and group activities, which helped in managing the classroom dynamics effectively. Ice-breaking activities at the beginning of the sessions were particularly useful in creating a sense of community among the participants, which in turn facilitated better learning outcomes.

The trainers' role extended beyond mere content delivery; they were also responsible for ensuring that the participants remained engaged and motivated throughout the training. This involved being responsive to the learners' needs, providing additional support where necessary, and adjusting the pace of the training to match the participants' learning speed.

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The BOOMER training programme effectively implemented a blended learning approach, combining face-to-face workshops with online learning modules. This approach was particularly beneficial for participants who were initially hesitant about online learning. Starting with offline workshops allowed these learners to gradually become comfortable with the digital tools and platforms used in the online sessions. The virtual corner learning models were designed to replicate the face-to-face learning experience as closely as possible. However, the feedback from the pilot sessions indicated that while the online components were useful, participants still valued the face-to-face interactions more highly. This suggests that while blended learning is effective, it is important to maintain a balance between online and offline sessions to cater to the preferences of all learners, especially in seniors' settings.

Feedback from both trainers and learners was collected continuously throughout the pilot sessions. This feedback was instrumental in refining and confirming the training content and delivery methods. Trainers noted that learners responded positively to hands-on exercises and practical demonstrations, especially with continuous comparisons to the analogue world, which helped to reinforce the theoretical knowledge covered in the sessions.

Learners also provided valuable insights into the aspects of the training that were most beneficial to them. For instance, they appreciated the focus on practical skills that they could immediately apply in their daily lives. This feedback was used to adjust the training materials, ensuring that they remained relevant and accessible to all participants.

Based on the feedback and findings from the pilot sessions, several recommendations were made for delivering the BOOMER training in diverse operational settings. One key suggestion was to ensure that training sessions are adaptable to the specific needs of the target group. For example, in settings where participants may have limited access to digital tools, it may be necessary to provide additional support and resources to facilitate their learning. Another recommendation was to incorporate more hands-on activities and practical demonstrations into the training sessions. These activities not only help to reinforce the learning but also make the training more engaging and enjoyable for the participants. Additionally, offering follow-up sessions and supplementary materials was suggested to support continuous learning and skill retention.

The assessment of learning outcomes was conducted through a combination of self-assessments, quizzes and informal feedback sessions. The results indicated that most participants had successfully acquired the skills and knowledge targeted by the training. However, it was also noted that some participants required additional support, particularly in areas related to digital literacy. Adjustments could be made to the training programme based on these assessments. For example, additional resources could be developed to help participants who struggled with certain aspects of the training. These resources included step-by-step guides and video tutorials that

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participants could refer to after the training sessions. This leaves room for future initiatives for the BOOMER project

In conclusion, the feedback and findings from the delivery and validation phase of the BOOMER training programme have provided valuable insights into how to effectively engage and train elderly learners. The success of the programme was largely due to the combination of interactive materials, tailored communication strategies and a blended learning approach that catered to the diverse needs of the participants. Moving forward, these insights have to be taking into account to ensure a continued effectiveness in diverse operational settings.

Recap of valuable insights:

- **Mixed approaches**: Combine online and face-to-face formats is effective in meeting learners' different preferences and levels

- **Communication with learners**: It is advisable to use a bottom-up approach, in communication and ice-breaker activities to actively engage learners and create a trust-based learning environment

- **Motivation and commitment of the target group**: The sooner the "right" topic is on the "agenda", the greater the interest of the target group. Decide on the respective priority together with the participants. Tailor the training to the needs of the target group and use activating and engaging elements

- **Practical relevance**: Provide as many real life / practical examples and case studies as possible, with several examples and references to analogic world. Connect training content to everyday work / life. Participants must be able to apply what they have learned immediately

- **Practical tools**: Videos, quizzes, clearly structured presentations and case studies are helpful to have visual support and thus be able to conduct more effective training

- **Use of the OER platform**: The platform is the valuable hub for making the training materials accessible. Make sure you provide good training in advance so that the target group can use the possibilities of the platform

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6. How to interact with the BOOMER virtual corner

In the context of a project such as BOOMER, aimed at addressing the digital literacy of the elderly to reduce the social and intergenerational gap caused by the digital transformation, the presence of an Open Educational Resources Platform is a practically indispensable element. The so-called **BOOMER Virtual Corner** represents a repository of project results and a digital space for learning and community engagement, with a number of functionalities and features specifically defined to support the greatest possible impact of the project:

- **Results available 24/7, in open, free and multilingual format**: Users can access the results of the project without the need to register and at any time, adapting flexibly to the schedules of each person. The possibility of publishing results in different formats also makes it possible to increase the impact in a simple way, as they can be accessed from anywhere in the world in English, Croatian, Spanish, Italian and German

- **Collection of anonymous statistics**: In order to better understand the impact generated, the platform has functionalities that collect statistics, always in compliance with the GDPR. Thanks to this we know that the platform has already accumulated more than 40.000 visits since its opening

- **Online community space**: The platform also serves as a digital space in which to bring together the different associates who join the project, allowing any organisation – targets and stakeholders – to send its application to collaborate in the project and obtain visibility and access materials and networking

- **News**: The virtual corner is not only a repository of results, but also an information point where users and stakeholders can get the latest news, experiences and updates on the project

- **Training**: Representing an e-learning platform, the BOOMER Virtual Corner offers a variety of functionalities in hosting the training material that allow for a smooth and effective acquisition of competences. These functionalities represent one of the most important means of leveraging the results, as described below. Thanks to the statistics gathering functionalities, we know that the platform already has more than 900 users in online training

- **Backoffice**: The backoffice is a private part of the platform that partners can access with a username and password, that allows partners to easily upload and update content on the platform, reflecting changes in the public part. It represents a means to improve the efficiency of workflows by reducing the need for intervention of programmers in charge

All these features result in a platform that can be used by the diverse stakeholders and practitioners of adult education, as the platform has a wide potential for scalability. Its

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availability during the 24 months of project implementation and at least 3 additional years after its completion, makes it easy to deliver training to the target groups in a user-friendly and responsive way.

The experience during the implementation of the project has resulted in the implementation of a number of e-learning functionalities that represent the best practices to be followed by AE professionals in order to maximise the effectiveness of training delivery:

- **Formats**: The BOOMER platform supports a multitude of formats: text, pdf, ppt, doc, video embedding, etc. It is important to ensure support for a wide variety of digital formats, as this will allow a wider range of resources to be available

- **Feedback**: Ensuring that users can send their comments will be positive for two reasons: (1) it will make them feel heard, reflecting the important role they play in the implementation of the project and (2) it will allow us as implementers to generate improvements in content and functionalities. To this end, the BOOMER platform has a feedback form linked to each course, as well as a contact email address

- **Gamification**: Gamification in education has a number of proven benefits, helping to improve knowledge retention and facilitate the process of acquiring skills. In this sense, the BOOMER project takes advantage of the glossary terms of each course to create a game of guessing the word by means of a definition, encouraging users to grasp the most important concepts. There are also multiple-choice questions for self-assessment

- **Competences validation**: The validation of acquired competences is necessary in any training, but there are many ways of approaching it. In the case of BOOMER, this validation of competences is carried out through a system generated certificate of completion of the module, issued automatically by the platform upon completion of a course test with more than 75% correct answers

- **Accessibility**: Accessibility is important for all age groups, but even more so for older segments of the population, as they are more prone to visual impairments. It is therefore important to ensure functionalities that facilitate their access to training. In the case of BOOMER, the platform has text resizing and page colour contrast modification functionalities, as well as a text-to-speech functionality in each training course

By using the above-mentioned functionalities and good practices for e-learning training, it will be possible to facilitate access to training, as well as to improve its delivery to the target group by exploiting the full potential provided by digital resources and tools, also improving the offer of AE available in the consortium countries and the EU.

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7. Tailored promotion and valorisation of BOOMER results

The BOOMER project, aimed at enhancing digital literacy among the elderly, employs several effective promotional strategies and tools to reach its target audience and stakeholders. The project utilised all available tools for promotion and dissemination to reach the widest possible target group. For the initial announcements regarding the project's launch, the most visited news portals in Croatia were used, which allowed the project to reach a large audience (millions of people) in the early phase. A roundtable in Zagreb attracted over 200 participants from the target group, as well as local and European policymakers, helping the project reach a higher level. The same news was subsequently replicated in other countries through the websites and social media pages of the individual partner organisations involved in the project, and at the European level, unified in terms of the consortium, through the project website – the BOOMER Virtual Corner.

Promotional strategies and tools:

- **Workshops and T&V sessions**: The project organises workshops, dissemination events and piloting training sessions across all countries involved in the project and in various regions. For instance, in Croatia, workshops were held in multiple counties, covering key topics such as internet safety, recognising misinformation and managing personal finances in a digital environment. The same was organised in the other project countries (Belgium, Germany, Italy and Spain), using the same materials that were brought into different cultures and contexts, and then adapted to the specific needs of the target audience and ecosystem. These interactive sessions were designed to address the specific needs of the elderly, providing both theoretical knowledge and practical skills for everyday application. They also engage AE actors and stakeholders, aiming to exploit BOOMER's results, deliverables and means, and raise awareness on the interconnected issues and opportunities

- **Multiplier dissemination pathways**: The round table held in Zagreb "Digital skills in the third age" gathered wider audience and presentation of project results at the Faculty of Economics and Business Zagreb. Representatives of the European commission, Ministry of Labour, Pension System, Family and Social Policy, Agency for Mobility and EU Programmes participated in the round table itself. On June 28th, 2023, the Matica umirovljenika Hrvatske, the largest association of elderly persons in Croatia, held a gathering as part of its SENIOR 2030 project activities. BOOMER representatives were invited to present the project's accomplishments and future plans. The presentation of the BOOMER survey results generated significant interest among the elderly participants. These sessions highlighted the project's objectives, the consortium's roles and the benefits of the project's online platform. The widest reach was achieved through the appearance of our representative, Nikolina Pejović, on local state-owned television in November 2023, on the morning programme Good Morning Croatia - show called "Third age" dedicated to the elderly population. Following

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the broadcast, BOOMER began receiving calls from this group eagerly awaiting the announced live workshops in all Croatian counties. In May and June, with the help of Matica Hrvatske, which invited local pensioners' association leaders to gather pensioners, Croatian partners conducted live visits to most counties. The plan is to visit all Croatian counties with live workshops where we educate interested pensioners about BOOMER and the essential digital skills needed to navigate today's world

- **Partnerships and collaborations**: The project collaborate with various institutions and organisations across Europe, including universities, Telecom companies and pensioners' clubs and associations. These partnerships help in extending the project's reach and impact through shared resources and expertise, thanks to a network of informal ambassadors

Communication channels and platforms

The BOOMER project utilises a mix of communication channels and platforms to maximise impact:

- **Online platforms**: The BOOMER Virtual Corner is accessible online and offline via download of materials, requiring no registration, which ensures ease of access for the elderly. This platform serves as a repository for educational content, freely available 24/7

- **Television and media appearances**: Elderly-tailored promotional campaigns include presentations on national television to reach a wider audience, particularly those less familiar with online resources. By hosting in the local main tv in the morning programme BOOMER reached wide national audience

Effectiveness metrics and feedback

The effectiveness of promotional activities is measured through:

- **Participation rates**: Over 600 users from Croatia and all other countries have participated in the educational content developed by the project, both online and in physical settings

- **Reached audience**: Through TV and news portals of the BOOMER Virtual Corner and the partners' institutional websites, the widest audience reached numbers in the millions

- **Feedback from workshops and T&V sessions**: These feedback helps in assessing the practical application of the skills taught and identifying areas for improvement. This is crucial for eventually fine-tuning the educational content and delivery methods to better meet the needs of the elderly

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8. Key highlights and final recommendations for BOOMER future use in AE

The BOOMER project has provided invaluable insights into the challenges and opportunities associated with enhancing digital literacy among the elderly through Adult Education (AE). This section highlights the key findings, best practices and strategic recommendations to guide the project results' adoption and future initiatives, ensuring the sustainability and broader application of the BOOMER Adoption Suite.

Summary of key findings and lessons learned:

- **Tailored digital literacy content**: The BOOMER project has demonstrated the importance of developing digital literacy content that is specifically tailored to the needs of elderly learners. By focusing on relevant and practical skills, such as online safety, e-health literacy and digital identity management, the project has successfully engaged seniors and addressed their specific concerns and challenges

- **Interactive and gamified learning**: Incorporating interactive elements, such as quizzes, crosswords and demo videos, proved to be highly effective in maintaining learner engagement and enhancing information retention. The use of gamification, in particular, has shown to be a valuable tool in making the learning process more enjoyable and motivating for elderly participants

- **Blended learning approach**: The combination of face-to-face workshops and online learning modules has been essential in accommodating different learning preferences and levels among seniors. The flexibility offered by this blended approach allows learners to progress at their own pace while still benefiting from personal interaction and support

- **Importance of a learner-centered approach**: The BOOMER project reinforced the significance of placing learners at the centre of the educational process. By involving seniors and AE practitioners in the development and validation of the content, the project ensured that the training materials were relevant, accessible and user-friendly, resulting in higher engagement and better learning outcomes

- **Sustainability and flexibility of the training content**: The adaptability of the BOOMER training content allows for its integration into various educational settings, making it a versatile resource for AE practitioners. This flexibility ensures that the content can be continuously updated and customised to meet the evolving needs of elderly learners

Strategic recommendations for future initiatives:

- **Promote cross-sectoral collaboration**: Encourage collaboration between AE practitioners, healthcare providers, technology companies, HEIs and

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community organisations to create a comprehensive support network for seniors. This collaboration can help address the multifaceted needs of elderly learners and ensure the sustainability of digital literacy initiatives

- **Expand and diversify content offerings**: Future initiatives should consider expanding the range of topics covered in digital literacy training to include emerging technologies, such as artificial intelligence and telemedicine, as well as deeper dives into areas like online banking and social media usage. This will ensure that training remains relevant and responsive to the rapidly changing digital landscape

- **Leverage technology for continuous engagement**: Use digital platforms and tools to maintain ongoing engagement with learners even after the completion of formal training. This could include the development of online communities, periodic refresher courses, and access to a repository of updated resources to support continuous learning and skill development

Broader implications and impact:

- **Strengthening AE ecosystem**: The adoption and replication of the BOOMER strategy can significantly enhance the capacity of the AE ecosystem to address the digital divide among seniors. By providing AE practitioners with well-structured, flexible and learner-centered training content, BOOMER has set new materials and opportunities for digital literacy education for the elderly

- **Extending impact beyond AE**: The insights and methodologies developed through the BOOMER project can be extended beyond the AE ecosystem to benefit other fields, such as healthcare, public services, higher education, VET system and community development. The focus on practical skills and the use of gamification and blended learning can be adapted to various contexts to empower different populations and bridge other forms of digital inequality

- **Fostering innovation in AE practices**: The success of the BOOMER project highlights the need for continuous innovation in AE practices. Embracing new technologies, pedagogical approaches and collaborative frameworks will be crucial in ensuring that digital literacy education remains effective and inclusive for all learners, particularly those who are most vulnerable to being left behind in the digital age

The BOOMER project has provided a solid foundation for advancing digital literacy among seniors, offering valuable insights and practical recommendations that can guide future efforts in AE and beyond. By building on these successes and continuously adapting to the needs of learners, AE practitioners and stakeholders can play a pivotal role in bridging the digital divide and fostering a more inclusive digital society.

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