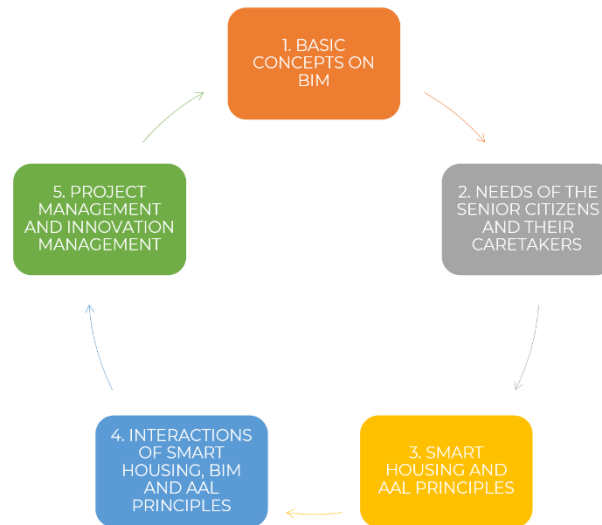


Update on the development of the free didactic material



© ESSENSE Project: Didactic Contents

During the last months, ESSENSE has further developed its Didactic Content: The didactic content is divided into 5 modules:

1. Basic concepts on Building Information Modelling

Building Information Modelling (BIM) is a technology that has rapidly gained in importance in the last few years.

The objective of the unit „Basic Concepts on BIM“ is to obtain an overview of the definition of BIM and the possible uses; to show the advantages of BIM or computer-aided design concerning the data associated with the 3D objects.

2. The needs of the senior citizens and their caretakers

As older adults are a growing part of the population, addressing their needs is becoming one of the main challenges for the building sector. Unit 2 presents crucial knowledge that professionals need to create the built environment supportive of older adults and their caretakers. The unit presents common issues that older adults and their caretakers face in everyday life and suggests both building-related and technological solutions that can improve the occupant quality of life. Although the unit provides specific and actionable suggestions, a lot of focus is given in providing general skills and knowledge, which the learners can use to provide flexible and customized solutions to various user groups in different contexts.

3. Smart Housing and AAL

We live in a world where sensors and actuators are used in every domain of the human life. Ambient assisted living (AAL) confirms this by using sensors, actuators

and advanced signal processing and machine learning algorithms to make the living environment smart in a way that it can aid the aging population in their everyday activities. This unit gives an overview on the existing approaches, methods and practices in a way that a civil engineer or architect can understand the basic principles of AAL and Smart homes. It provides an overview of the way how the signals and data obtained from the sensors are processed and the methods used to extract information and knowledge. Also, the students will learn the basic principles of algorithms and methods for decision support, learning, detection and classification in AAL and smart houses. Finally, this unit gives an overview of best practices, case studies and the state of the art of the research advancements.

4. Interactions between BIM, Smart Housing and AAL (KIT)

As a goal, the unit “Interactions between BIM, Smart Housing and AAL” aims to introduce learners to using AAL principles and Smart Housing technologies within the BIM method. It will show how to combine the principles of Ambient Assisting Living with the concept of Building Information Modelling.

5. Project Management, Innovation Management and collective competencies for optimum implementation of BIM principles and AAL concepts

Module 5 is based on six different units concerning key aspects such as innovation and project management, implementation plan, different components of the BIM framework in order to assess the performance or maturity level, return on investment concepts, ambient assisted living and smart housing principles.

During this module the learners will be introduced to the most relevant aspects on how to managing all the information related to BIM, like data quality models and reference models. Module 5 will pave the way for the learners to go from the Building Risk Log to a BIM Model, in order to know all the relevant steps for a BIM implementation.

These modules will be freely available at the end of the project in 2021 on the ESSENSE Collaborative Platform with innovative quizzes, exercises and some extra lectures.