GUIDELINES

D.T3.2.1

Guidelines for the implementation of training activities for decision makers on HBA management

Traditional Hungarian countryside house. Picture by Jozica Lazar

Index

CONTEXT

In the current period training sessions on Historic Built Areas (hereinafter HBAs) management are taking place. During the project meetings in Wien on February 28 – March 1, 2019 and in Baktalórántháza on April 8 – 11, 2019, draft of the Guidelines for the implementation of training activities for decision makers in HBA management ("guidelines" hereinafter) are presented. Based on the internal trainings the training material and outcomes of seminar will be produced. This material is conceived as a book with suggestions, list of educational products and initiatives to implement the training model through 2 different types of training: A) Engineering and architectural features and needs for HBA management; B) economic and procedural aspects of HBA on the field of integrated environmental management. The training materials will be translated into 7 national languages (CZ, AT, IT, CR, SI, SK, HU) and provided to the participants of the local trainings for professionals.

TRAINING A - ENGINEERING AND ARCHITECTURAL FEATURES AND NEEDS FOR HBA MANAGEMENT

INTERACTIVE WORKSHOP

ADVICE TO THE TEACHER

This teaching activity proposal offers an alternative training mode suitable for skilled professionals, planners, decision makers. The goal is to improve their awareness and knowledge about the HBA management concept and possibility of its efficient use as one of the core concepts for comprehensive application of HBA strategy.

Before you attempt to study or to deliver this module, please make sure that you understand the entire project BhENEFIT. For delivering this Module effectively and retaining your target groups' interest you need to include, wherever you can, local examples of good or bad practice. Use also your specific professional knowledge to illustrate the points and findings arising from these presentations.

TARGET GROUPS

This module is formulated to address the highly skilled planners, managers and representatives of the key stakeholders' groups involved in the development of the Action plans supporting sustainable development of functional urban areas. The use of the teaching material for broader public requires its adaptation.

Target groups	Description of target groups
Local public authority	Municipalities, Civil Protection.
Regional public authority	Regional Administration departments, Regional Agencies, Preservation Boards, Association of Municipalities at regional level
National public authority	National Preservation Boards
Sectoral agency	Energy Agencies, Development Agencies
Infrastructure and (public) service provider	Utility companies
Interest groups including NGOs	Cultural Associations, citizens committees, civic society associations
SME	Private companies related to design and planning, constructions sector, energy sector, tourism sector, ICT technologies sector

TASKS FOR SELF-STUDY OF THE TRAINERS

To improve the teachers' preparation, it is recommended to complete the content with national specific issues and frame conditions.

For the self-study we recommend the following:

- The BhENEFIT project's deliverables especially the strategic materials
- The materials deepening the knowledge about the concept of HBA management
- The materials deepening the knowledge about multi-actors' decision making
- The materials dealing with the assessment of HBA management with special focus on engineering and architectural features and needs
- Formal and informal instruments in respective planning culture used for optimization of HBA management performance
- National specific materials on HBA management

These are some other tasks we recommend you undertake:

- Discuss with others the awareness on HBA management issues within professional planners' community;
- Discuss with others the context of HBA management concept's issues under specific local conditions;
- Discuss with others what are the main political and methodological approaches in the field of HBA management;
- Survey the available books, websites, articles, concerning the best practice in the HBA regeneration planning;

- Discuss with others and write down the lessons what to do and what not to do that you learned while researching the case studies.

METHODOLOGY OF THE TRAINING

Training objectives

Improvement of the abilities of the target group to use the concept of engineering and architectural features and needs as the leading concept in the management of the HBAs.

Goals of the teaching unit

- to develop awareness about the HBA management strategy
- to develop awareness concerning the potential of the HBA strategy in planning and management of HBA sustainable development
- to develop the knowledge about common international institutional frameworks of the HBA management
- to mediate the best practice examples

Training Materials

- The PowerPoint presentation with the main ideas to the topic
- The text Shared Strategy for an integrated governance system of HBA within the CE region
- The case-study

Training Format

Interactive workshop

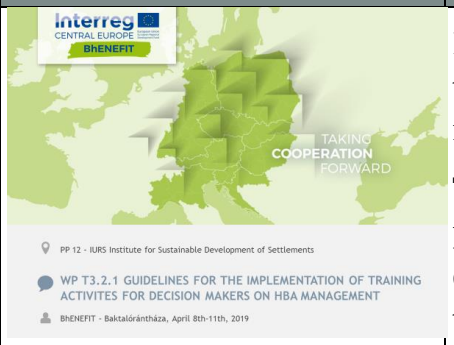
Training Methods

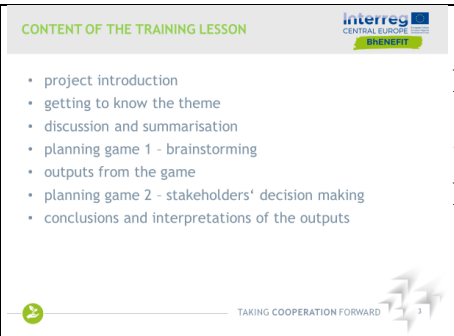
- Reading written texts
- Brainstorming
- Silent decision making
- Critical discussion
- Team work on idea development
- Explanatory interpretation exercise
- Technology-Based Learning
- Lectures & Tutorials
- Role Playing / Management Games
- Outdoor Training

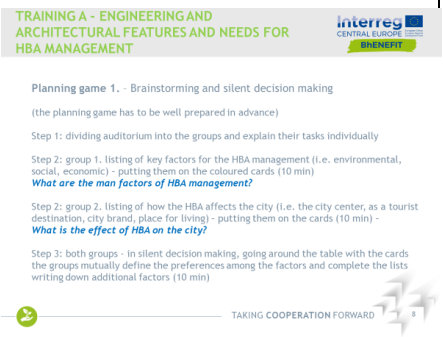
Logistics

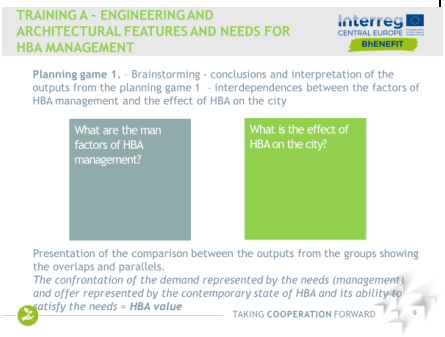
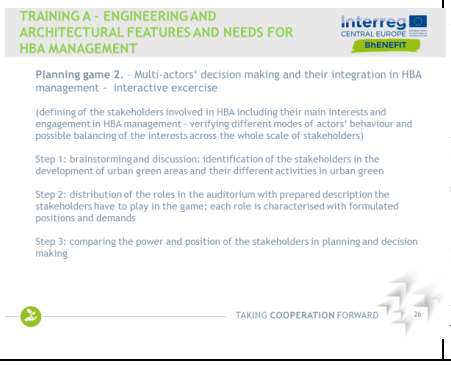
- Recommended capacity 21 trainees
- Trainers 1 leading + 2 assistants
- Room with min 3 tables and 25 chairs free movable
- Wall board / Projector, Computer /PC, Tablet
- Sheets of paper 5x5 cm coloured 300 pcs, with glue
- With board or flipcharts, markers 3 colours
- Time slot 3 x 50 minutes

Below, as examples, some of the steps and activities designed for training and key stakeholders' involvement on Interactive Tools are described more to the point. The training and engagement activities will be distinguished according to the different actors involved (professionals, politicians, entrepreneurs, communities,...), the specific case-study, context and facilities available.

Activity	Basic content of the activity	Comment for the teacher
1		Introducing the project, the people involved and the trainer is the first step for including people in the project. This should be immediately followed by asking people to present themselves providing a short description of the reason why he/she is present to the event.
2	Goals of the training 	It is important that the trainer has clear the importance of stakeholders' awareness in decision-making processes. The involvement of actors is a necessary step for making them discuss and produce different visions. The pro-active attitude of the trainer will be crucial in translating the different point of views into a common vision of the case study area.
3	Content of the training lesson	Introducing the teaching unit, duration of the training can be as follows: project introduction – lecture 1 (20 min.)

		1st planning game (25 min.) lecture 2 (20 min.) 2nd planning game (35 min.) lecture 3 - case study + conclusion (20 min.)
4	Reading written texts 	The participants obtain the text they should read. The text in national language is explanatory and provides basic information about the Shared Strategy of the HBA (engineering and architectural features and needs for HBA management) The proposal for the text elaborated as a part of BhENEFIT project is as annex of this material, but the trainers can use another text.
5	Discussing the written texts, explanation in reaction to the question	The trainer starts the discussion with the understanding question and 2 - 3 questions for all participants. How the knowledge about HBA management concept can influence your own decision making? Which features and needs (engineering and architectural) can improve the HBA management? Each participant has 5 minutes to write the answers to the sheets

6	Summarisation	The trainer in interaction with the trainees makes an overview about the answers structuring them into the groups of similar or linked answers
7	Planning game 1. Brainstorming - Monitoring indicators: - key factors for the HBA management (i.e. environmental, social, economic) – how the HBA affects the city (i.e. the city centre, as a tourist destination, city brand, place for living) 	The teacher has to prepare the planning game in advance. The coloured small sheets of paper are useful as well as markers for writing. The teacher has to divide auditorium into the groups and explain their tasks individually. The presence of assistants would be welcomed in order to save time. After 10 minutes of writing ideas the teacher stops the first phase. All sheets with the ideas are at the table and the second phase starts – silent decision making. The teacher explains the principles of silent decision making and technicalities of the procedure to the auditorium. After two runs the groups can change.
8	Planning game 1. Brainstorming - Monitoring indicators:	The teacher is collecting the outputs from the groups including the defined priorities. The outputs are displayed at the table. The teacher demonstrates the comparison between the outputs from the groups showing the overlaps and parallels.

	– select main topics for your HBA (reasons, expectations) – outputs from the game 	
9	Planning game 2. Multi-actors' decision making and their integration in HBA management: - defining of the stakeholders involved in HBA including their main interests - suggesting ways to engage the stakeholders in HBA management 	The teacher is using this game for verifying different modes of actors' behaviour and possible harmonisation of the interests across the whole scale of stakeholders. The game supposes to distribute the roles in the auditorium with prepared description of the roles they have to play in the game. Each role is characterised with formulated positions and demands. The model situation for the decision making is described by a map and several sentences. The best model situation is linked to the area of interrest, all of participants know and a plan to invest on certain plot. The roles can be e.g. owner of the plot, citizen, investor, representatives of the self-government, journalist, eco-activist and representative of the

		opposition in the local authority.. The role of planner is to moderate the discussion and to argue against not objective or extremist requirements. After the game, the teacher is comparing the outputs from the game of different groups. Although the descriptions of the roles are identic as well as the composition of the players, the results from interactive decision making can be different from group to group as the personalities and personal abilities to argue are different.
10	Planning game 2. Multi-actor decision making and integrative HBA management: - challenge for changes 	The teacher is interpreting and commenting the outputs from the planning game stressing the role of the planners in the process of the game. In the same time the teacher is addressing the territorial governance, mainly understood as "the manner in which territories of a national state are administered and policies implemented with particular reference to the distribution of roles and responsibilities among the different levels of government (supranational, national and sub-national) and the underlying processes of negotiation and consensus building" The practice of CE HBA management is experiencing the movement from traditional model of hierarchical territorial government, connected closely to the very

		sensitive issue of territorial sovereignty across different levels of territorial units (local, regional), to the system of governance where the power is shared and split among a variety of stakeholders creating overlapping vertical and horizontal co-operation patterns between governmental and non-governmental public and private structures across various levels of decision making.
11	Case study presentation 	Sharing examples of good practice is not only a tool suitable for presenting experiences on "sustainable" HBA management in selected area, but also for adding the necessary knowledge to those stakeholders who have decision-making powers limited by the dispositions of their profession (especially legislatively given – e.g building authorities, monument protection authorities etc.). A model example (whichever is chosen) is key for better understanding the HBA management approaches in each country.
12	Web references, sources	

13		The teacher should change the final slide by - adding the link to national web of the project - replacing the picture by the picture from the model area - adding own logo in the bottom of the slide

Annex: Shared Strategy for an integrated governance system of HBA within the CE region

Introduction and terminology

It is necessary to clarify several key terms for a better understanding of principles, actions and key words related to the protection of HBA with the main objective to implement strategies for a more sustainable governance and to develop a shared strategy for an integrated HBA.

HBA - historic built environment, both limited to a portion of an urban area or extended to a not-natural, designed landscape (shaped by complex human forces acting on the natural environment), which is made up of innumerable unique and interlinked human-built elements (buildings, infrastructures, streets, canals, factories etc.) which tell the particular story and identity of the place.

Although every country involved in BhENEFIT shares the definition of HBA, not one national normative report this peculiar matter that can be considered an intersection between urban planning and the protection of cultural Heritage. The various national laws are about similar concepts, however.

Strategy - can be considered a plan of action designed to achieve a long-term or overall aim. For the BhENEFIT project, the term strategy represents one of the main outputs of the project (to produce a shared Strategy for the sustainable management of HBA), focused on governance issues that collects suggestions and advices developed by the partners to improve a more efficient and sustainable governance of HBAs.

Governance and management - the boundary between governance and management of HBA is subtle but clear. In summary, we can say that governance concerned the decisional process, management the executive one. Governance sets general objectives; management specific goals and feasibility. Governance is a more general reflection that includes several aspects concerning the complexity of an integrated approach; management concerns guidelines and how we can do something.

Management is a step after Governance and it concerns the day-to-day operation of the program within the context of the strategies, policies, processes, and procedures that have been established by the governing body. Whereas governance is concerned with "doing the right thing", management is concerned with "doing things right".

Sustainable management of HBAs – Sustainable development and, consequently, sustainable management is a global objective, the fulfilment of which requires a long-term strategy dovetailing policies for economically, socially and ecologically sustainable development of HBAs. Sustainable management represents specific quality of the management, one of leading functions of which is the safeguarding the sustainability of the managed objects (processes, physical objects, communities etc). This function is an integrating function across other management functions, e.g. coordination, optimisation of the processes, minimisation of the resource consumption, maximising the benefit, or others.1

Decision making – is continuous and indispensable component of managing any organization or business activities as well activities for the protection and valorisation of HBAs. Sustainable conservation, reuse and management is not feasible without a systematic data collection and registration that identifies history, architectural attributes, preservation state and the possible alterations during the entire lifetime. It constitutes a solid basis for any knowledge-based decision-making process to establish priorities of HBA protection.

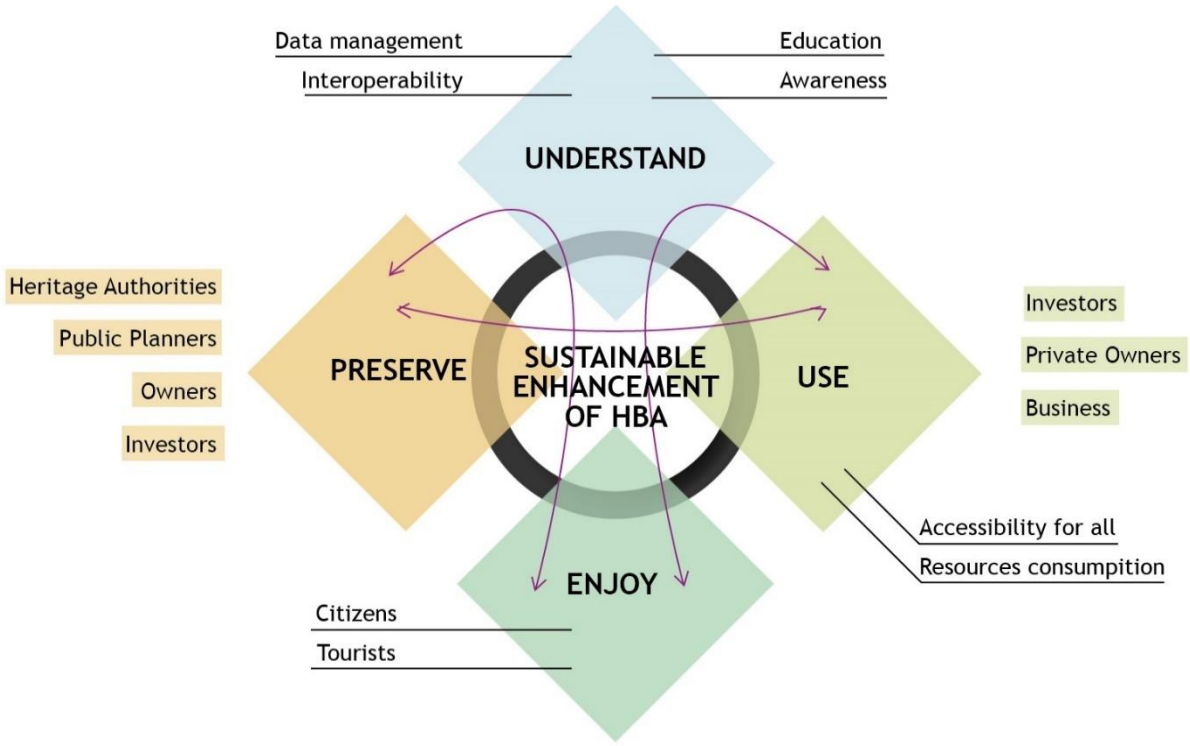
To achieve a shared strategy for the sustainable governance and management of CE HBAs a path has been developed consisting of analyses, meetings, visits and targeted workshops and trainings.

Governance and management of HBA

To understand the complexity of the governance and management of an HBA, the first step is to adopt the above mentioned HBA definition. When we realize that the HBAs influence different aspects of society and life, it should be obvious that spending the time to build an effective knowledge is the right direction. A

[1] Central Europe Countries are confronted with numerous challenges in ensuring sustainable management of HBA, including the need to guarantee adequate funding for conservation and protection of these assets and the necessity to improve the buildings' sustainability of HBA. The research of a financial support has become particularly important in the aftermath of the global financial crisis, which led to reduced budgets of many public authorities.

strategy for the enhancement of HBAs must start from education and awareness, from information (i.e. tourism), data management and inter-operability. Decisions regarding the governance and management of HBA, programming and resource allocation are all based on an effective territorial understanding that helps to describe the overall context of the HBA.



The currently Central Europe evolving thinking about conservation and management of HBAs is placing emphasis on an integrated approach. It stresses the need to place HBA concerns in a broad framework, to link protection, enhancement, use, tourism, engagement, accessibility and sustainable development and to consider a values-led approach as a useful tool for governance and management. One of the most fundamental aspect for the governance of CE HBAs is sustainable development.

Sustainability

The relationship between HBA conservation and a sustainable management can be understood in two ways (a combination of the two approaches):

1. As a concern for sustaining the HBA considered as a result in itself, and part of the environmental/cultural resources that should be protected and transmitted to future generations to guarantee their development (intrinsic).
2. As the possible contribution that HBA conservation can make to the environmental, social and economic dimensions of sustainable development (instrumental).

The necessity to improve and manage the buildings' sustainability of HBA is a CE question. How can HBA be used and managed efficiently? How can the management of HBA be able to tap the ecological and social innovation potential to ensure conservation and valorisation? The hope is to ensure that the HBA be protected, in a dynamic fashion, through an efficient, comprehensive and sustainable management system, strengthened by the effective coordination amongst the different stakeholders involved.

Participation

A participatory approach to management is being promoted in various fields but particularly in the HBAs sector, given the perception of heritage as the shared property of communities and a factor in ensuring the sustainability of those communities. Achieving more efficient participation is one of the main goals of HBAs' representatives that should be:

- managed by local people more in mind,
- managed to meet the needs of local people,
- drew on local knowledge.

Information from the CE Countries shows that, in practice, HBAs management systems are often failing to involve local counterparts. Even when community

involvement does take place, the level of participation in decision-making and the capacity of local stakeholders actually to engage and make contributions are often limited. An effective participatory approach that delivers reciprocal benefits to the cultural property and to society depends on understanding:

- who participates in decision-making, assessment, planning, implementation and evaluation processes, and how;
- who contributes with experience, knowledge and skills, and how;
- who benefits economically, socio-culturally and psychologically, and how.

Partnership principle – stakeholders' involvement

Stakeholder involvement must be goal-oriented and refers to participation of interest groups (i.e. representatives of locally affected communities, owners, professionals, national or local government authorities, politicians, civil society organizations and businesses, citizens) in the planning or decision-making process of HBAs. Stakeholders can be defined as any group or individual who can affect or is affected by the management of HBAs. In general terms, four main stakeholder groups can be distinguished:

- stakeholders who directly benefit (beneficiaries),
- stakeholders who are negatively affected (burden),
- stakeholders who directly impact on HBAs' ecosystem (services) (e.g. land owner, resource manager);
- stakeholders who indirectly influence on HBAs' ecosystem (services) (e.g. decision maker, civil society organisation).

In HBAs we can divide the stakeholders in two main categories:

1. stakeholders by law: the institutional stakeholders that needs to be involved at the beginning of the decision-making process – essential elements (i. e. public bodies, municipalities, governmental institutions but also private owners, developers);
2. additional stakeholders: important to be involved in the decision-making process at different times and with different modalities (very broad category

presenting very different characteristics – i.e. NGOs', specialized sectoral agencies)

In order to establish a collaborative relationship, we have to consider it a strategic activity – trust, tailor making, transparency.

Pooling and optimizing resources

To delineate the sharing and optimization of resources, we started with identifying the main groups of actors involved, subdividing them into three macro-categories, and then trying to understand, for each one, what roles and resources could be put in common.

Public sector is represented by local, regional and state authorities, public institutions (such as schools, research institutions, etc.), communities, NGOs. The main competences are identification and protection of the public values, governance of social processes, urban development and decision-making. There are many other competences related to the public sector f. e. data maintenance, management of the dialogue and coordination between different stakeholders, management of the participatory processes, raising of the awareness and communication, mobilisation of resources, absorption capacity

Semi-public sector is represented by universities, associations, clusters, public-private networks, religious institutions.
Their main competences are knowledge collection and development, value identification, argumentation and mediation among stakeholders and the public sector. The procedures usually used by semi-public are education, managing and mediating of collaboration practices, training, supporting, catalysing and safeguarding self-learning and self-organization processes. Semi- public setor also provides feedbacks, critical reflection on the societal development.

Private sector is represented by enterprises, banks and financial institutions, private institutions (research, consultancy, etc.). The main competences are

decision making, making sustainable businesses, using money and other resources for achieving specific benefits, attracting the invesstors, marketing. Private sector is chracterized by capitalizing on the values, attracting the investors, blending resources in general.

Horizontal and transversal competences

Each sector has peculiar and crucial characteristics within the HBAs' governance and management. It is inevitable the creation of a gap between sectorial skills and roles; this gap can only be filled by mutual comparison and collaboration. Hence the specific skills and competences of the public, semi-public and private sectors have been clearly recognized and analysed, we have identified some horizontal or transversal competences, for which execution a shared dialogue and ongoing collaboration between the involved sectors is necessary. These competences belong to different and more complex fields including:

- environment: energy efficiency, urban heat island phenomenon, waste and water, pollution, mobility;
- society: services and facilities, cultural life and leisure facilities, identity perception, gentrification vs. mixite, accessibility, security;
- economy: tourism impact, maintenance costs, transformation costs.

We can no longer think separately and independently from others governance players; if we want to achieve a sustainable enhancement of HBAs in all its aspects (environmental, social and economic), we need to establish and coordinate a multi-actor decision-making process to guarantee urban regeneration and land management with all the aspects related2.

Trade-off mechanism principle

[2] urban processes management, technical infrastructure (sustainable energy supply, water supply, waste water cleaning and sewage systems, smart systems and smart technologies (monitoring, control, etc.); energy efficiency (lighting); transport systems and transport infrastructure (public transport services); waste management (collection, separation and reuse); social services, grey infrastructure; retail services, restaurants, hotels;urban landscape management (water management and climate change mitigation), housing (social hosing, rental housing), safety and security.

In HBAs, also the trade-off principles should be used to find the balance between conservation of the historical buildings, their use, the economic profit and the maintenance of a high level of quality in the historical city centres. The results need to find the best technical solution adjusted to the conservation prescriptions of each CE Country.

This schematic process highlights the necessity to have a shared vision between the local administration (in the role of mediator) and the different groups of stakeholders, otherwise these strategic city players cannot be in the condition to contribute and implement the HBA's sustainable enhancement strategy. In the result, the maintenance of the use and the activities cannot only depend on the public administration but must be a common (and principal) responsibility also of private owners and investors involved in the decision-making process.

From challenge to strategy

The shift in the HBAs sector from simple physical protection through a more layered approach to the management that takes into account social, economic and environmental challenges. This provides a basis for giving the HBAs a

function in the life of the community. HBAs are very often subjects of contention among multiple stakeholders, mainly in the face of rapid socio-cultural changes. This more holistic approach has made the management of HBAs all the more demanding.

The challenges of managing an HBA starting from a common framework representing the basis within the very wide range of possible governance and management systems. The challenges are defined with the problem posed and from the objectives to be achieved then end with strategic actions proposal useful for drawing up the local guidelines. See the action plan below:

Legislation

Facilitation of the development of complementary instruments and regulations for HBAs Integration across cultural Heritage's legislation and urban planning

Urban and Strategic Planning

- Planning of recurring working and updating meetings
- Involvement of different professionals in the design phase
- Planning the economic sustainability in the long term

Citizens

- Building the perception of the city as a Commons
- Organization of targeted and public meetings
- Openness to proposal for collaboration (e.g. pact of collaboration with citizens) Introduction of a participated budget

Private sector for-profit

- Involvement through meetings and workshops
- Involvement in the monitoring phase
- Creation and definition of call for ideas

Specialised Technical Bodies

Integration across information and resources:

- Best use of all information sources
- Across disciplines and sectors
- Identify major issues
- Documentation quality
- Involvement of professional associations (architects, engineers, lawyers ...)

Internal Collaboration

- Definition of more simple procedures with more rapid times
- Coordination of a sharing participation in decision-making, assessment, planning, implementation and evaluation processes

Sustainable Technology

- Evaluation of the building's value
- Drafting of a check list for the choice of the most suitable type of intervention
- Definition of common evaluation parameters such as: historical value, sustainability of the site, water management, energy and atmosphere, materials and resources, internal environmental quality, innovation in the design, territorial priority

Sustainable Tourism

- Medium and long-term planning involving different stakeholders, in particular: local businesses, associations, cultural institutions and citizens)

- Educating travellers to responsible tourism also through experiential situations

Key actions related to the main topics (challenges) – see above

Example - HBA Mikulov regeneration strategy approach

The regeneration program kicked off the process of restoring historical cities 26 years ago. A number of objects from 13th to 19th century have been managed to restore in the MPR Mikulov area (HBA), which would be destroyed or neglected without help. With some exceptions, the state of MPR Mikulov is satisfying in 2017. However, a number of objects that were restored during the early stages of the regeneration process in the 1990s require new repairs based on conceptual approach and management interventions.

Main programme goals are:

- protection and care of historical heritage
- systematic preparation, implementation and instigation of the restoration and regular maintenance of buildings in the HBA Mikulov
- restoration and maintenance of technical infrastructure
- urban and architectural care, particularly in compliance with approved regulations of spatial planning and with prudent approach in maintenance of the monument fond
- completion of the public areas with small architecture and greenery, establishment of traffic-restrained and pedestrian zones
- preparation and execution of renovation and maintenance of public areas, solutions of their equipment with architectural elements and greenery

- ensuring the care for existing and restoring of the defunct historical greenery and sensible establishment of new public green
- establishing of traffic-restrained and pedestrian zones in HBA
- recovering historical public centre of the city with appropriate business and public activities and operations focusing on the long-term concept and goals of the city
- restoration and care on the quality of natural components of the environment and its ecological stability
- encouraging the interest and willingness of the city's inhabitants to participate in regeneration - to instigate and support cultural and educational activities to expand information territory systems

Stakeholders' involvement

Although the HBA's regeneration in Mikulov has long been supported by the city's management and other institutions involved (particularly the South Moravian Region, the Ministry of Culture of the Czech Republic), HBA's management is facing a long series of problems. The overall technical status of the monument fund can be regarded as predominantly satisfying, nevertheless, it requires comprehensive care with signifiant costs for rescue services and recovery. There should be one common task for all actors both in the public and private sphere, to make an effort to a permanent conceptual revitalization of the town center, ideally with the dominance of the town's tourism services development.

Thus the stakeholders can be sorted as:

Stakeholders by law - the town of Mikulov

Additional stakeholders - South Moravian Region, Ministry of Culture of the Czech Republic, National Herritage Institute NGO's Private owners and traffic and technical infrastructure administrators

Citizens and real estate owners within HBA Mikulov

Participatory approach

HBA Mikulov has established local working group that fulfils its urban regeneration programs. The group is the cornerstone of a participatory approach to the HBA's regeneration, as well as the implementation tool of local government, participating in the development of local strategic plans, territorial and regulatory plans and creating conditions for planning and spatial protection of HBA.

In general, the participatory approach is based on cooperation in implementation of the Mikulov HBA's Regeneration Program (updated 2017), which is in line with other goals and concepts of the city development. The regeneration program is intended to provide economic, informational and organizational assistance to the city and the other owners and users of HBA's real estate.

Pooling and optimizing resources, trade-off mechanism- the general framework and the methodology

The support of the legal framework with a focus on the Mikulov HBA can be achieved mainly by implementing the local plan. The Mikulov local plan was approved by the Town Council in May 1996. Last change no. 8 was approved in June 2012. A new local plan is being developed, a proposal for joint action is available on the city's website. For urban development, including the HBA, the local plan is crucial. The HBA's regulatory plan is not yet available (will be prepared in 2019-2020).

The Mikulov City Strategic Plan (2013-2026) development of the town of Mikulov 2013-2026 was elaborated in 2013. The Strategic plan and the local plan are taken directly by the town of Mikulov. Both documentations are based on the needs of the town and at the same time the interrelation of both documents is ensured.

Mapping of the local resources

The groups of actors can be divided according to their origin and their expected relations to HBA Mikulov (financial, professional). From the origin point of view, it is possible to carry out a basic classification into public and private partners.

The technical status of monuments and their funding are generally linked key issues of the heritage conservation and urban regeneration. All the monument owners can benefit from special titles provided by the Ministry of Culture of the Czech Republic - using Programme of the regeneration of urban conservation areas and urban conservation zones (established in 1992); Emergency Programme; Architectural heritage rescue programme; Restoration Programme for Movable Cultural Monuments; Subsidies to civic associations; Support for the restoration of cultural heritage (via municipalities with extended competences – i. e. Mikulov). In case of HBA Mikulov these programmes are used besides the South Moravian Region subsidies, other EU programs and structural funds as well as grants in the form of donations. The town of Mikulov annually declares its own subsidy program to the building owners. All the competencies in the process of planning and project preparing within the HBA area are clearly defined by valid legislation.

Trade-off mechanism

In Mikulov HBA, the trade-off mechanism will be used to find a balance between preserving and using the historical heritage in a conservation area and the economic profit associated with their use (renting), and in keeping a high level quality of planning processes in the historical center of the town at the same time. The result of the trade-off selection will be in accordance with the principles of the protection of the historical heritage of the Czech Republic, which is defined by a Monument Law.

Monitoring and results

The regeneration program should be understood as an open project, which will gradually complement and evolve reflecting the current situation of the Mikulov HBA. The succession of individual sub-investment projects is difficult to unify into a fixed schedule. Since it is difficult to quantify the actual costs need to be spent on regeneration process - it is necessary to set up monitoring indicators and to launch a monitoring plan. The program's actions are planned with a view to 2022.

- current Regeneration Program of Mikulov HBA is following the previous document approved in June 2005 and its outputs are continuously documented and analysed
- actual recommended cycle for updating the regeneration program is five-year period,
- monitoring of the regeneration process is the basis of the strategic HBA Mikulov design
- one of the indicators will be the number of newly recommended projects
- total amount of funds invested in the maintenance of historical monuments will be determined

Indicators such as building-technical condition of monuments, transport solutions and availability of objectives and services within HBA, including their cost are, in general, the most monitored and prioritised indicators by the Mikulov HBA management. Monitoring of savings by introducing energy-saving measures or monitoring of insolation or greening indexes are not yet widespread, and experience of other BhENEFIT project partners will need to be used to assess the relevance of these indicators. within Mikulov HBA.

Information on the results and the fulfillment of the monitoring indicators will be carried out using modern communication tools as well as during the processing period. The principle of partnership will be respected, allowing the access to the implementation of the Mikulov regeneration program, both for professionals and so for the general public.

TRAINING B - ECONOMIC AND PROCEDURAL ASPECTS OF HBA

INTERACTIVE WORKSHOP

ADVICE TO THE TEACHER

The second teaching activity proposal offers an alternative training model suitable for skilled professionals, planners and decision makers with interest to improve their understanding and skills when working with BIM and GIS systems for enhanced sustainable HBA management. The goal is to improve their awareness and knowledge about the HBA management and IT tools designed to support the decision making for comprehensive application of HBA strategy.

Before you attempt to study or to deliver this module, please make sure that you understand the entire project BhENEFIT. For delivering this module effectively and retaining your target groups' interest you need to include, wherever you can, local examples of good or bad practice. Use also your specific professional knowledge to illustrate the points and findings arising from these presentations. You are encouraged to alter the slides according to your willingness and according to the needs of your audience.

Target groups

This module is formulated to address the highly skilled planners, managers and representatives of the key stakeholders' groups involved in the development of the Action plans supporting sustainable development of functional urban areas, with particular focus on the local decision makers.

Target groups	Description of target groups
Local public authority	Municipalities, Civil Protection.
Regional public authority	Regional Administration departments, Regional Agencies, Preservation Boards, Association of Municipalities at regional level
National public authority	National Preservation Boards
Sectoral agency	Energy Agencies, Development Agencies
Infrastructure and (public) service provider	Utility companies
Interest groups including NGOs	Cultural Associations, citizens committees, civic society associations, professional interest groups
SME	Private companies related to design and planning, constructions sector, energy sector, tourism sector, ICT sector

TASKS FOR SELF-STUDY OF THE TRAINERS

To improve the teachers' preparation, it is recommended to complete the content with national specific issues and frame conditions.

For the self-study we recommend the following:

- The BhENEFIT project's deliverables especially the strategic materials
- The materials deepening the knowledge about the concept of HBA management
- The materials deepening the knowledge about multi-actors' decision making
- The materials dealing with the assessment of HBA management with special focus on engineering and architectural features and needs
- Formal and informal instruments in respective planning culture used for optimization of HBA management performance
- National specific materials on HBA management
- The materials related to the use of GIS and BIM for HBA management
- Case studies from the local and regional areas for improved understanding of key ideas and skills for the participants

These are some other tasks we recommend you undertake:

- Discuss with others the awareness on HBA management issues within professional planners' community
- Discuss with others the context of HBA management concept's issues under specific local conditions
- Discuss with others the use of ICT when dealing with HBA management

- Discuss with others what are the main political and methodological approaches in the field of HBA management
- Survey the available books, websites, articles, technical toolkits concerning the best practice in the HBA regeneration planning
- Discuss with others and write down the lessons what to do and what not to do that you learned while researching the case studies

METHODOLOGY OF THE TRAINING

Training Objectives

Improvement of the abilities of the target group to use the available GIS and BIM technologies related to HBA management.

Goals of the teaching unit

- to develop awareness about the available ICT tools related to HBA management
- to develop awareness concerning the already existing ICT tools in planning and management of HBA sustainable development
- to develop the skills necessary for effective use of GIS and BIM technologies related to HBA management
- to mediate the best practice examples

Training Materials

- The PowerPoint presentation with the main ideas to the topic
- The text familiarizing the teacher with the basics of GIS and BIM for HBA management

Training Format

Interactive workshop

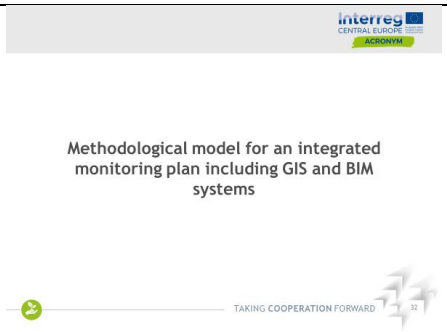
Training Methods

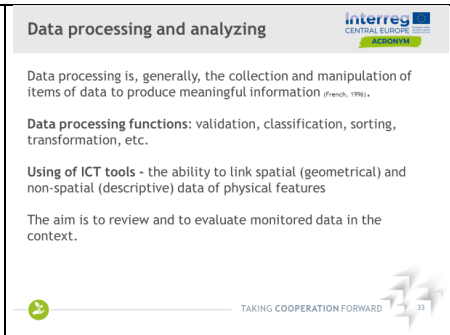
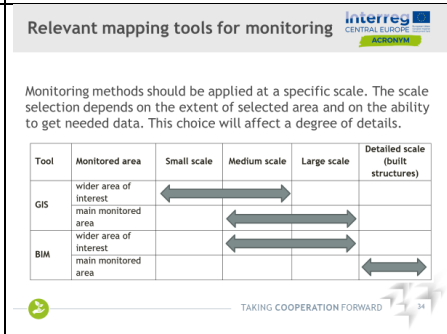
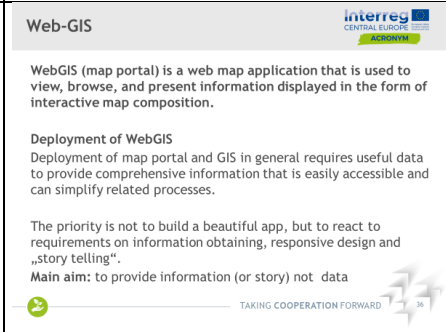
- Reading written texts
- Brainstorming
- Silent decision making
- Critical discussion
- Team work on idea development
- Explanatory interpretation exercise
- Technology-Based Learning
- Lectures & Tutorials
- Role Playing / Management Games
- Outdoor Training

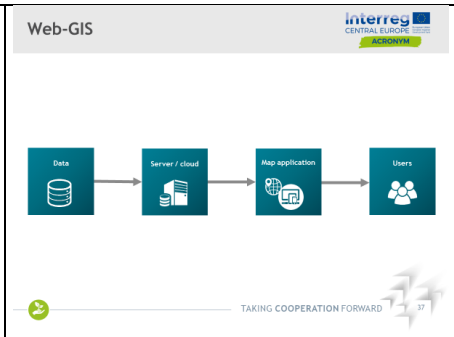
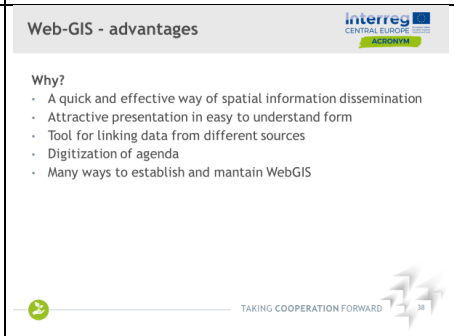
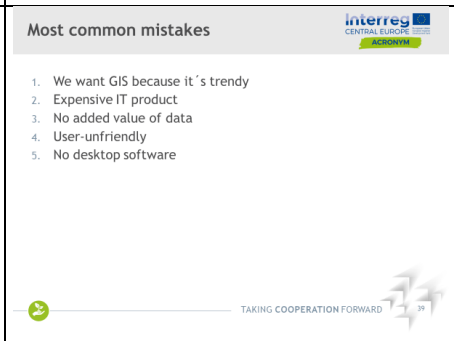
Logistics

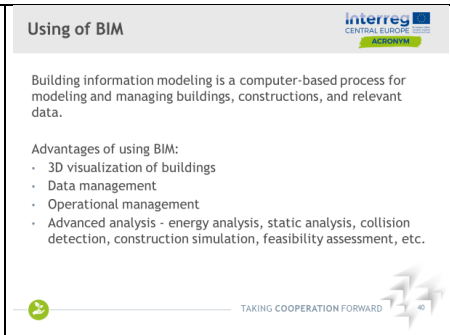
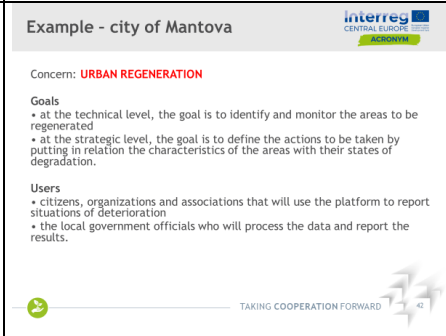
- Recommended capacity 10 trainees
- Trainers 1 leading + 1 assistant
- Room with computers with installed software necessary for ICT training OR room with tables and chairs for 10 participants where they can use their own laptops
- Wall board / Projector, Computer /PC, Tablet
- With board or flipcharts, markers 3 colours
- Time slot 3 x 50 minutes

Below, as examples, some of the steps and activities designed for training and key stakeholders' involvement on Interactive Tools are described more to the point. The training and engagement activities will be distinguished according to the different actors involved (professionals, politicians, entrepreneurs, communities,...), the specific case-study, context and facilities available.

Activity	Basic content of the activity	Comment for the teacher
1		Introducing the project, the people involved and the trainer is the first step for including people in the project. This should be immediately followed by asking people to present him/herself providing a short description of the reason why he/she is present to the event.
2		The trainer introduces the topic and content of the training – methodological model for an integrated monitoring plan including GIS and BIM. The first part is dedicated to the technical background behind the model and the second and third parts are oriented towards introducing GIS andf BIM technologies and BhENEFIT platform with example of the city of Mnatova WebGIS platform.

3		The trainer explains the reasoning behind the data processing and analysing the data. Depending on the level of technical knowledge on the technical aspects, this can be either briefly introducedor traininer can go deeper and explain the logics of what data can be used and how to process and analyse them, with particular focus on the topic of HBA management.
4		Within this slide the trainer continues discussing the existing relevant tools utilizeable for the monitoring of HBA. What is important to stress is the scale which greatly matters when selecting what tool to use. For this purpose there is the table with depiction of scales and suitable ICT tools to be used.
6		In the beginning of this slide, it is recommended to ask participants for their questions and clarifications. It is important to ensure participants are familiar with the technical background and understanding the basic ideas. This slide is introductory for the second phase in which the ICT tools are presented. Firstly GIS is introduced as well as one of its components – WebGIS.

7		In this simple diagram trainer explains the key parts of WebGIS to get participants to understand that it is a blackbox with many components and how these components are interlinked.
8		In the following two slides the advantages of using WebGIS as well as the most common mistakes are presented. It is important to explain there are many tools out there and each has its pros and cons and why the BhENEFIT project is dealing with GIS and what it allows its users (decision makers, local community, …) to do. As a complex system and ICT tool, it is prone to mistakes to be made during the use and therefore it is important to discuss these and present how to avoid them.
9		

10		The second ICT tool is BIM (Building information modelling) as a computer-based process for modeling and managing buildings, constructions, and relevant data. Similarly to GIS, it is important to discuss its use, it advantages and disadvantages as well as reason with participants why this tool had been selected and what it allows its users to do. According to the place the training takes place, it is possible to present the topics that were elaborated on during BhENEFIT project and how these were tackled using BIM. Local examples are highly recommended and welcomed.
11		The third and last part is dedicated to presentation of case studies from pilot areas of BhENEFIT project. For this training, the city of Mantova and its WebGIS had been selected. As mentioned above, we recommend using examples the trainer is the most familiar with and in ideal case that also the participants know about. For Mantova example, the case needs to be introduced making sure the participants know not only the basic geographical information, but mainly the topic and why it become so important

		to discuss the issue of urban regeneration in Mantova.
12	Web references, sources	
13		The teacher should change the final slide by - adding the link to national web of the project - replacing the picture by the picture from the model area - adding own logo in the bottom of the slide

Annex: Methodological model for an integrated monitoring plan including GIS and BIM system

The role of monitoring is as one component of management. According to the UNESCO Recommendations, monitoring is assumed as a necessary and sufficient condition for programming, obtaining through direct observations, useful information to predict, and then to decide in advance. The term "monitoring" has its origin in the industrial field, indicating the continuous control over a machine in operation, using special instruments that measure the characteristic parameters like speed, consumption, production, etc. (UNESCO, 2015; Ciocia, Napolitano, & Viola, 2013).

Within BhENEFIT project, the monitoring in HBA can be explained as the continuous controlling process over selected historic structures in transformation, aimed at structural and functional indicators using ICT tools.

Monitoring involves assessing the condition of the historic area and may lead to recommendations that outline the requirements for conservation and to management activity that results in work carried out. Monitoring is essential to understanding a problem before any remedial action is attempted (Department of Conservation, 2003). This work can be an investment in the future

management of the historic urban area. Decisions must be based on detailed knowledge about relevant territory.
A monitoring system in HBA depends on specific conditions due to reasons for monitoring. It is important to follow defined main interests and objectives (strategic approach). The goal is to get data that will be evaluated contextually and show potentials, key problems, and differential comparison.
Methodological model for an integrated monitoring plan describes the steps of the monitoring process in more concrete details that include proposals for an efficient and effective monitoring system. It describes why monitoring is needed, what is possible to monitor, who is active in the monitoring process and briefly described possibilities for monitoring. Methodological model is focused on the more detailed description of how to implement monitoring and steps in it.

The first stage consists of the definition of:

- Main interests (topics for monitoring)
- Selection of data for monitoring (indicative list of available data and needed data)
- Role definition (description of active parties)

1. Data collecting

1.1. Selection of the monitored area

Demarcation of interest area is an essential step for efficient monitoring. Data should be collected for a specific area. The extent of this area is individual and may vary in size. It is possible to select an extent for the main monitored area and for wider area of interest.
The extent of selected area may affect a definition of the degree of detail (monitoring scale) and access to data. These two factors must be taken into account.
The main monitored area can be defined as one building, several building, compact historic building block, compact historic area, or separate areas.

1.2. Description and selection of methods

Almost every research in an early stage begins with the desk research method. Desk research is basically involved in collecting data from existing resources (currently available data, historical records, archaeological records, photography, geometric plans, …) hence it is often considered a low-cost technique as compared to field research. This method requires a relevant knowledge of researcher. Desk research is very effective in starting phase and a base for next monitoring procedures. The output is a wide range of collected information.

Next useful method is a creating and completing of forms or standard checklists based on site visit, familiar information, recorded observations, photographs, or on the output of desk research. The monitoring forms comprise a series of boxes promoting the collection of structured information, together with free-format fields chosen to reflect the particular characteristic of monitored subjects. The output is a structured database of descriptive information about monitored subjects (buildings, areas, constructions, …).

The monitoring requires the acquisition of some new necessary using measuring methods. These methods include remote sensing, measurement of energy flows, statistical and technical measurements using some sensors and meters.
Some monitoring objectives can require a cooperation with the public to get some data about the selected area. This method is called the crowdsourcing. It consists of using people as living sensors. It requires some interactive actions such as questionnaire survey, information submitting via the Internet, social media or smartphone apps.

1.3. How to identify a right scale for monitoring

Monitoring methods should be applied at a specific scale. The scale selection depends on the extent of selected area and on the ability to get needed data. This choice will affect a degree of details. The more accurate information on existing

objects may lead to an optimal design of monument restoration. Some information related to the scale for monitoring are part of DT221.
Relevant tools for monitoring according to scale are specified in table 1.

Table 1: Relevant mapping tools

Tool	Monitored area	Small scale	Medium scale	Large scale	Detailed scale (built structures)
GIS	wider area of interest	←	—	→	
	main monitored area		←	—	→
BIM	wider area of interest		←	—	→
	main monitored area				↔

2. Data processing and analyzing

Data processing is, generally, the collection and manipulation of items of data to produce meaningful information (French, 1996).

2.1. Data processing functions

Data processing may involve various processes, including:

- Validation – Ensuring that supplied data is correct and relevant.
- Sorting – arranging items in some sequence and/or in different sets.
- Summarization – reducing detail data to its main points.
- Aggregation – combining multiple pieces of data.
- Analysis – the collection, organization, analysis, interpretation, and presentation of data.
- Reporting – list detail or summary data or computed information.
- Classification – separation of data into various categories.

- Transformation - converting data or information from the format of a source system into the required format of a new destination system

2.2. Data processing requirements

Data and information collected in the previous stage must be processed to provide clear and comprehensive information. This process uses different processing functions. The aim is to review and to evaluate monitored data in the context.
For example, contextual evaluation for energy efficiency is a result of the comparative analysis that uses data about measured energy consumption recalculated per building volume, floor area, number of inhabitants/occupants, etc. Then the output can be used as an energy rating of buildings.
It is important to follow indicators that will show gaps or problems and prove the necessary interventions. This procedure requires to find tolerance ranges and the threshold level, and to use some database operations such as query and statistical analysis.

3. Using of ICT tools

BhENEFIT deliverable declares a potential of modern digital technologies such as Geographical Information Systems (GIS) and Building Information Modelling (BIM) to provide a clear information, identify vulnerabilities, measure and register changes, and to process comparative analyses. The main advantage is the ability to link spatial (geometrical) and non-spatial (descriptive) data of physical features. It allows knowing the conditions of the object practically with one click on the map or model.

3.1 Using of GIS

A geographic information system (GIS) is a computer-based tool for mapping and analyzing spatial objects and data within some territory. GIS uses a wide range of processing functions that can be divided into location-based and analytical.

Location-based functions provide the identification or estimation of the real-world geographic location of some objects. For spatial data creation is commonly used placement of new features (polygons, polylines, points) directly into the map with geographic coordinates. Next examples of most used location-based functions are:

- Geocoding - This process assigns geographic locations to features directly from attribute data that contain locational information within a data file. There are two types of geocoding: coordinate locations and address matching.

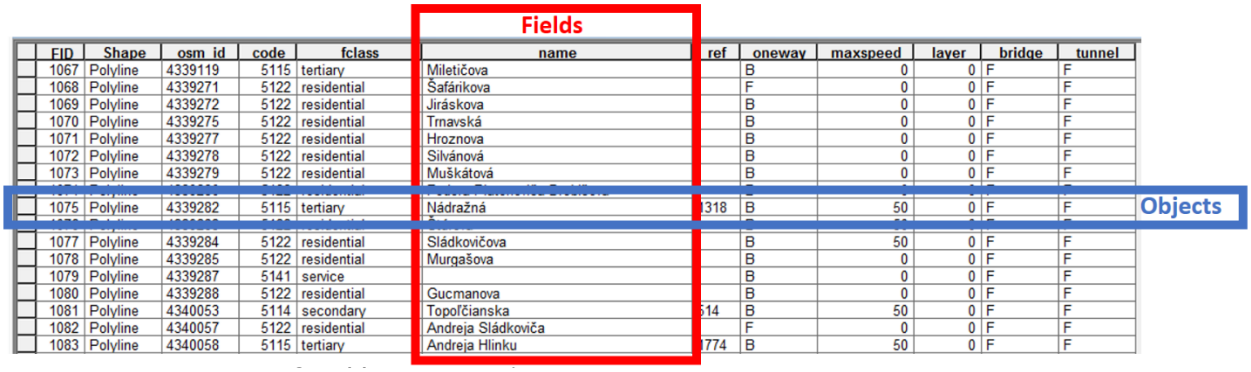
- Georeferencing of raster data - Any image can be entered into a GIS, but to be useful, the image needs to be placed in its proper geographic location. Georeferencing aligns images to their spatial location.

- Georeferencing of vector data – a similar process like with images, but with vectorized data such as CAD outputs.

- Spatial adjustment – This function is used when some spatial features are located with wrong coordinates.

Analytical functions work with located features and integrate a wide range of query, statistical and spatial analyst tools. Outputs can include new generated spatial data or new attributes assigned to existing data.
Spatial data is displayed as objects with a geographical location in the form of points, lines, and polygons (areas) to which descriptive information is attached in the form of attributes. Attributes are visualized in the table, to every single object is assigned one line and characteristic information is sorted in columns that are called fields (see picture below).

Picture 1: Example of attribute table in GIS



FID	Shape	osm_id	code	fclass	name	ref	oneway	maxspeed	layer	bridge	tunnel
1067	Polyline	4339119	5115	tertiary	Miletičova		B	0	0	F	F
1068	Polyline	4339271	5122	residential	Šafárikova		F	0	0	F	F
1069	Polyline	4339272	5122	residential	Jiráskova		B	0	0	F	F
1070	Polyline	4339275	5122	residential	Trnavská		B	0	0	F	F
1071	Polyline	4339277	5122	residential	Hroznova		B	0	0	F	F
1072	Polyline	4339278	5122	residential	Silvánová		B	0	0	F	F
1073	Polyline	4339279	5122	residential	Muškátová		B	0	0	F	F
1075	Polyline	4339282	5115	tertiary	Nádražná	1318	B	50	0	F	F
1077	Polyline	4339284	5122	residential	Sládkovičova		B	50	0	F	F
1078	Polyline	4339285	5122	residential	Murgašova		B	0	0	F	F
1079	Polyline	4339287	5141	service			B	0	0	F	F
1080	Polyline	4339288	5122	residential	Gucmanova		B	0	0	F	F
1081	Polyline	4340053	5114	secondary	Topoľčianska	514	B	50	0	F	F
1082	Polyline	4340057	5122	residential	Andreja Sládkoviča		F	0	0	F	F
1083	Polyline	4340058	5115	tertiary	Andreja Hlinku	1774	B	50	0	F	F

- some data for every object inserted in the map, shown when the user click on the object
- a toolbar: zoom in, zoom out, save the map, measure, etc., or other tools according to the purposes of the platform

Objects shown in the map can be polygons, polylines or points. The web GIS application can be obtained through different commercial solution, for example ESRI technology or GIS CLOUD.

3.2 Using of BIM

Building information modeling is a computer-based process for modeling and managing buildings, constructions, and relevant data. Many users and software developers stop at the first benefit of BIM. They consider BIM to be a kind of glorified computer-aided design (CAD). Traditional CAD applications are based on tools for drawing 2D drawings or creating geometric 3D models. BIM offers a new way of working using intelligent elements of the information model and helps to reduce costs and accelerate construction schedules (Taylor, 2017; CAD studio, 2018). The most used formats for BIM projects are .rvt or .dxf.

BIM uses processing functions that can be divided into modeling and analytical. Modelling functions allow creating a model of the building and detailed elements of objects and spaces. Analytical functions include tools for processes such as calculating areas, energy consumption, structural properties, simulation of building performance, etc.

Using BIM as a software application gives users the following advantages:

- 3D visualization of buildings
- Data management - different kinds of project data (schedules, photos, scans of handwritten notes), Building Document Management, Project Data Management
- Operational management - check building performance over the lifetime of a building
- Advanced analysis - energy analysis, static analysis, collision detection, coordination, construction simulation, feasibility assessment, mechanical simulation, airflow, thermal comfort, etc.

BhENEFIT platform

Each platform hosts general data and specific data.

- general data
- cartographic basis: Who will use the platform? Depending on this, the basic map will be displayed on:

  technical map: Cadastral Cards, topographical maps, etc.

  user friendly map: general reference map (e.g. Google Maps, tourist maps, etc.)

- general information about location, for example data that help people in orientation, or property of the buildings (private or public), etc.
- specific data
- thematic layers: information on specific topics depending on the goals and the purposes of the platform.

Example – City of Mantova

In the city of Mantova, the pilot action concerns the urban regeneration. According to the regional law, the concept of urban regeneration is declined as

a coordinated set of urban, building, environmental and socio-economic interventions aimed to reduce the degradation of specific urban areas.

Goals

- at technical level, the goal is to identify and monitor the areas to be regenerated
- at the strategic level, the goal is to define the actions to be taken by putting in relation the characteristics of the areas with their states of degradation.

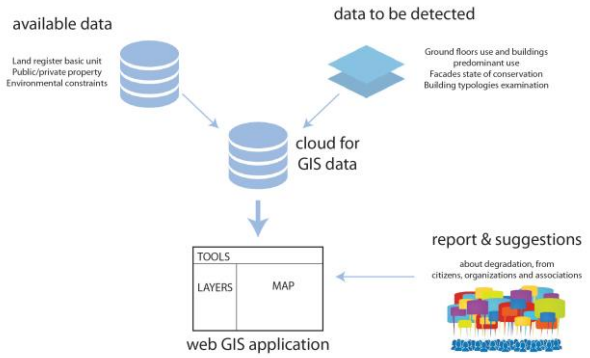
Users

The users of the platform are:

- citizens, organizations and associations that will use the platform to report situations of deterioration. The reporting will be made through the compilation of a form, which will populate the GIS database in order to better understand the different levels of perceived degradation.
- local government officials who will process the data and report the results.

Both categories of users can consult the map or add information on the map. PA technician will verify data inserted by citizens, organizations and associations.

Data Collection



Data are collected in three different way:

- some data are already available and constantly updated and monitored, as for example public and private property
- some other data are to be collected from scratch like ground floor usage, or buildings predominant usage, or the state of conservations of facades overlooking public spaces
- finally data about decay are collected from a specific form which will be submitted by people non-member of PA (citizens, organizations and associations).

Final result

- obtain a map which represent the perceptions of degradation from people
- after crossing the perception map with technical data, define which an where are the regeneration area and plan concrete actions.
- monitor the areas before and after urban regeneration projects.

BIOGRAPHIC REFERENCES

Reports

Web sources