

CESBA MED Training System Framework

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Program priority: 2.1 - To raise capacity for better management of energy in public buildings at transnational level

Work package: 4 - Transferring

Activity: 4.2 - CESBA MED Training System

Deliverable: 4.2.2 - CESBA MED Training System Framework

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1. Introduction

The deliverable D4.2.2 aims to describe the general framework of the training system to be implemented, tested and validated in CESBA MED project. The CESBA MED Training System represents a key component of the project as it is crucial to ensure a correct use of the CESBA MED tools and methodology by the main target groups and the widest transferring in the MED area. To develop an appropriate training system to be tested during project implementation and continuing after its conclusion will ensure a balanced and sustainable development of MED area urban districts through the improvement of local policies. A roadmap approach demands constant learning, follow-up and continuous improvement in order to adjust to new conditions.

This deliverable is one of the four included in Activity 4.2 of WP 4 - Transferring. The other deliverables that will complete the CESBA MED Training System are:

- the training material (D 4.2.1): manual, slides, technical documentation for the CESBA MED courses will be developed in 6 languages (English, Italian, Spanish, French, Greek, Croatian);
- the e-learning platform (D 4.2.3): an e-learning platform based on existing e-learning services will give access to training courses and materials for users and decision makers;
- the training courses (D 4.2.4): pilot courses targeted to technicians and decision makers will be organized in each region (Piemonte, Friuli V.G., Rhone Alpes, PACA, Catalonia, Greece, Croatia and Malta).

An additional group of training activities is foreseen in WP5-Capitalizing, Activity 5.2 (RP: University of Malta) and it concerns the involvement in CESBA MED training activities of cities in the MED area, not included in the CESBA MED project. In this phase, introductory info-days and e-learning sessions will be carried out.

The CESBA MED training courses will aim to explain to the concerned target groups how to use effectively the methodology and tools developed under CESBA MED WP3 – Testing in particular:

- the “CESBA MED Generic Framework”, a generic multicriteria assessment tool for rating the level of sustainability of buildings and urban areas;
- the “CESBA MED SNTools”, the contextualized Sustainable Neighborhood tools for the 9 regions concerned by the project and including two components, the CESBA SNTool for the urban scale and the CESBA SBTTool for the building scale;
- the decision-making process, supported by the aforementioned tools, targeted to identify the best retrofit option for an urban area and public buildings.

Chapter 3 focuses on the presentation of the CESBA MED methodology and tools.

The CESBA MED Training System will be tailored for two specific main target groups:

- **Technicians:** this group includes professionals, SMEs technicians, urban planners, public bodies’ technical staff. All of them have a technical profile and need to learn how to use CESBA SNTools both in terms of technical and functional / operational aspects. A further subdivision of this target group into two more specific sub-groups, is deemed necessary to reflect the different ways the CESBA MED tools and methodologies will be used in defining and implementing urban plans. The two subgroups, the “assessment process coordinators” and the “area experts”, are clearly defined in Chapter 4.
- **Decision-makers:** this group include policy makers, investors, developers, public bodies managers. They need to reinforce their capability to set up high quality energy retrofitting actions on public buildings or new construction projects as part of effective urban development plans by using CESBA MED tools and methodology.

A further element determining the division of the different target groups foreseen for the CESBA MED Training System is related to the scale on which the CESBA MED tools operate: the urban scale or the building scale. Chapter 4 provides a detailed description of CESBA MED user and target groups.

Chapters 5, 6 and 7 focus on the description of CESBA MED courses. The learning outcomes, the methodological approach, the modular structure and the content of the CESBA MED courses are described.

Chapter 8 provides indications about the contextualization and delivering of the generic CESBA MED courses in the eight concerned territories during the testing phase.

Chapter 9 outlines the general criteria that should guide the choice of the open source LMS to be used to implement the CESBA MED e-learning platform.

In chapter 10 the monitoring and evaluation actions to be carried out to guide CESBA MED training activities and to improve performances of CESBA MED Training System are described. The validation of training activities by the stakeholders is another important component included in this chapter.

2. Why a CESBA MED Training System

Raising the knowledge base of public building stock owners and public bodies decision-makers is considered essential to set up high quality and sustainable urban plans. Like-wise the technical training of professionals and technicians, operating in private companies or in public administrations, on the use of the tools that can support the decision-makers in the definition of sustainable urban development plans is indispensable to ensure an adequate support for the decision-making process.

Improving stakeholder skills by delivering targeted training actions is an essential component of CESBA MED strategic overview.

In order to make the results of the CESBA MED project as effective and lasting as possible, it is crucial that updating the skills of policy-makers and technicians is not limited to the project implementation period, but it must go beyond the end of the project.

The CESBA MED Training System is intended to make a positive contribution to effectively respond to this challenge:

- in the Transferring phase (WP4): the CESBA MED Training System is developed, contextualized and tested in the eight concerned territories and validated;
- in the Capitalising phase (WP5): the courses, the teaching materials and the methodologies tested during WP4 will help to maximize the capitalization of the project's outcomes, their transferability and durability by involving the CESBA MED Cities Network;
- after the end of the project: the on-line CESBA MED Training System tools and materials will remain available to users to ensure ongoing training actions. The CESBA MED Training System will be able to evolve alongside the evolution of tools and methodologies, spreading more and more the network of urban development stakeholders able to set up high quality and sustainable urban plans. In the phase after the end of the CESBA MED project, the training platform will be managed by CESBA Network with the aim of providing a virtual place for continuous learning and professional up skilling for all the stakeholders.

In each of the two CESBA Sprint Workshops included in the CESBA MED project (Activity 4.3, Deliverables D4.3.1 - D4.3.2) involving experts, public managers, technicians and other target group representatives from the whole MED area, a working session is specifically devoted to CESBA MED training system: the first workshop has the objective to receive expectations, needs and advice on the CESBA MED training system development; the second workshop has the objective to exchange information about the pilot training activities and validate the outcomes.

The suggestions coming from the first CESBA Sprint Workshops, held in BEZAU (AU) from 18 to 20 September 2017, are included in this report.

The CESBA MED Training Framework is aimed to promote the use of the CESBA MED methodology and tools to improve professionals' technical skills and strengthen the capacity of local stakeholders to develop efficient policies and to design integrated Local Action Plans for sustainable urban development.

CESBA MED training activities will not only aim to improve technical and methodological competences of the target groups. In each of the concerned regions, they also will contribute to:

- analysing local challenges, seeking solutions and ultimately developing local urban plans to address these challenges;
- supporting a holistic approach taking into consideration the physical, economic and social dimensions of urban development, from a sustainable perspective;
- developing strong partnerships between public bodies, the private sector and civil society;
- analysing the challenges and barriers to improve the collaboration among the various stakeholders that are involved and have to work together during a sustainable urban planning process;

- improving communication and participative processes of all the involved stakeholders;
- contributing to the transnational exchange and learning process taking place at network level;
- communicating results at local level, and disseminating lessons learned to the wider community.

3. The focus of learning: CESBA MED tools and methodology

The CESBA MED Training courses will focus on tools and methodologies developed in WP3-Testing.

In this chapter an overview of the main outcomes of WP3-Testing is provided and the content of the courses is described.

CESBA MED Generic Framework, the contextualization process and the local assessment (SNTools)

The CESBA MED Generic Framework (CESBA MED GF) is a transnational generic multicriteria assessment system for rating the sustainability performance of urban areas and public buildings.

“Generic” means that the CESBA MED GF needs to be configured to carry out an assessment on a specific urban area or building. The configuration process consists in the contextualization of the CESBA MED GF to local conditions in order to reflect the specific sustainability priorities and practices. The contextualization takes place through the selection of the preferred assessment criteria and the assignment of a weight and a scoring scale to each of them. Local sustainability priorities are set up assigning a regional weight to the assessment criteria.

Through the configuration of the CESBA MED GF, the contextualization process, it is possible to produce local assessment tools for rating the sustainability of any urban area or building in the Mediterranean.

Conventionally, the local systems derived from the CESBA MED GF are named “CESBA SNTool + city name” (i.e CESBA SNTool Barcelona, CESBA SNTool Torino, etc.). The CESBA MED GF is not operational and can’t be used as it is. It always needs to be adapted to local conditions.

The contextualization allows to reflect the local practice, regulations, standards and level of advancement in the sustainability field through the possibility to define a local performance scale for each assessment criterion.

Despite the different weights and benchmarks of assessment tools (CESBA SNTool) derived from the CESBA MED GF, the results produced by them are totally compatible because they are based on the same transnational methodology.

The structure of the CESBA MED Generic Framework

The CESBA MED Generic Framework is organized in two modules:

- Building Scale (CESBA MED GF – B)
- Urban Scale (CESBA MED GF - U)

The “Building Scale” (CESBA MED GF-B) module allows to measure the performance reached by a public building with regards to 7 main issues and to give a rating to it. The 7 issues are:

- Site Regeneration and Development-Urban Design and Infrastructure
- Energy and Resource Consumption
- Environmental Loadings
- Indoor Environmental Quality
- Service Quality
- Social-Cultural-Perceptual aspects
- Cost and Economic aspects

The module contains 153 assessment criteria and relative indicators organized in 25 categories. All criteria measure an objective performance on the base of a specific assessment method. The module basically measures “physical” quantities. This module hasn’t a prescriptive nature but instead it allows to measure the actual sustainability of a building and its potential future performance on the base of possible scenarios.

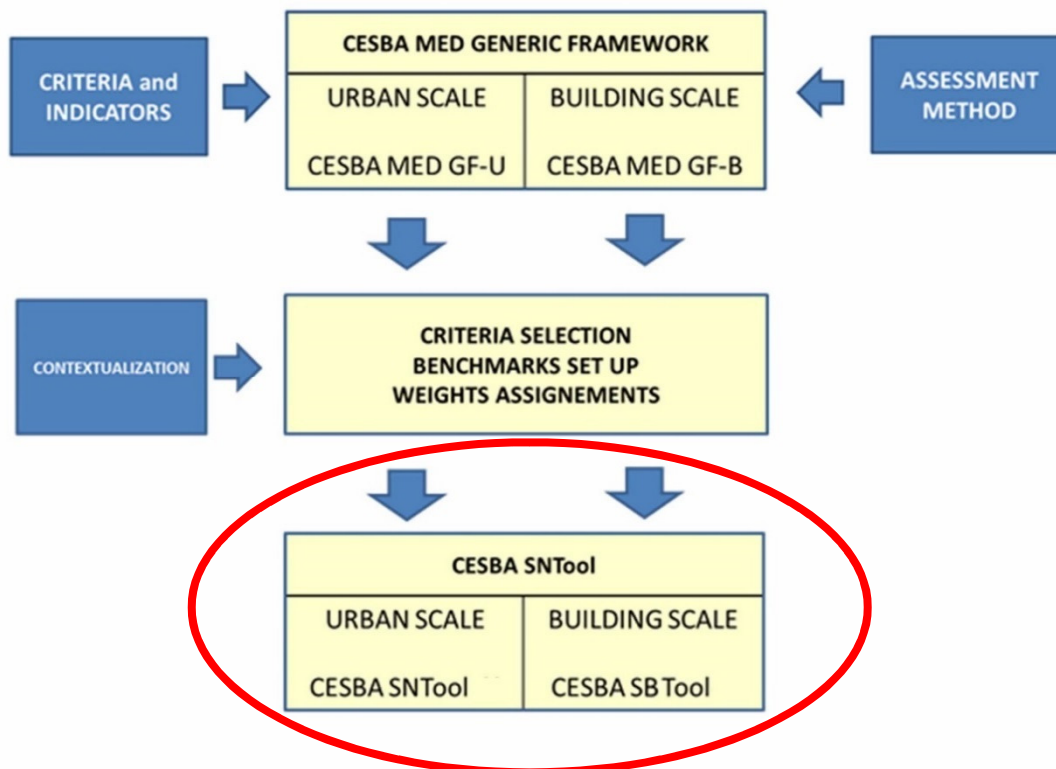
The “Urban Scale” (CESBA MED GF-U) module allows to measure the performance reached by an urban area (neighbourhood, block or cluster) with regards to 7 main issues and to give a rating to it. The 7 issues are:

- Built Urban System
- Economy
- Energy
- Atmospheric Emissions
- Non-Renewable Resources
- Environment
- Social Aspects

The module contains 178 assessment criteria and relative indicators organized in 23 categories. All criteria measure an objective performance on the base of a specific assessment method. The module basically measures “physical” quantities. This module hasn’t a prescriptive nature but instead it allows to measure the actual sustainability of an urban area and its potential future performance on the base of possible scenarios.

The focus of CESBA MED pilot training courses

The figure below summarizes the CESBA MED Generic Framework, its contextualization and its structure consisting of two components: CESBA SNTTool for the urban scale and CESBA SBTool for the building scale. The red circle shows what the CESBA MED pilot training courses will focus on. In each of the eight regions the training will refer to the contextualized CESBA SNTTool in relation to the two scales: Building and Urban. The contextualized tools have to include the common KPIs (Key Performance Indicators) to be used to compare the assessment results.



4. CESBA MED end-users and training target groups

The end users of the CESBA MED tools and methodology can be divided in two main groups and the CESBA MED Training System will be tailored to their characteristics and needs:

- a. **Technicians:** this group includes professionals, SMEs technicians, urban planners, public bodies' technical staff. All of them have a technical profile and need to learn how to use CESBA SNTTools both in terms of technical and functional / operational aspects. However, to make training more suitable to the end user's features in relation to how the CESBA MED tools and methodologies will be used in the process of defining and implementing urban plans, a further subdivision of this end-users group is necessary. The 2 sub-groups are the following:
 - **Area/issue specialists:** this group includes the experts in the different specific areas/issues operating on urban or building scale (i.e. Energy, Social aspects, Indoor Environmental Quality, etc.);
 - **Assessment process coordinators:** this group includes the technicians who play the role of "interface" between the decision-making level and the specialized experts. They have to coordinate assessment processes at urban or building level by integrating the different assessment results from the experts. They can be public bodies' technical staff or private professionals.
- b. **Decision makers:** this group includes policy makers, investors, developers, public bodies managers. They need to reinforce their capability to set up high quality energy retrofitting actions on public buildings and effective urban development plans by using CESBA MED tools and methodology.

The other element which determines the division in the different target groups foreseen for the CESBA MED Training System is related to the scale on which the CESBA MED tools operate: the urban scale or the building scale.

The table below summarizes the CESBA MED Training target groups.

Scale	User type	Training target groups	Target group description
Urban	Technicians	Specialists	Experts in specific areas in relation to the 7 issues defined in CESBA MED SNTTool: Built Urban System, Economy, Energy, Atmospheric Emissions, Non-Renewable Resources, Environment, Social Aspects
		Coordinators	Urban planners operating in municipalities or other public bodies, private experts and professionals providing consultancy services to public bodies for urban planning projects.
	Decision-makers	Urban scale decision-makers	Politicians, policy makers, top managers in municipalities or other territorial public bodies.
Building	Technicians	Specialists	Experts in specific areas in relation to the 7 issues defined in CESBA MED SBTool: Site Regeneration and Development- Urban Design and Infrastructure Energy and Resource Consumption, Environmental Loadings, Indoor Environmental Quality, Service Quality, Social-Cultural- Perceptual aspects, Cost and Economic aspects
		Coordinators	Architects, construction engineers responsible for designing and monitoring of buildings renovation or new construction projects.
	Decision-makers	Building scale decision-makers	Building owners' top managers and decision- makers, investors, ESCOs, developers, building authorities.

It is important to point out that the distinction between the two different technical sub-groups “area specialists” and “assessment process coordinators” has the purpose of reflecting clearly the general structure of the CESBA MED tools and methodology and the different ways they can be used.

When the local versions of the courses will be implemented in the different regions, the two technical sub-groups could be joined according to the local needs and end users peculiarities.

5. The learning outcomes

Learning outcomes describe what an individual should know, understand and/or be able to do at the end of a learning process. They are focused on the learner's experience, rather than giving primacy to the content of the subjects that make up the curriculum.

Learning outcomes are increasingly used in EU education and training context. They are used as a common language in the European Qualifications Framework (EQF), National Qualifications Frameworks (NQF) and European Credit system for Vocational Education and Training (ECVET).

In the recent publication "Education for Sustainable Development Goals – Learning Objectives" (2017) UNESCO settles knowledge, skills, values and attitudes, expressed as Learning Objectives, that the individuals must acquire to become sustainability change-makers. The UNESCO Learning Objectives are related to each of the 17 Sustainable Development Goals (SDGs) included in the 2030 Agenda for Sustainable Development that the UN General Assembly adopted on 25 September 2015,

The following table shows the Learning Objectives referring to goal n. 11 "Sustainable Cities and Communities – Make cities and human settlements inclusive, safe, resilient and sustainable" which is closer to the aims of the CESBA MED project.



1.2.11. SDG 11 | Sustainable Cities and Communities | Make cities and human settlements inclusive, safe, resilient and sustainable

Table 1.2.11. Learning objectives for SDG 11 “Sustainable Cities and Communities”

Cognitive learning objectives	1. The learner understands basic physical, social and psychological human needs and is able to identify how these needs are currently addressed in their own physical urban, peri-urban and rural settlements. 2. The learner is able to evaluate and compare the sustainability of their and other settlements' systems in meeting their needs particularly in the areas of food, energy, transport, water, safety, waste treatment, inclusion and accessibility, education, integration of green spaces and disaster risk reduction. 3. The learner understands the historical reasons for settlement patterns and while respecting cultural heritage, understands the need to find compromises to develop improved sustainable systems. 4. The learner knows the basic principles of sustainable planning and building, and can identify opportunities for making their own area more sustainable and inclusive. 5. The learner understands the role of local decision-makers and participatory governance and the importance of representing a sustainable voice in planning and policy for their area.
Socio-emotional learning objectives	1. The learner is able to use their voice, to identify and use entry points for the public in the local planning systems, to call for the investment in sustainable infrastructure, buildings and parks in their area and to debate the merits of long-term planning. 2. The learner is able to connect with and help community groups locally and online in developing a sustainable future vision of their community. 3. The learner is able to reflect on their region in the development of their own identity, understanding the roles that the natural, social and technical environments have had in building their identity and culture. 4. The learner is able to contextualize their needs within the needs of the greater surrounding ecosystems, both locally and globally, for more sustainable human settlements. 5. The learner is able to feel responsible for the environmental and social impacts of their own individual lifestyle.
Behavioural learning objectives	1. The learner is able to plan, implement and evaluate community-based sustainability projects. 2. The learner is able to participate in and influence decision processes about their community. 3. The learner is able to speak against/for and to organize their voice against/for decisions made for their community. 4. The learner is able to co-create an inclusive, safe, resilient and sustainable community. 5. The learner is able to promote low carbon approaches at the local level.

In the CESBA MED Training System the use of learning outcomes aims to make clear to the involved stakeholders the expectations they have to meet, allowing a mutual recognition of the roles and responsibilities in the urban planning processes.

The participants will be encouraged to take initiative in learning and be pro-active in applying effectively CESBA MED tools and methodologies in urban planning processes.

The following tables describe the CESBA MED learning outcomes expressed for each of the 3 learning dimensions:

- knowledge and understanding
- skills and competencies
- judgement and approach

For each dimension, the learning outcomes are related to the different training target groups.

KNOWLEDGE AND UNDERSTANDING

After the completion of the course participants will:	SPECIALIST	COORDINATOR	DECISION MAKER
demonstrate a broad understanding of sustainable urban development and a deep knowledge of sustainability and urbanization processes	✓	✓	✓
demonstrate knowledge of the “CESBA MED Generic Framework” and the multicriteria assessment methodology used in the generic framework for rating the level of sustainability of buildings and urban areas;	✓	✓	✓
demonstrate the knowledge, ability and approach needed to independently use the CESBA MED SNTools and methodology;	✓	✓	
demonstrate knowledge of the decision-making methodology based on CESBA MED sustainability assessment tools		✓	✓
demonstrate a deep knowledge of the principles and methods of calculation of the CESBA MED indicators	✓		
understand the role of local decision-makers and the importance of representing a technical support in planning and implementing policy of urban development processes.	✓	✓	
understand the role of technicians to receive the necessary support in planning and implementing sustainable urban development policy			✓

SKILLS AND COMPETENCIES

After the completion of the course participants will be able to:	SPECIALIST	COORDINATOR	DECISION MAKER
identify and collect data required for the application of the CESBA MED SNTTools and methodology	✓	✓	
use CESBA MED SNTTools and methodology to prepare, analyze and assess projects and processes for sustainable urban plans development;	✓	✓	
compare the effect of different indicators of sustainability in evaluations of urban development projects;	✓	✓	
calculate the indicators related to an area	✓		
support decision-makers by providing consistent and comprehensible information and data necessary to implement the decision-making process		✓	
apply the CESBA MED decision-making methodology			✓

JUDGEMENT AND APPROACH

After the completion of the course participants will be able to:	SPECIALIST	COORDINATOR	DECISION MAKER
relate her/his work to the different needs of stakeholders involved in sustainable urban plans processes implementation	✓	✓	✓
play a pro-active role to raise awareness about the need to design and implement sustainable urban plans	✓	✓	✓
apply a more holistic and integrated approach taking into consideration the physical, economic and social dimensions of urban development, from a sustainable perspective	✓	✓	✓

6. CESBA MED training methodology

The CESBA MED training methodology will include a large number of different solutions aimed at making the training activities as flexible as possible and customized according to the characteristics and needs of the target groups and the peculiarities of the local territories in which training actions will take place.

Modular approach

CESBA MED training system will adopt a modular approach to ensure maximum flexibility, usability and personalization of training. Each course will be composed by more training modules.

Each training module will be described in terms of:

- sequencing constraints (in relation to other training modules);
- duration;
- didactic methodologies;
- didactic content and articulation;
- training materials.

Learning activities

The CESBA MED courses will be based on methodologies requiring active and participatory involvement of the participants in order to maximize the learning outcomes and speed up the application start of CESBA MED tools and methodologies. The learning activities of CESBA MED courses will include lectures and seminars (or webinars), practical exercises using CESBA SNTTools, on site study visits, case studies analysis and discussion.

The table below illustrates an example of distribution of learning activities in relation to the three types of courses addressed respectively to area experts, technical coordinators, decision-makers. Each region will define the most suitable learning activities in relation to its needs.

Learning activities	Course for area experts	Course for technical coordinators	Course for decision-makers
Lectures/seminars/webinars	30%	60%	60%
Practical exercises using CESBA MED SNTTools	60%	20%	-
Case studies analysis /On site study visits	10%	20%	40%
Total	100 %	100 %	100%

The CESBA MED training courses are an opportunity to bring together all relevant local stakeholders related to development and implementation of high quality and sustainable urban development plans.

Although the different training courses for decision-makers and technicians will be held separately and with different learning objectives, there should be some "common sessions" where technicians and politicians can share and discuss the criticalities of their role and find a common language to make communication and information exchange easier. For example, a common final course session devoted to the analysis of a case study could be scheduled as well as simulation of decision-making process might be interesting for both technicians and decision-makers

Courses implementation methodology

The pilot training courses will be implemented in the eight regions mainly with a "face to face" approach. Some on line/distance learning activities have to be included in this step to test the CESBA MED e-learning platform (see chapter 9). For example, a webinar can replace a "face to face" seminar or practical exercises using CESBA SNTools can be implemented online using shared tools in a "virtual classroom".

The training activities to be delivered in WP5 5 – Capitalizing are aimed at involving a larger number of MED cities and territories and, accordingly, they will be for a larger part implemented using a "distance learning" approach supported by the CESBA MED e-learning platform.

At the end of the project, the CESBA MED training courses and materials will remain available on-line to the users and decision-makers all over Europe by accessing the e-learning platform.

The table below illustrates the different methodological approaches used in three different moments of the CESBA MED project as described above:

Pilot training courses (activity 4.2)	"Face to face" courses with some e-learning session to test the CESBA MED platform
Transferring and capitalising courses in MED area (activities 5.2-5.3)	Blended approach with 80-90 % e-learning and 10-20 % "face to face": - 1 training workshop in Marseille; - 5 introductory half day courses (info days) organized in MED cities (Lisbon, Montpellier, Rome, Ljubljana, Valencia); - 2 e-courses for participants from the whole MED area.
At the end of CESBA MED project: CESBA Network platform for continuous learning	e-learning courses for participants from all over Europe

7. CESBA MED training courses curricula

This chapter presents the CESBA MED courses, their modular structure, duration and general content.

The courses are presented in a future perspective of use and application of the CESBA MED tools in full operation, while the pilot courses to be implemented in activity 4.2 of the CESBA MED project will have a more informative approach, aimed at making known the potential of the CESBA MED tools in the eight regions.

So it is important to point out that the duration of the courses and training modules composing them as shown below are “indicative” and during the implementation of the pilot courses they can be modified.

Moreover, the characteristics of the pilot courses will depend, among other things, according to the number and type of indicators chosen by each territory during the testing phase.

Training courses

The CESBA MED training system is structured in five courses according to the identified target groups and the two scales, building and urban.

While for the two technical target groups two specific courses are planned, one for the building scale, one for the urban scale, for the decision makers, a single course addressed to the two scales is foreseen.

In this course the content covered refers to both the building scale and the urban scale.

- | | |
|--------------------------------------|--------------------------|
| 1) Course for decision-makers | Building and urban scale |
| 2) Course for technical coordinators | Building scale |
| 3) Course for technical coordinators | Urban scale |
| 4) Course for area experts | Building scale |
| 5) Course for area experts | Urban scale |

Each course is divided into modules. Each module represents a didactic unit and can be used in diverse courses, for example the Module 1 is repeated in all the courses aimed at different target groups and scales.

The courses, presented with their modular structure, are as follows:

COURSE FOR DECISION-MAKERS (Building & Urban Scale)

Duration: 5-12 hours

Module 1	Module 2	Module 3
The CESBA MED Generic Framework concept and the multicriteria assessment methodology	The decision-making process	Case studies analysis (integration of building and urban scales): focus on decision making
1-4 hours	2-4 hours	2-4 hours

COURSE FOR TECHNICAL COORDINATORS (Building Scale)

Duration: 8-18 hours

Module 1	Module 4	Module 2	Module 6
The CESBA MED Generic Framework concept and the multicriteria assessment methodology	The assessment criteria of the contextualized CESBA MED SBTool – Building Scale	The decision-making process	Case studies analysis (integration of building and urban scales)
1-4 hours	3-6 hours	2-4 hours	2-4 hours

COURSE FOR TECHNICAL COORDINATORS (Urban Scale)

Duration: 8-18 hours

Module 1	Module 7	Module 2	Module 6
The CESBA MED Generic Framework concept and the multicriteria assessment methodology	The assessment criteria of the contextualized CESBA MED SNTTool – Urban Scale	The decision-making process	Case studies analysis (integration of building and urban scales)
1-4 hours	3-6 hours	2-4 hours	2-4 hours

COURSE FOR AREA EXPERTS (Building Scale)

Duration: 12-30 hours

Module 1	Module 4	Module 5	Module 2	Module 6
The CESBA MED Generic Framework concept and the multicriteria assessment methodology	The assessment criteria of the contextualized CESBA MED SBTool – Building Scale	Use of the contextualized CESBA MED SBTool – Building Scale	The decision-making process	Case studies analysis (integration of building and urban scales)
1-4 hours	3-6 hours	4-12 hours	2-4 hours	2-4 hours

COURSE FOR AREA EXPERTS (Urban Scale)

Duration: 12-30 hours

Module 1	Module 7	Module 8	Module 2	Module 6
The CESBA MED Generic Framework concept and the multicriteria assessment methodology	The assessment criteria of the contextualized CESBA MED SNTTool – Urban Scale	Use of the contextualized CESBA MED SNTTool – Urban Scale	The decision-making process	Case studies analysis (integration of building and urban scales)
1-4 hours	3-6 hours	6-16 hours	2-4 hours	2-4 hours

Training modules and their content

A total of eight different training modules compose the five courses above:

Module 1	The CESBA MED Generic Framework concept and the multicriteria assessment methodology
Module 2	The decision-making process
Module 3	Case studies analysis (integration of building and urban scales): focus on decision making
Module 4	The assessment criteria of the contextualized CESBA MED SBTool – Building Scale
Module 5	Use of the contextualized CESBA MED SBTool – Building Scale
Module 6	Case studies analysis (integration of building and urban scales): focus on technical issues
Module 7	The assessment criteria of the contextualized CESBA MED SNTTool – Urban Scale
Module 8	Use of the contextualized CESBA MED SNTTool – Urban Scale

The contents of each module are presented below. Each module includes learning assessment tests.

Module 1 - CESBA MED Generic Framework concept and the multicriteria assessment methodology

This module aims to present the basic concepts of sustainability in urban areas and of the assessment systems for the built environment focusing in particular on the CESBA MED Assessment Methodology, Generic Framework (Building and Urban Scale) and contextualization process.

Content:

- Sustainability of urban areas
- The CESBA MED project: background information, objectives, methodology, deliverables
- Introduction to assessment systems for the built environment
- Basic overview of CESBA MED Assessment Methodology
 - o basic definitions and structure of the SBEMethod
 - o the assessment procedure in the SBEMethod
 - characterization step
 - normalization step: assignment of a score to indicators' value
 - aggregation step
- Structure of the CESBA MED Generic Framework Building Scale
 - o issues, categories and criteria
 - o physical boundaries

- time boundaries
- Structure of the CESBA MED Generic Framework Urban Scale
 - issues, categories and criteria
 - physical boundaries
 - time boundaries
- Contextualization process:
 - Selection of the active criteria
 - Benchmarking
 - Weighting

Module 2 - The decision-making process

This module aims to present how to implement a decision-making process based on CESBA SBTool and SNTTool to set up high quality energy retrofitting/new construction projects as part of sustainable urban development plans.

Content:

- Model of decision-making process for sustainable urban areas and public buildings
 - Initiation
 - Preparation
 - Diagnosis
 - Strategic definition
 - Setting Targets
 - Setting constraints and restrictions
 - Decision Making
 - Creation of retrofitting scenarios
 - Retrofit scenarios assessment and ranking
 - Retrofit concept
 - Decision making process for new urban developments

Module 3 - Case studies analysis

This module, addressed to decision-makers, aims to present the choices made locally for the contextualization of CESBA Tools and the motivations behind them. The presentation will be made by analyzing one or more case studies related to the territory. The case studies analysis focuses mainly on decision-making aspects. Each territory develops its own case study. A common template is provided for the presentation of the case study.

Content:

- Presentation of the Local SNTTool and SBTool
- Case study presentation

Module 4: The assessment criteria of the contextualized CESBA MED SBTool – Building Scale

This module aims to give a detailed presentation of the assessment criteria of the CESBA MED SBTool – Building Scale. For each territory the presentation concerns KPIs and locally selected assessment criteria. For each criterion the intent, the assessment methods and the main elements that characterize the corresponding indicator are presented.

Content:

- For KPIs and locally selected assessment criteria, presentation of the following elements:
 - Intent
 - Indicator
 - Unit of measure
 - Information sources
 - Assessment method

Module 5: Use of the contextualized CESBA MED SBTool – Building Scale

This module aims to present how to calculate in practice the indicators of the CESBA MED SBTool – Building Scale. For each territory the presentation concerns KPIs and locally selected assessment criteria. For each indicator an example of calculation and an exercise will be included. The module also includes the explanation of score assignment and aggregation methods.

Content:

- For KPIs and locally selected criteria, presentation of three elements:
 - assessment method : illustrating the calculation step by step;
 - example of calculation: applying the calculation steps to a case study;
 - exercise: calculation exercise to be carried out by the participants.
- Scores assignment: method and examples of calculation;
- Scores aggregation: method and examples of calculation;

Module 6 : Case studies analysis

This module, addressed to technicians (technical coordinators and area experts), aims to present the choices made locally for the contextualization of CESBA Tools and the motivations behind them. The presentation will be made by analyzing one or more case studies related to the territory. Each territory develops its own case study. A common template is provided for the presentation of the case study.

Content:

- Presentation of the Local SNTTool and SBTool
- Case study presentation

Module 7: The assessment criteria of the contextualized CESBA MED SNTTool – Urban Scale

This module aims to give a detailed presentation of the assessment criteria of the CESBA MED SNTTool – Urban Scale. For each territory the presentation concerns KPIs and locally selected assessment criteria. For each criterion the intent, the assessment methods and the main elements that characterize the corresponding indicator are presented.

Content:

- For KPIs and locally selected criteria, presentation of:
 - o Intent
 - o Indicator
 - o Unit of measure
 - o Information sources
 - o Assessment method

Module 8: Use of the contextualized CESBA MED SNTTool – Urban Scale

This module aims to present how to calculate in practice the indicators of the CESBA MED SNTTool – Urban Scale. For each territory the presentation concerns KPIs and locally selected assessment criteria. For each indicator an example of calculation and an exercise will be included. The module also includes the explanation of score assignment and aggregation methods.

Content:

For KPIs and locally selected criteria, presentation of 3 elements:

- assessment method : illustrating the calculation step by step;
- example of calculation: applying the calculation steps to a case study;
- exercise: calculation exercise to be carried out by the participants.

Scores assignment: method and examples of calculation;

Scores aggregation: method and examples of calculation;

Only the KPIs will be developed in the generic English version. During the implementation of the local versions of training materials, each territory develops the locally selected criteria. A common template is provided for the presentation of KPIs and locally selected criteria.

8. Contextualization and implementation of training courses

It is important to stress that the CESBA MED Training System reflects the general structure of CESBA MED tools and methodology and the different ways they can be used to implement high quality interventions on public buildings and to set up sustainable urban development plans.

The five courses, as presented in the previous chapter, are designed in a future perspective of use and application of the CESBA MED tools in full operation, while the pilot courses to be implemented in activity 4.2 of the CESBA MED project will have a more informative approach, aimed at making known the potential of the CESBA MED tools in the eight involved regions.

So it is important to point out that the durations of the courses and training modules composing them are “indicative” and could be modified during the implementation of the pilot courses.

Moreover, the characteristics of the local versions of pilot courses will depend, among other things, according to the number and type of indicators chosen by each territory during the testing phase.

The definition of the modular structure of the courses is intended to represent the training content in “simple components” that during the implementation of the local versions of training, can be more easily modified and aggregated to suit the characteristics of the local context and the needs of local users of CESBA MED tools and methodology.

During the contextualization of training courses, each region can include the two different technical target groups into a single course, or combine the urban scale and the building scale in a single course, or both. For example, in an integrated design logic, it would be useful to deal with the two scales in the same course. This means that the number of courses to be implemented in each of the eight regions will vary from 2 to 5.

The partners concerned will define the detailed contents of the training modules and their duration according to the features of CESBA MED tools contextualized and tested in their own territory.

To summarize, the definition and implementation of the local versions of training assume that, while maintaining unchanged the general aims and the learning outcomes defined in the Training System Framework, in each region the following elements can be modified:

- the number of courses: minimum 2 up to 5 (i.e. the building and urban scale can be included in the same course, the two technical target groups can be joined in a single course or both the options are applied);
- the duration of the courses;
- the combination of learning methodologies (lectures/workshops/ webinars/practical application exercises/case studies analysis /on site study visits, etc.)

The steps expected before implementing the pilot courses in the involved territories are the following:

1. development of a generic common training materials in English language;
2. preparation of the local version of the training material according to the specific features of the contextualized CESBA SBTool and SNTTool;
3. translation of the training material into the local language;
4. setting up of a preliminary version of the e-learning platform that will be tested during the implementation of pilot courses.

Furthermore, during this preparation phase common and shared tools and methodologies for monitoring and evaluation of courses will be defined and shared. It is relevant for the CESBA MED Training System to compare and analyse the implementation of the pilot courses in eight regions on the basis of shared criteria to evaluate the effectiveness of training activities and to highlight the strengths and weaknesses of the CESBA MED Training System.

9. The CESBA MED e-learning platform

The CESBA MED e-learning platform will be based on available open source e-learning services. It will be in English to maximize the access to the CESBA MED training system.

The platform will give access to training courses and materials for technical users and decision makers.

An easy-to-use learning interface will be created by using an existing open source Learning Management System (LMS). There is a wide selection of them: Moodle, Eliademy, FormaLMS, Dokeos, Myicourse, Ilias, Opigno, etc. An analysis will be carried out by the involved partners to identify the most appropriate one for the CESBA MED needs both from the user's point of view and from trainers and course management point of view.

The CESBA MED e-learning platform will offer to the users at least the following services:

- users' registration;
- down loading and up loading of training materials (video lectures, presentations, documents, exercises, etc.);
- webinar: real time interactive seminars conducted via the web;
- communication tools;
- assessment tools to measure the effectiveness of the training.

The CESBA MED e-learning platform will be tested during the pilot courses implementation phase (Activity 4.2). Following the testing, the e-learning platform will be reviewed and tuned to be used in the next step (Activity 5.2).

10. Training courses monitoring, evaluation and validation

Monitoring and evaluation actions will be carried on aimed at providing the necessary data to guide CESBA MED training activities and to improve performances of CESBA MED Training System.

As pointed out above, in each of the eight regions involved, the implementation of the pilot courses will be monitored by the relevant partners using common and shared monitoring tools and methods.

On-going monitoring and evaluation

Data to be collected for on-going monitoring and evaluation will concern:

- reaction of participants to the training program implementation; during the training material development will prepare a standardized participant satisfaction questionnaire (in English) to assess, for example, compliance with expectations, learning methods, quality of trainers / materials, course scheduling, etc.; the English template of the questionnaire will be translated in to the local language by the relevant partners.
- level of learning: during the training material development will prepare a standardized test (in English) to measure, for example, changes in knowledge, skills and attitude of the participants. The English template of the test will be translated in to the local language by the relevant partners of the eight regions.

The data collected from the on-going monitoring of the courses will be used at the end of the implementation of the pilot courses to:

- compare the pilot training courses implemented in the eight different regions and analyse strengths and weaknesses of the local training experiences;
- evaluate and assess the performances of the CESBA MED Training System during the testing phase. The evaluation outcomes will be used for:
 - improving CESBA MED Training System performances;
 - better implementing next steps of the CESBA MED project;
 - setting up the CESBA Network Training System to be continued even after the end of the project.

Post-training assessment and evaluation

To assess the effectiveness of training in CESBA MED project will be crucial to assess whether and how the participants will be able to apply learning once back in their workplace, as part of working practices.

The key question is: are the skills acquired by the participants (technicians and decision-makers) really applicable to influence decision-making processes for the development of highquality urban plans?

This sort of changes can take time to manifest and there are challenges in assessing attribution since a multitude of factors influence changes in policy making real contexts.

The ex-post evaluation will focus on identifying the main expected areas of change and will be combined with Activity 5.2. It will be aimed to understand whether skills acquired during training are actually applied by technicians and decision makers and whether this is making a real advantage to improve performance and influence decision-making processes. The post-training assessment will be implemented by using questionnaires, targeted interviews and focus groups to gain some insight on success stories or challenges of practical implementation. A generic template of a questionnaire will be prepared in English, outlining the main expected impacts, for example, technical impacts (professionals have developed more skills on sustainability issues), political impacts (public administrators have changed their approach to urban planning), or both. The specific content and the approach will be adapted to the local context and carried out by the partners concerned. The collected data will be analysed from a qualitative and quantitative point of view during Activity 5.2.

Training validation

Considering the aims of the CESBA MED Training System, the validation by the broader group of stakeholders is crucial.

During the second CESBA Sprint Workshop to be held in Malta in November 2018, stakeholders coming from all the involved territories will validate the CESBA MED pilot training activities.

The results of the CESBA MED training pilot phase resulting from the on-going monitoring and post-training evaluation will be presented in a specific session of the Sprint Workshop event and critically examined by a stakeholders' panel. The stakeholders' panel will critically analyse the monitoring and evaluation data and will undertake discussion with the pilot courses teams in order to make a collective judgement as to the effectiveness, the quality and the actual compliance of training to their needs. The stakeholder validation will provide recommendations and guidelines for improving the CESBA MED Training System.