

Topics		Target groups	
		Craftsmen / Construction company	Refurbishment designers
LP1	Cultural Heritage and Historic Constructions		
LP1.1.	Introduction into cultural heritage buildings	cultural heritage, legal framework, building typology, reference to practice	Definitions of cultural heritage, Built cultural heritage in BSR, Historical building periods (masonry construction buildings), Typology of buildings, Valuable features of historical buildings
LP1.2.	The history of brick masonry construction	building materials, comparison to modern ones, tolerance with modern materials	Historic development of masonry construction in BSR, Historic periods of brickwork construction (Gothic, Renaissance, Baroque, Classicism, Historicism, Functionalism)
LP1.3.	Preserving brick masonry heritage: problems and lessons learned	suitable and tolerable techniques, risky techniques, learning from practice examples	Physical characteristics of historic brick masonry in the BSR, Preservation with respect to authenticity, Basic methods of treatment of historic brick structures in the BSR (Rebuilding, Restoration, Conservation, Provisional conservation), Need of conservation today
LP1.4.	Damage pattern of historic masonry construction	damage patterns and causes, interrelations, holistic approach of demonstration buildings	The main causes of damage of historic masonry construction, Damage effects of moisture, Types of moisture in masonry constructions, Measures of protecting brick masonry from different types of moisture, Elimination of damage causes and restoration techniques for damaged brick masonry

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LP2	Energy Efficient Refurbishment Measures and Technical Services		
LP2.1.	Introduction and overview of energy efficient measures	suitable and tolerable techniques, practice examples, catalogue of techniques, decision making process using practice examples	
	Thermal conductivity and moisture regimen and computer software for calculation of it		Norms for building insulation (EN, ISO, DIN, STR); Physical-insulating parameters of building materials of historic buildings; Calculation of thermal conductivity of different structure parts of the buildings (Exterior walls, Roofs, Exterior walls insulated from inside, Floor and entablatures); Typical frost-bridges and modeling of it; Calculation of moisture regimen; Condensate, mould and fungus potential; Modeling indoor climate conditions with computer software; Modeling energetic effectiveness of the building; Practical examples of calculations of thermal insulation from inside the building
	Air tightness and indoor climate	practice examples from WP4, interrelations between building envelope and indoor climate	
	Analysis of weak points - workshop-	overview of possible weak points, physical and chemical basics	

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LP2.2.	Refurbishment measures of historic masonry construction		Breathable internal wall insulation system for solid walls to reduce heat and energy loss (particularly on historic structures or where facades cannot be altered); Internal wall insulation process description; iQ-Therm system, it's application; New insulation material (GAMO thermal cottonwool, Vacupor & etc.); Material for heritage building renovation; Building renovation examples in BSR countries
	Special features of construction and installation works of historic buildings		
	Internal insulation with mineral foam boards	properties of material, processing, physical basics	
	Internal insulation with calcium silicate boards	properties of material, processing, physical basics	
	Energy Efficient Refurbishment of roof construction from inside -theory-	history of roof constructions, materials, carpentry, dry construction work	
	Energy Efficient Refurbishment of roof construction from inside -practical unit-	materials, carpentry, dry construction work	
	Energy Efficient Refurbishment of roof construction from outside -theory-	history of roof constructions, materials, carpentry, dry construction work	
	Energy Efficient Refurbishment of roof construction from outside -practical unit-	materials, carpentry, dry construction work	

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LP2.3.	Life cycle of the buildings from the energy consumption perspective		LCA definition, origin and application; Rules of LCA; Main phase and stages of LCA; Principled scheme of building LCA; Segmentation of building into elements and materials; The phases of LC (creation, usage and destruction-evaluation of re-use); Interpretation of results; The algorithm of building LCA; Examples of LCA
LP2.4.	Innovative heating systems and usage of it in historic building (Preferably: Building systems including heating, ventilation and those history)		Types of traditional heating systems, loss of energy in these methods; Innovative heating systems (heat pumps, solar heating, radiation heating); Overview of innovative heating solutions; Application examples of different heating systems in historic buildings (to make the heating more effective)

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LP3	Quality management and work planning		
LP3.1.	Management stages of construction projects, planning of the refurbishment process		Management stages of construction projects, planning of the refurbishment process
	3.1.1. Building audit, condition survey and Energy audit		Building audit, condition survey and Energy audit
	3.1.2. Planning of a building modernisation according to needs of a customer and laws (and reuse possibilities by renovation)		Planning of a building modernisation according to needs of a customer and laws (and reuse possibilities by renovation)
	3.1.3. Documentation and design of a building		Documentation and design of a building
	3.1.4. Modernisation of a building		Modernisation of a building
	3.1.5. Building exploitation (Occupancy / maintenance stage?)		Building exploitation (Occupancy / maintenance stage?)
	3.1.6. Quality assurance and work planning	responsibility as a craftsman, responsibility as a company, coordination, communication, controlling, (self-)discipline, work planning and execution work, product choice	
LP3.2.	Public procurement in construction market		Manners of public procurement regulating selection of construction contractors; Selection of qualification indicators assessed by construction contractors; Inspection of qualification of construction contractors; Indicators for assessment of construction contractors; Selection of construction contractors
LP3.3.	Evaluation of rationality of investment (pay-back?)		Construction sites participants in the investment business; Investor demand and user needs; Review of methods of investment performance detection; Energy efficiency rating, economic benefit to the user rating; Economical investment project evaluation

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LP4	Market opportunities		
LP.4.1	Analysis of [Country] Construction market		Activity indexes of [Country] construction sector; Development tendencies of the construction sector in [Country]; Factors influencing the volume of the construction sector; Changes in [Country] construction sector; Usage of new building materials and technologies in construction sector; Perspectives of the construction sector in [Country]
	Market opportunities for building companies	market development in the BSR, working abroad and with international partners	
LP4.2.	Construction ware (materials?) and products used for renewal of historical buildings		Historical evolution of building masonry ceramics produced in [Country]; Main building ceramics companies in [Country] and their produce; Building ceramics production used for renovation of historical buildings; Assortment of produced ceramic bricks and blocks; Construction ware used for renewal of historical buildings in Baltic Sea region
LP4.3.	Usage of local constructional material in Baltic States		Main mineral raw material used in [Country]; Clay, gravel and sand mines and their usage in construction sector; Other mineral raw material (dolomite, limestone, marl); Usage of local material for building ware production used for renewal of historical buildings; Types of building walls made from local ceramic material and their peculiarity
LP4.4.	Reguirement of building energy efficiency in [Country]		Distribution of construction and renovation of new residential buildings in [Country]; Directive requirements for building energy saving and heat preservation; Requirements of LR Law on Construction for building energy efficiency; Main technical regulations concerning building energy efficiency; Implementation of building energy efficiency requirements in [Country]