essense

Education Supporting Smart Environments for Seniors

Blueprint

Erasmus+

Project Title	Higher Education Programme on Building Information Modelling towards the development of Smart environments for Seniors
Acronym	ESSENSE – Education Supporting Smart Environments for Seniors.
Project Reference	2018-1-DE01-KA203-004292
Start date	01-09-2018
End date	31-08-2021
Partners	Karlsruher Institut für Technologie (DE), Coordinator. buildingSMART e. V. (DE) Fundación Ageing Social Lab (ES) Ss. Cyril And Methodius University in Skopje (MK) Asociación Empresarial de Investigación Centro Tecnológico del Mueble y la Madera de la Región de Murcia (ES) ALFATRAINING Bildungszentrum GMBH (DE) Univerza na Primorskem Universita del Litorale (SI)
Document	O5- A4
Version	First
Author	buildingSMART

Document Track Changes

Version	Date	Changes
1st	March 2021	Initial Version of the Document.

Index

Glossary

Abbreviation	Explanation
AAL	Ambient Assisted Living encompasses methods, concepts, (electronic) systems, products, and services that support the everyday lifes of elderly and also disabled people in a situation-dependent and unobtrusive manner. The techniques and technologies used are user-centered and integrated into their immediate living environment. Consequently, the technology adapts to the user's needs and not vice versa.
AEC-Industry	Architecture, Engineering, Construction AEC is used to describe the entire branch of architecture, engineering and construction. In planning, this means: architecture, building services planning and structural design.
BIM	Building Information Modeling refers to a cooperative working methodology with which, on the basis of digital models of a building, the information and data relevant to its life cycle are consistently recorded, managed and exchanged in transparent communication between the participants or transferred for further processing. According to the official definition of DIN EN ISO 19650, it is the: "Use of a mutually provided digital representation of an asset to support planning, construction and operational processes as a reliable basis for decision-making. Structural assets include, but are not limited to, buildings, bridges, roads and process plants."
ESSENSE	**E**ducation **S**upporting **S**mart **EN**vironments for **SE**niors The abbreviation describes the project funded by the European Union through the Erasmus+ Program.
Erasmus+	Erasmus+ is the program of the European Union for the support of education, training, youth and sport in Europe.
Smart Housing	Smart Housing is an umbrella term for technical processes and systems in living spaces and houses that focus on increasing the quality of living and life, security and efficient energy use. It is based on networked and remotely controllable devices and installations as well as automatable processes.

Executive Summary

Europe is facing a growing elderly population.[1] This demographic megatrend rises a number of questions. What can be done to ensure that older adults can live a self-determined life for as long as possible? One essential point is: What can be done that older people can stay in their own homes and care for themselves for as long as possible - perhaps even until the end of their lives?

One answer is technology. New sensors, smart-home-systems and connected assistant systems for a large number of use cases can contribute considerably in enabling elderly people to remain autonomous and maintain their daily routines; enabling continued participation and engagement in activities at home and in the community and to stay active longer. Methods, Technologies, Services and Solutions in this context are often summarized in the term Ambient Assisted Living (AAL). Many of these solutions are directly connected and integrated into appartements or living spaces. This has a direct influence on methods and technologies of planning, building, operating and to the maintenance of living spaces and thus to Building Information Modeling (BIM). BIM revolutionizes current design, planning, building, and facility management processes. It allows to consider special demands already in the early planning phase to optimize a building for the operational phase and to integrate user's requirements more effectively. In addition, BIM means a systematical and coherent data-creation and -storage during all phases of a building's lifecycle ("digital twin"). This vast set of data allows more easily to integrate new features and technologies into a building as well as monitor it on real-time.

[1] European Union (2020). Aging Europe – Looking at the lives of older people in the EU – 2020 edition, https://ec.europa.eu/eurostat/en/web/products-statistical-books/-/ks-02-20-655

Source: Reflex Verlag Smart Living Smart Home/ThinkstockPhotos

It creates additional value to combine BIM and AAL. Seeing both as interconnected, opens vast opportunities for an ageing population and for companies offering respective solutions, products and services. In this context, this kind of infrastructures will allow the gradual integration of telemedicine systems and non-intrusive methods to take care of the elderly in their own homes. This fact is of great relevance due to the characteristics of COVID-19 virus and its impact on the elderly and its danger in enclosed spaces like hospitals.

In order to exploit fully the potential of BIM and AAL it is necessary to build up respective qualification programmes as both BIM and AAL are not integrated in current curriculums or educational programmes related to Architectural or Design Studies. The Erasmus+ Project ESSENSE therefore provides a state-of-the-art education programme for Higher Education institutes and professional education. This approach combines essential knowledge and qualifications about Building Information Modeling (BIM), Ambient Assisted Living (AAL) and Smart Housing Technologies, with the aim of equipping homes but also being able to visualize and manage this

information in the most optimal way. This perspective opens new and relevant opportunities for companies, especially for SME, in order to effectively create new solutions of AAL for our ageing societies.

Relevance of the AEC-Industry for the EU´s ageing population

The building and construction industry is a key sector for the EU's economic and social development. It provides about 9 % to the EU´s GDP and employs directly around 18 million persons[2]. It creates high-skilled-jobs and induces investment in other industries that lead to further social and economic benefits.

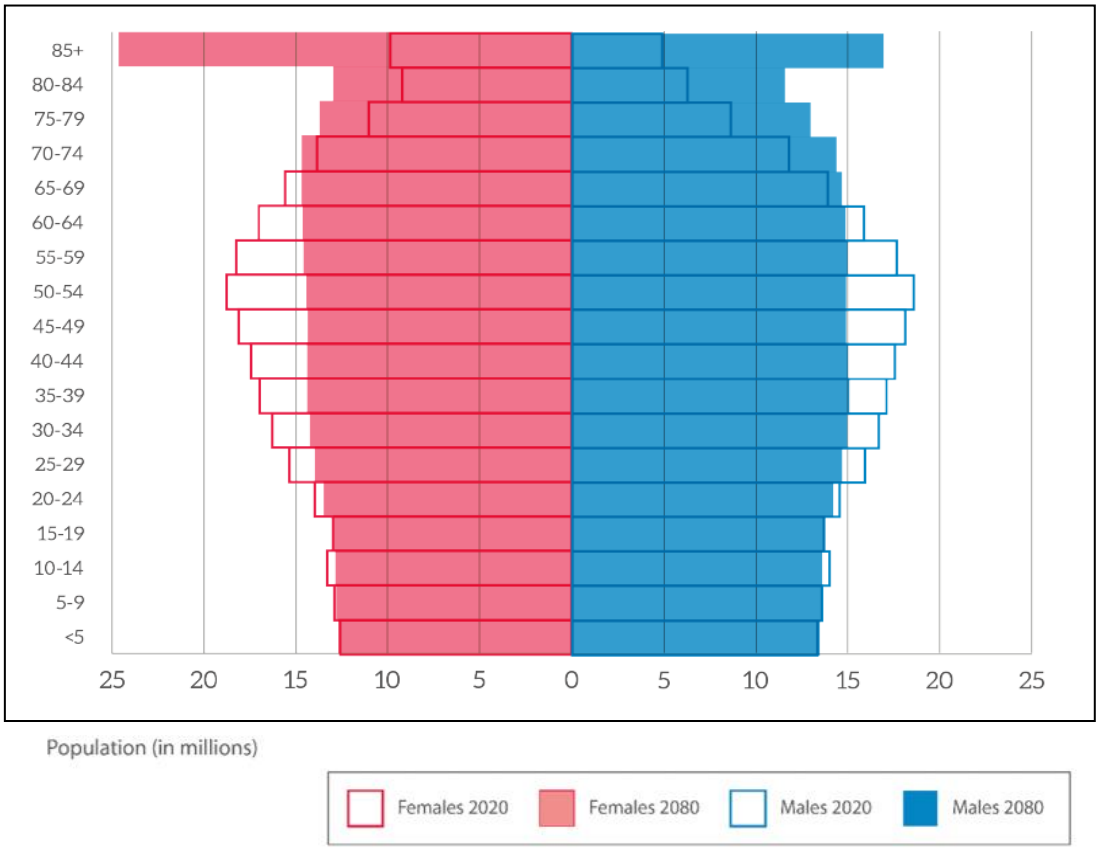
The increasingly widespread use of Building Information Modelling (BIM) in the building and construction industry aims towards a better and more efficient collaboration among the various parties involved in planning, construction and maintenance of a building. This method improves the communication of all partners involved in the planning, construction and maintenance and operating of a building. It limits costly and time-consuming faults and misunderstandings. The numerous advantages of BIM play a significant role for the planning and the installation and maintenance of smart technological devices in living environments (Ambient Assisted Living) and also in its data visualisation and monitorisation.

As the number of older people is expected to rise, the need for public and private spaces adapted to the requirements of the older generation will rise, too. By 2050, the number of persons over 65 years in the EU will increase by 70 %; the number of persons over 80 years will increase by 170 %[3]. These figures illustrate the demographic trend towards an ageing population in Europe.

[2] European Commission: Internal Market, Industry, Entrepreneurship and SMEs (2020); Available from: https://ec.europa.eu/growth/sectors/construction_en

[3] Eurostaat: Aging Europe – statistics on population developments (July 2020); Available from: https://ec.europa.eu/eurostat/statistics-explained/index.php/Ageing_Europe_-_statistics_on_population_developments#:~:text=The%20EU%2D27's%20median%20age,in%20Poland%2C%20Slovakia%20and%20Malta.

Figure 1 - Population pyramids for the EU-28 (number of women and men by age trenches), 2020 and 2080



Source: EPRS (Scientific Service of the European Parliament) based on Eurostat data.

The construction and housing sector will need to respond to this demographic challenges especially as most houses and homes are planned and designed without taking into account needs and requirement of adults and people. We observe that private homes and public spaces – that work well for young and healthy people – could become difficult environments for older people: full of barriers and obstacles. Homes become more and more dysfunctional. This directly affects the degree of autonomy and independence of older people. They become either dependent from external support (with attendant costs) or become more and more isolated and left-behind with a number of further negative consequences such as increased risk of accidents, depressions, etc. In total, the quality-of-life risks to diminish dramatically in ageing. The application of BIM, connected with AAL can make a considerable difference. By using BIM, it is easier to plan

and build multifunctional buildings and rooms. Since a vast amount of building-related data already exist, thanks to BIM, it is easier to install sensors, actors, communication devices and apply AAL technologies to create dwellings that enables people to live active and healthy for longer. Additionally, all this data could be used as feedback to re-think and re-design the different aspects of the spaces for the elderly.

The Objectives of the Blueprint

The ageing population in Europe is increasing and with it the requirements of the living environment for the elderly. In order to prepare the current and future work force in the built industry to this development, the vision of this ESSENSE programme is to provide a Higher Education programme that connects the perspectives of BIM and AAL with the requirements of elderly in their living environment. By adapting the missing knowledge, the programme shall close this gap of knowledge and increase job opportunities and interest in that sector. The defined Blueprint actions shall raise the awareness of this topic and implementation of this programme among citizens, public authorities (national, regional, local and EU level), industry, health and social care organisations and educational provider within the next 3-5 years and beyond.

1. The Impact and relevance of ESSENSE

ESSENSE aims to make a contribution to enable Higher Education institutions and organisations of professional education to offer respective training for BIM and AAL in order to fill those ''digital gaps'' in and between the different sectors.

During the ESSENSE's programme development, several target groups and markets were analysed taking into account also requirements of the built industry and of the educational environment. Viewing the outcome of these analyses, the ESSENSE programme focuses on the complex fields of BIM and AAL and their interrelations, providing a state-of-the-art digital learning approach. The developed learning outcome therefore may have the potential to affect following key factors:

Key Factor 1: Impact on the competences of individuals

The first activity of the ESSENSE-partnership was the analysis of the status quo of the current knowledge, skills and qualifications needs among individuals and companies dealing with BIM, Smart Housing and AAL technologies.[4] This market analysis was composed of a digital survey and interviews within the partners' networks. According to the respondents, future employees should be first and foremost well educated in:

- Information and Communication Technology (ICT),
- The interdisciplinary field of BIM & design,
- Computer-aided design and manufacturing tools (e.g., CAD & CAM)
- Ageing and the needs of the elderly[5].

[4] ESSENSE: Report on the Situation and Evolution of Smart Housing and AAL within the BIM method: current Knowledge, skills and qualification needs (O1-A3): http://essense-project.eu/o5a3-identification-of-national-strategies-policies-and-agendas/

[5] ESSENSE: Report on the Situation and Evolution of Smart Housing and AAL within the BIM method: current Knowledge, skills and qualification needs (O1-A3): http://essense-project.eu/o5a3-identification-of-national-strategies-policies-and-agendas/

It was pointed out that current practices related to building solution and ageing could be considerably improved. Many companies, especially in the AEC (Architecture, Engineering, Construction) industry, face serious difficulties to find qualified employees and candidates that have sufficient qualifications in BIM. Employers support employees with special professional trainings to gain additional BIM-qualification. However, many employers are not convinced about the quality and the relevance of the course's curricula for the actual market needs. Although BIM and AAL are part of several university-level courses, both are rarely the main topic and usually only covered briefly within a broader context or presented only for very specific use. Known as ''Lonely BIM'' it often does not provide BIM's functionalities as a whole and the different complexities and tensions of its implementation. One consequence is, that ultimately building professionals are not using BIM in conjunction with building management, AAL, or building sensors due to the lack of skilled staff. Therefore, students and professionals could benefit immensely from a comprehensive and systematic curriculum and respective educational programs that integrate BIM, AAL, and aspects of healthy and active ageing.[6]

Key factors 2: Impact to Higher Educational programmes in Europe

The second analysis deals with the existing academic courses in the four partners countries (Germany, Republic of North Macedonia, Slovenia and Spain) in the fields of Building Information Modelling (BIM), Ambient Assisted Living (AAL) as well as social sciences with focus on needs of an ageing society and their cares.[7] The identified courses cover to some extend the available knowledge with respect to one of the three core topics, but as they are not offered interdisciplinary they barely cover the applicability in real-life projects. The ESSENSE programme aims to provide the missing links between BIM and AAL. It thus intends to contribute to broader

[6] ESSENSE Report (2019): Report on the Situation and Evolution of Smart Housing and AAL within the BIM method: current Knowledge, skills and qualification needs (O1-A3)
[7] ESSENSE Analysis (2020): Identification of HE programmes related to BIM and AAL (O5-A1)

knowledge that could be of direct use for employees and employers and may have also an impact across Europe.[8]

Key factor 3: Impact on political, economic, educational and health-related strategies in Europe

To estimate if the market conditions enable a successful implementation of the ESSENSE programme, we analysed strategies of all four partner countries and the EU in the output I05-A3. The overall analysis examined the political strategies, focusing on education, economy, innovation and technical development and health, and concluded that they are all supporting the environment required for a successful program implementation.[9]

The following most relevant strategies are listed below:[10]

- Increasing investments in the qualification of staff and qualification systems, inclusive qualification in BIM.
- National legislation to demand the use of BIM for public construction projects.
- Investments in Infrastructure and technical innovations.
- Associations foster the implementation of BIM by the development of training, guidelines and regulations as well as opportunities to exchange experience within the industry.
- Regulations on universal accessibility improvement and innovation on home automation solutions (Smart Housing appliances, modern building management systems etc.)

[8] ESSENSE Analysis (2020): Identification of HE programmes related to BIM and AAL (O5-A1)
[9] ESSENSE Analysis (2020): Identification of HE programmes related to BIM and AAL (O5-A3): http://essense-project.eu/o5a3-identification-of-national-strategies-policies-and-agendas/
[10] ESSENSE Analysis: Identification of HE programmes related to BIM and AAL (O5-A1)

2. The Educational Programme

The objective of ESSENSE is to provide a comprehensive and coherent proposal for a Higher Education programme on BIM and AAL with the focus on seniors' environments according to their needs. It is expected that the content to be developed under the ESSENSE Strategy Partnership will be recognized and adapted to the European Credit Transfer and Accumulation System (ECTS) and the European Qualification Framework with **eight ECTS** within two years after the end of the project.

The validated programme comprises a Joint Curriculum, didactic materials and a collaborative platform for students and employees of the AEC (Architecture, Engineering and Construction) and housing/ real estate sector.

This chapter will highlight the elements of innovation (a), summarize the joint curriculum and Learning Outcomes (b), gives an overview over the didactic content of the programme (c) and describes the final exam and certificate.

a) Elements of Innovation

In general, students and professionals in the field of architecture, engineering and construction (AEC) get trained today on aspects related to BIM or AAL/Smart Housing. But very often building professionals are not using BIM in conjunction with building management, AAL, or building sensors. Evidently, students and professionals could benefit immensely from a comprehensive and systematic course that integrates BIM, AAL, and healthy and active ageing.[11]

ESSENSE provides training materials, a collaborative platform and a central exam tool, that can be used in a flexible manner and can be integrated into existing training programs and curricula. The full material will be provided in English language; video material will be provided in English language plus

[11] ESSENSE Analysis: Analysis of Higher Education Programmes and Strategy Plans in Europe (O5-A3): http://essense-project.eu/o5a3-identification-of-national-strategies-policies-and-agendas/

English subtitles. The modular approach of the ESSENSE programme may be of special value for, a variety of disciplines and special groups of the building sector. In addition, the ESSENSE programme may be also of use for other sectors, like ICT, health industry and nursing and others. Table 1 lists the elements of innovation for various occupations.

Table 1. Occupations benefiting from the ESSENSE course[12].

Occupation	Additions to existing knowledge	Benefits for students
Architects, planners, surveyors, and designers, including Building architects	Greater focus on Smart Housing and AAL as well as human centric design strategies	Practical information and intervention examples that can improve occupant wellbeing and are directly transferrable into practice
Engineering professionals, including civil engineers	Interactions between BIM, Smart Housing, and AAL; project and innovation management; effective collaboration	Getting more familiar with several stages and aspects of building projects that can improve productivity and collaboration
Construction managers	Greater depth on use cases of BIM (AAL), and linking BIM to the needs of users	Broader knowledge, direct experience with occupant needs, greater understanding of the needs of other stake holders
Health and safety engineers	How Smart Housing and AAL can improve health and safety; specific needs of older adults and approaches to address them	Being able to augment current health and safety interventions with technology and prepare interventions tailored to older adults
Interior designers	Human centric design strategies emphasizing human needs	Understanding interior design approaches that can directly improve occupant health and wellbeing

[12] European Commission, Eurostaat Metadata: SCL – International Standard Classification of Occupations 2008 (ISCO – 08), Available from: https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=CL_ISCO08&StrLanguageCode=EN&IntPcKey=&StrLayoutCode=HIERARCHIC&IntCurrentPage=1

Industrial (furniture) designers	Integrating furnishings with technology to improve its functionality and address occupant needs	Learning which needs of older adults to address and how specific design approaches and technology can help address them
IT professionals, including Software developers and Computer network professionals	Information on how hardware (e.g., actuators, sensors) and software can be used in Smart Housing	Practical knowledge on technological aspects of Smart Housing that can be quickly put to practice
Health professionals, including Residential home care workers	Greater focus on how technology can improve quality of life of older adults and their caretakers	Familiarizing with different technological solutions and how they can be implemented to assist in many everyday tasks facing older adults and their caretakers

b) Joint Curriculum and Learning Outcomes

The joint curriculum of the ESSENSE programme consists of five modules with topic-related units. This chapter provides a summary about the structure and content of the single modules as well as the expected Learning Outcomes.

Overview of the five modules and their sub-units

Source: EU Erasmus+ Project ESSENSE

Module 1 – Building Information Modeling (BIM)

The module prepares the participants for active and meaningful participation in a BIM-based procedure. The central aspect of these fundamentals is the communication of an open and regulated working method. It is characterised by an early networking of the planning participants and by open and regulated processes between them. For this purpose, the fundamental aspects of the methods are theoretically presented and practiced.

At the end of the module the learner knows and understands: The basics concept of the BIM method.

- The benefits of using the BIM method with the focus on AAL.
- Obstacles to the introduction of BIM methods.
- Introduction into the different BIM Technologies.
- General legal requirements.

The learner is able to:

- Implement a planning project on the basis of a common process model.
- Act as a partner in BIM-based projects.
- Communicate in an aligned technical language.

Module 2: Needs of the Seniors Citizens and their caretakers

The objective of this module is to prepare building designers, construction workers, and related professionals with the knowledge, skills, and competences required to make design decisions that support healthy active ageing, and to implement those solutions in new buildings and refurbishments. It presents a common understanding about needs of senior citizens and provides suggestions of building-related and technological

solutions that can improve autonomous and independent life of the older generation. Although the module provides specific suggestions, it focuses on general skills and knowledge, relevant for various user groups in different contexts.

At the end of the module the learner will know and understand:

- The psychosocial and physical needs of the older adults.
- Solutions to support the needs of older adults.
- Accessibility issues in the built environment and how to overcome them.
- Common challenges faced when working with older adults.
- Common challenges faced when preparing solutions for older adults.
- Digital skills of caregivers and older adults.
- Technology adoption issues and how to overcome them.
- Understand human centric design paradigm.
- The various types of spaces older adults must interact with, their constraints, and the challenges faced by older adults.

The learner will be able to:

- Employ user-led design and open-innovation approaches to develop solutions.
- Find, understand, and interpret new information about the needs of the elderly.
- Display empathy, patience, and care regarding differences between demographics.
- Interview / collect data from various stake holders.

Module 3 - Smart Housing and AAL principles

This module provides an overview of existing approaches, methods and principles of AAL and Smart Housing. It introduces the way on how signals and data obtained from sensors are processed and which methods can be used to extract information and knowledge. The students will learn

principles of algorithms and methods for decision support, learning, detection and classification in AAL and smart houses. Finally, this module provides best practice experiences, case studies and the state of the art of the research advancements.

At the end of this module the learner knows and understands:

- AAL concepts, basic concepts of sensing technologies, basic concepts of digital signal and how smart systems function.
- Processing, basic concepts of communication technologies, ambient intelligence concepts, activity modelling and decision support systems basics, security and privacy issues and considerations.
- Technical language of AAL.
- Technical language of communication, software, hardware and security and privacy experts.
- How software and hardware components are connected and work together.

The learner will be able to:

- Work together with engineers and experts of different profiles such as electrical engineers, software engineers, telecommunication engineers.
- Make design changes and decisions in AAL and Smart housing design.
- Make decisions related to choosing the adequate sensor and actuator types and configurations.
- Make decisions related to choosing adequate algorithms and tools.

Module 4 - Interactions between BIM, Smart Housing and AAL

The module prepares the participants to combine the specific requirements of Ambient Assistant Living with the requirements of the BIM method, to plan and coordinate concepts and services (with the BIM- method), which are primarily intended to improve the quality of life of older people and people who live alone or have limited mobility. With the support of BIM, the development and coordination of the demographic change is being addressed. In this way, the steadily growing number of older people should be enabled to live independently in their own homes for as long as possible. Participants will use their AAL knowledge to develop meaningful and workable design proposals for the living environments of elder people. The unit provides students with transversal knowledge in fields of BIM, Smart Housing and AAL.

With the support of BIM, the development and coordination of demographic change is being addressed. In this way, the steadily growing number of older people should be enabled to live independently in their own homes for as long as possible.

At the end of this module the learner knows and understands:

- Smart Housing and AAL aspects with the support of the BIM method.
- Technical Issues in the introduction of BIM as a planning method to support AAL.
- How to combine the principles of Ambient Assisting Living with the concept of Building Information Modelling.
- How to create and modify BIM objects.
- The BIM standards, such as Open BIM / Industry Foundation Class (IFC), ISO 16739:2013, ISO 12006-3 (IFD), ISO 29481 (IDM), ISO 16739 (IFC)

The learner will be able to:

- Develop design integrating domotic objects in smart houses.
- Reflect and use personal experience to harmonize the BIM and ALL concepts.
- To plan and coordinate Concepts and services (with the BIM-method) which are primarily intended to improve the quality of life of older people, but also of people who live alone or have limited mobility.

Module 5 - Project Management, Innovation Management and collective skills for an optimum implementation of BIM principles and AAL concepts.

The objective of the module is to train the students in BIM Project Management, its processes and procedures and its relation with Innovation Management and economic value in the digital environment. Some of the key points of the programme are how to successfully implement BIM in companies, how to consistently measure its performance and the quality criteria related to Ambient Assisted Living concepts.

At the end of this module the learner knows and understands:

- Project Management methods, processes and tools.
- The different types of Innovation Management and economic value.
- How to successfully implement BIM in companies.
- How to measure performance and quality criteria related to Ambient Assisted Living concepts.
- New trends and market products.

The learner will be able to:

- Plan, Manage and transfer information.
- Cooperate and communicate with virtual collaborations.
- Interconnect and network with other project participants.

c) Didactic Content

The didactic content will be presented to students in form of text (.docx), videos, and infographics. Each module will be summarized with an infographic that will provide students with an overview of the educational course. Textual content within each module will be supplemented with brief videos that will summarize the content of each sub-unit in an engaging and concise way. Learners are presented with many additional resources in the modules (webpages, books, articles) that can further expand their knowledge. As they will progress through the content, learners will respond to multiple choice questions and gain regular feedback on their current knowledge level. Although different modules are linked together, each module, or sometimes even each unit, can be used as a standalone course, so education provider can adapt or complement already existing courses by the missing content of a module or unit.

d) Exam and Certificate

After completing each course module, participants will be able to complete a test quiz. Upon successfully completing test quizzes for all modules, they will receive a certificate that states they had successfully completed the course and acquired the presented knowledge.

Erasmus+

essense Education Supporting Smart ENvironments for SEniors

Co-funded by the Erasmus+ Programme of the European Union

CERTIFICATE OF COMPLETION

Name, Surname

for successful completion of the module:

„Needs of the Senior Citizens and their Caretakers"
The ESSENSE Joint Curriculum

The module covered the following topics:

- Characteristics and needs of older adults
- Supporting the needs of older adults in the built environment
- Working with older adults and their caregivers
- Human centric design strategies

Date, dd. Mm. yyyy
on behalf of the ESSENSE Project Team

KIT Karlsruhe Institute of Technology · CETEM · alfatraining · ageing_lab foundation · buildingSMART Germany

ESSENSE Module 2 - Certificate

3. Priorities and Action Plan

The partner of the ESSENSE programme developed five priorities and related actions to ensure that the program will be recognized by the different stakeholder and decision makers as politicians, universities and institutions. The target is to exploit common synergies, create long-lasting effects and a sustainable implementation of the program. Each priority comprises several actions which will be described below.

1. Priority: Raise awareness about the importance of providing homes that respond to the demographic change and offer solutions for seniors with the use of Building Information Modelling (BIM).

The demographical development critically influences the future requirements on building construction, customization and maintenance of living quarters. To advice the relevance of considering arising challenges this topic will be promoted regularly together with the ESSENSE programme among political decision maker, within institutions and in the educational world.

2. Prioritiy: Increase acceptance of the use of digital and multidisciplinary learning approaches.

COVID-19 has boosted digital collaboration and we may expect that this trend in digitalization continues. Digital learning in particular may become more widespread and may be increasingly demanded and promoted in the future. However, short-term digital learning might not be fully accepted because teachers and students may lack relevant technical skills or find the existing platforms challenging or not attractive to use. ESSENSE promotes the digital learning by offering a user-friendly learning and communication platform and relevant materials in order to increase the acceptance and integration of digital learning.

3. Priority: Provide training workforce with the missing skills and competences related to BIM, AAL and seniors needs.
Based on our analysis it becomes apparent, that trainers/teachers have a rather limited knowledge about BIM and AAL. ESSENSE program provides comprehensive train-the-trainer material. Due to the module-based structure the program is flexible and transferable, which allows institutions to adapt the program according to their special needs.

4. Priority: Create synergies with relevant and complementary initiatives with clear educational commitments aligned with regional and national strategies and policies.
The actions concentrate on the cooperation and interrelation with other initiatives, institutions, organizations, political decision maker and other Erasmus+ projects and related EU-funding's like Horizon Europe.

5. Priority: This priority focusses on the cooperation with Higher Education institutions, professional training organizations and enterprises dealing with a similar topic as ESSENSE. Creating synergies with educational institutions will increase the interest for the program and the expected rate of implementation. Additionally, it is possible that different course providers or learners would meet within the learning platform and build a collaborative relationship.

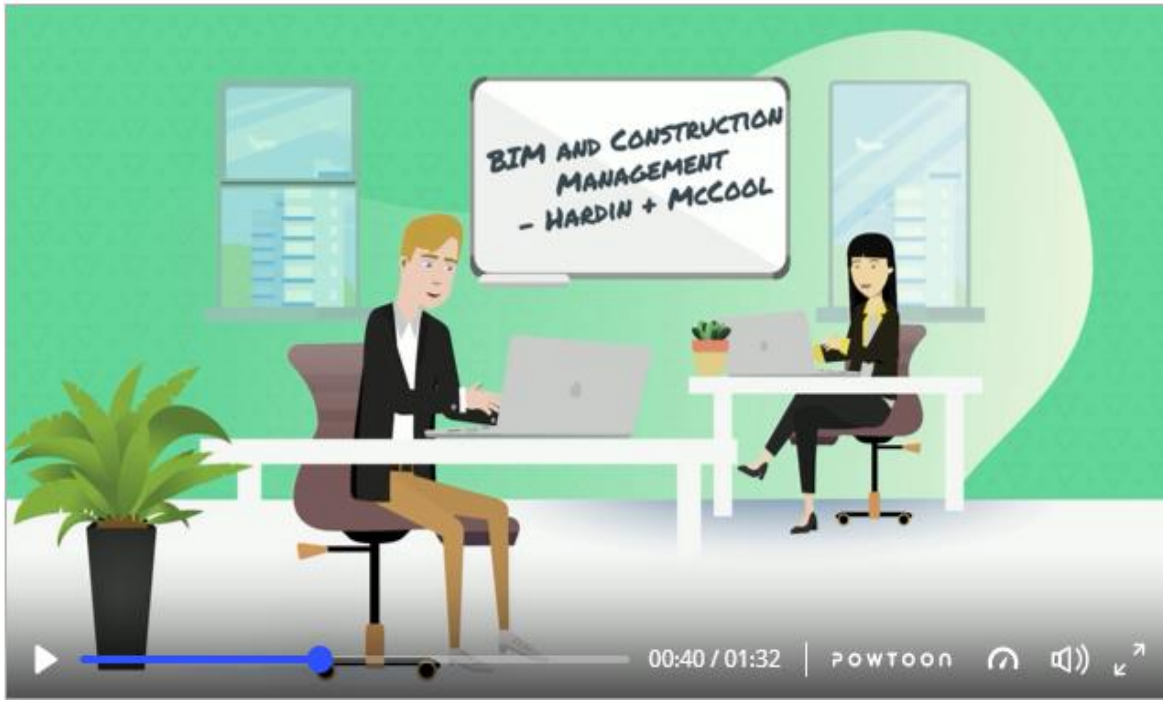
All these actions will require the implementation and adaption of the program in a sustainable and long-lasting way.

4. Outlook

This document will be subject to an open consultation by various stakeholders of different institutions and initiatives until the end of the project development in August 2021. The objective is to expand the conversation to a wider range of organisations and initiatives that contribute ideas to improve the programme, to commit to the described priorities and to implement this educational programme. A sustainability plan and memorandum of understanding will ensure that the project partner and stakeholder will continue to collaborate and commit to deploy the programme with a view to achieving the goals until 2024.

At the end of the project the educational materials and the collaborative platform will be made available free of charge to the relevant training institutions for further use. This ensures that the educational programme can be established throughout Europe and even worldwide without any financial barriers, enriching educational programmes related to Building Information Modeling and Ambient Assisted Living.

Example picture of summarized unit-content provided as Powtoon-Video



Source: ESSENSE Learning Plattform