PGI01482 - REBUS

Renovation for Energy efficient BUildingS

CONTEXT ANALYSIS – Borsod-Abaúj-Zemplén County Development Agency (Former NORDA Regional Development Agency of North-Hungary)

I. Introduction to the Context Analysis

REBUS develops an Energy Renovation Path (ERP) to assist the public sector by providing means and instruments to undertake efficient renovation works of their public building stock, thus saving energy and public resources. REBUS uses interregional exchange among more and less developed regions to identify experiences to be included in the ERP.

Experiences refer to energy efficiency renovations in public buildings, with focus on 4 topics outlined in the table below:

ERP – the 4 topics	
Topics	**Issues to be addressed**
PLANNING	**Identification of building for renovation (prioritisation, data collection):** → *Lack of reliable information, skills and effective decision-making structures hinders the process of prioritising buildings to be renovated.*
IMPLEMENTING	**Tendering & Financing: procurement rules, funding schemes available (including ESCO contracts/investments/grants):** → *Affecting public tender process and subsequent works*
MONITORING	**Tools available on the market, means of verification:** → *Leading to difficulties in selecting/using tools that can monitor impact and consumption*
HORIZONTAL THEME: CAPACITY BUILDING	**Capacity building schemes for civil servants:** → *Raise awareness and build skills on energy related issues among civil servants involved in the management of the building stock (i.e. those working in spatial planning and legal departments)*

The process towards designing the ERP foresees 3 main steps:

1. The 1st step (M1-8) focuses on the identification of experiences.
2. The 2nd step (M8-34) focuses on Good Practice selection.
3. The 3rd step (M18-36) focuses on Action Plan development.

The Context analysis is developed within Step 1 of the process. The purpose of this Context analysis is to gain an in-depth understanding of current regional procedures for planning, implementing and monitoring renovation works in public buildings. The horizontal theme of capacity building is also addressed. State of the art, relevant experiences and needs are identified for each of the 4 topics addressed. The analysis should support partners in the selection of relevant GPs and Action Plan development during step 2 and 3 of the project.

All partners should complete the document on the basis of the template provided below and in close cooperation with their Local Stakeholders Group.

For each topic, the following sections should be completed with requested information (max 3-4 pages per topic):

- **state of the art**: please focus on current procedures in your territory, provide a brief description of the main characteristics, as well as points of strength and weaknesses.
- **relevant experiences**: information on existing experienced in each of the 4 topics should be provided. Experiences could be linked to the territorial situation, but not limited to it. If partners are aware of relevant examples outside their area, they should include them too. Some parts of the section are compulsory, while others might only be completed if information is available (in this case the experience might be considered as a Good Practice). The different paragraphs to be filled in will guide partners in the process of description/identification.

  Experiences could be linked to information provided in State of the Art (e.g. strategy documents that have proved successful).
- **needs**: a critical look at each territory, in order to stress the main points of concerns regarding each specific topic (i.e. challenges that partners hope the address thanks to the ERP).
- **link with policy instrument** selected during the application stage: connections between the local situation in each topic and the policy instrument addressed should be identified, in order to understand the context in which the policy instrument operates. If there is no link, this should also be highlighted; this could provide input to potential improvement of the policy instrument.

The main objective is that of developing a clear and simple document, comparable among partners. Partners will have the opportunity (during project meetings, bilateral exchange rounds and further analysis) to go into further detail on the information provided here.

II. Context Analysis Overview

After completing all the information for each of the 4 topics, please try to summarise the main points in the following table.

	Topic 1: PLANNING	**Topic 2: IMPLEMENTING**	**Topic 3: MONITORING**	**Topic 4: HORIZONTAL THEME - CAPACITY BUILDING**
State of the art	Criteria defining the scope of the priority list of buildings to be renovated: - Legal background, e.g. conservation, regulations, construction and energy efficiency legislation, LXXVIII of 1997. Law Building Act - consumption survey, analysis - ownership intentions (political expediency) - preparing energy saving plans are mandatory task for public buildings - Involvement of energy expert in yearly energy consumption analysis is compulsory for public buildings - available funding sources - Indicators to be met Data collection methods: - on-site survey - Miskolc has a record of its public building stock - "NEÉR" system Responsible bodies:	- Procurement practices change too often (almost can be called a "chaos") and is therefore almost impossible to follow even for the experts - E-GPP is a general practice, but it has not spread widely due to technical conditions (e-signature) and partly because of attitudes Responsible bodies: - municipal council - management organization + technical controller There are standard procedures but they are too broad and general	- Monitoring is a weak point in investments. The data collection and analysis after energy efficiency and renewable enregy projects are not in the focus of the investors. - There are only a few good example for monitoring (at least not many actors are aware of their existence) - There are no complex systems; e.g. in case of a call for applications, an energy certificate about the final state is sufficient - No innovative tools, no funding sources -	- training for building users is not a common practice yet, but e.g. mandatory training for building users (in TOP 3.2.1) but with very limited budget: approx. 100 000 Ft (approx. 300 EUR/training) - On county and city level, there are funding possibilities in the frame of Territorial Operational Programme (TOP) and Rural Development Programme -

	- owner - operator Costs specifically attributable to design are very low approx. 1%			
Relevant experiences	- Utility maps were prepared in 1980 since then data is not updated - Preparation lacks resources (in general planning/design costs are reimbursed only) - From the municipality point of view, design costs are high - Prior to the execution, tasks are time-consuming (e.g. approval process, conduct public procurement) - Profitability assessment has key importance in the case of renewable energies (income-generating projects, therefore funding is lower) - Local or regional SEAP/SECAP is a relevant tool for strategic planning	Experiences in GREEN PROCA project: - High level of interest in municipalities on green solutions - Lack of knowledge and confidence on available green and innovative technologies - Lack of knowledge on GPP and innovative PP - Lack of capacity (human capacity, time for longer and more difficult decision making) for implementing green public procurements	- Monitoring methodology of SEAP/SECAP is adaptable for monitoring of the effect of development projects - Energy Performance Certification of buildings is a useful and exact tool for monitoring. - Independent experts	- Development of National Climate Adaptation Network project (CLIM-NET/HUN) http://www.dipolcsoport.org/klimatudatos-hu - Training on local energy management for municipalities is a possibility for sustainable development projects. - Targeting new groups (e.g. social sectors) with energy related trainings could help spread out the information on smart energy use and green technologies.
Needs	- Miskolc needs a city-level coordinator for energy efficient type of renovations - City-level database of updated and relevant information - Building management system	- Common agreement on the definition of green public procurement and innovative procurement - Trainings for public purchasers and other stakeholders involved in public	- Smart meters in an online system - Involvement of independent experts in the monitoring phase is necessary - Building management systems, building energy complex	- Reform of professional training system (e.g. for architects, electrical engineers) building engineer is the only appropriate base - Up-to-date knowledge in the training system of vocational

	(complex, automated, e.g. smart management) - More funding would be necessary - Solar cadastre (solar capacity analysis) GP "Solar cadastre for the City of Vienna » http://www.energycity2013.eu/pages/results/knowledge-and-information-base-repository/best-practice/solar-cadastre-for-the-city-of-vienna.php - Prioritize innovative solutions	procurements (e.g. planning offices, investment departments etc.) - Strong cooperation between different stakeholders - Easy to use decision making tools in GPP and innovative PP processes	system to be eligible for funding - awareness raising, changing attitudes for users - Energy audit and/or Energy Performance Certification of buildings and long term follow up of energy consumption is necessary both in preparation and in monitoring phase	schools - Local energy management trainings for municipalities - Energy advisor trainings for social sector

III. Topic 1: PLANNING - Prioritisation of Buildings

a. STATE OF THE ART

Please state the regulatory context regarding the planning phase, in terms of building selection criteria and data collection

In the 2014-2020 programming period, planning in Hungary can be referred to national, county, and local levels (no regional).

Main national-level legal documents concerning renovation of public buildings are the following:

- Act LXXVIII of 1997 on the Development and Protection of the Built Environment;
- Decree No. 253 of 1997 (XII. 20.) of the Government on National Urban Development and Building Requirements;
- Minister without Portfolio's Decree No. 7/2006. (V. 24.) on the energy characteristics of buildings; it describes the terms and definitions in relation with energy performance of buildings, and describes in detail the methodology for building energy calculations and sets the minimum requirements for new buildings and major renovations. According to the EPBD recast, new terms and requirements were added into the Hungarian 7/2006. Decree. **The main changes related to nearly zero energy buildings, and requirements accordingly the cost optimal level;**
- Member States have to define the classification of the energy consumption of buildings, i.e. the energy performance level. The quantitative values for energy performance levels of buildings are set in Government Decree 176/2008. (VI. 30.);
- Government Decree No. 1246/2013 of 30 April 2013 on the energy performance requirements applicable to buildings and establishing cost-optimal levels of minimum energy performance requirements in accordance with Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings;
- Decree No. 54 of 2014. (XII.5.) of the Ministry of Interior on National Fire Protection Regulations.
- **Act LVII. 2015 on Energy Efficiency and Decree No. 122/2015 of the Government on the implementation of the Act on Energy Efficiency**; the regulation declares several objectives for the maintenance bodies of public buildings. Public buildings in ownership of Central Government have to be refurbished by 3% per year (based on the used floor area of the buildings). Owners of public buildings (both: central and local governments) are obligated to publish energy saving plans for next 5 years and deliver the plans to the National Energy Experts Network. (Although the network still doesn't works in February 2017) The Central Government is obligated to build in energy efficiency aspects in their public procurement procedures. The National Energy Experts Network is ordered to provide online database tool and the maintenance bodies of public buildings are obligated to provide the yearly energy consumption data of buildings via this tool. (The tool still doesn't work in February 2017.) The owners/maintenance bodies of buildings over a certain energy consumption (100 000 m3 natural gas or 40 000 kWh electricity) are obligated to hire energy referent expert in order to register and analyze the consumption and seeking possible savings in the system.

Relevant ***strategic documents, action plans:***

- **National Building Energy Performance Strategy** (NAPEBS) (Commissioned by the Ministry of National Development and drawn up by ÉMI Non-Profit LLC. for Quality Control and Innovation in Building)

The NAPEBS was adopted by Government Decree No. 1073/2015 of 25 February 2015.

- **Hungary's National Energy Efficiency Action Plan until 2020** - Mandatory reporting under Article 24(2) of Directive 2012/27/EU of the European Parliament and of the Council on energy efficiency (August 2015)

The Third National Energy Efficiency Action Plan of Hungary (the 'NEEAP III') was developed in parallel with the National Building Energy Performance Strategy. The NEEAP III builds on the energy performance profile analysis provided in the NABEPS and is in line with other strategic documents currently under review, the proposed target for energy savings in buildings as well as the support programmes envisaged for the 2014–2020 period. The NEEAP III lists the institutional and structural measures required for the implementation of the NABEPS as well as the relevant monitoring tasks in detail.

The National Building Energy Performance Strategy *defines measures in three areas:*

1. Achieving energy savings for the existing stock of buildings;
2. Tightening and reviewing requirements concerning new buildings and renovations of buildings;
3. Research, development, demonstration, innovation, knowledge, training, information.

On county level, the core planning document is the Integrated Territorial Programme (ITP) based on the County Development Operational Programme Decision no. 51/2014. (IX. 17.) and Borsod-Abaúj-Zemplén County Integrated Territorial Development Programme Decision no. 54/2016. (IX.15.).

According to the database of the Hungarian National Asset Management Ltd., there are approx. 12 000 public buildings in Hungary. The building stock of municipal institutions is rather old: two-thirds of the buildings were constructed prior to 1976, 15% prior to the 20th century.

Although as we can see that recently there has been significant steps taken towards systematic planning activities, however, according to **general practice**, prioritization of buildings owned/managed by public institutions and public buildings under municipal jurisdiction the primary aspect that is taken into consideration is still mainly political considerations and only secondarily professional. Up to recent years, there was no particular concept to follow, mostly due to lack of reliable and up-to-date data and lack of necessary resources.

Nevertheless, a few good examples can be traced on local level (e.g. XY municipality regularly fills in a simple Excel file on consumption, costs, minor technical parameters of the buildings and the mayor asks for the designer/energy expert' opinion to set up the rankings).

Basically there is a need for so called facility managers in the public sector as well, who professionally assess and establish a ranking list according to the relevant technical condition of these buildings. Currently it's not a relevant experience.

Although necessary background already exists in Hungary regarding facility management education (e.g. Pécs, Debrecen, Miskolc (energy studies), but generally speaking these graduated professionals do not get hired in the public sector.

Nevertheless, in the private sector larger companies hire such experts, who do everything from minor renovations to major investments.

Who is/are the body(ies) in charge of designing, managing and implementing the process?	The appointed engineering team (with chamber of architects membership, and who participates in mandatory trainings) who undertakes these tasks. This ensures that a high quality process is carried out.
What tools are available for data collection?	Existing plans/design documentation, survey plan (if there are no existing plans, then engineering specialists develop the plans following an on-site inspection) and there is also the classical local telling/explanations. The common standard methodology of energy performance certification of buildings is suitable for providing reliable data about the buildings. The building certifications are collected in the documentation centre of Lajos Lechner Knowledge Centre, and when they are performed as part of an application form (e.g. for Operational Programs) the management body of the applications preserves the documents. The collected data are no available for the public. The methodology of SECAP is also suitable for collecting the energy consumption data of public buildings. The data consumption methodology of Display Campaign (http://www.display-campaign.org/) is available for the European municipalities, but the costs of the software fee makes it unpopular in Hungary. Currently there is no standard data-collection methods applied; each case is unique and different.
What funding / budget are available for planning?	Up to 2014, planning costs were incorporated in the applications. The max. cost that could be calculated were 6% of the total investment costs. This contained the planning fees, preparation costs, including public procurement (in an optimal case, only 3% remained for purely planning activities, which is a pity, since all other related activities should be built around a proper planning! As of 2015, this rate was reduced to 5%, but excludes the public procurement costs. Nevertheless, the situation has not improved. In fact, there should be a basic, dedicated budget for renovation works in the public sector, including planning. It is a general problem, that in case of applications for funding, costs are usually reimbursed, which makes it difficult to carry out proper planning, since architects must wait for their payments (in very rare cases, municipalities are able to pay upfront). Proposed solution: each municipality should have an annual, dedicated budget for properly assessing their buildings and financing plans. It is worth mentioning that where there is money, this tendency has already started.
Other comments:	Although there is an already existing framework for systematically collecting data on public building stock (starting from 2013 and few changes have been carried out already), however the reliability of this data is highly depending on the professional knowledge of the person who fills it in. The basic problem is, that currently there are three determining specialization, which makes it possible for professionals to obtain an energy expert degree by retraining, or advanced studies. These professions are: architects, building engineers and electrical engineers. The suggestion is that out of these three

specialties, only building engineers should be able to obtain such degree, since the curricula of the other two does not contain such important basic elements as e.g. energy background calculations. Therefore, we can conclude that from the general planner/designer point of view - due to the above mentioned hindrances -, the current planning system does not reflect the optimal level.

a. RELEVANT EXPERIENCES

EXPERIENCE n°1 *(please copy all sections for each different experience)*

Sections marked with (*) are compulsory, while the rest can be left blank if no information is available. Relevant experiences identified will be investigated further afterwards in order to understand if some of them could also be considered as Good Practices.

Title(*)	*Sustainable Energy Action Plan in District XVIII. Budapest*
Geographical coverage (i.e. local/ regional/ national) (*)	Local
Please describe the main features of this experience (e.g. objective, characteristics) (*)	The municipality of District XVIII. Budapest recognized the importance of strategic planning in energy management of the district and retrofit of the buildings in public and private sector. The main objectives of the planning were to get an exact overview about the energy consumption of the settlement, especially, to get information about the energy saving potentials in different sectors and to have a clear picture of the needs of retrofit in the public buildings owned by the municipality. The municipality joined to the Covenant of Mayors in 2014 and, in cooperation with external experts, started to elaborate the Sustainable Energy Action Plan of the city. The Plan was published in February 2015 on the website of the CoM. The target of reduction of CO2-emission is 20% by 2020. Based on the Action Plan the municipality ranked the public buildings in order of necessity of energy refurbishment. The plan helped to in the financing period and based on it several institutions were retrofitted in the next years.
Available budget (*)	The budget of planning was cca. 8000 EUR
Other comments /links	http://www.covenantofmayors.eu/about/signatories_en.html?city_id=6883&seap

Availability of results

Please describe: *- What were the main problems (in terms of energy efficiency) to tackle? (*)* *- What are the key innovative energy efficiency measures undertaken through the renovation? (*)* *- What are the measurable*	Barriers and problems: • Lack of availability of the energy consumption data breakdown for sectors and sources. • During the planning there was no adaptable methodology of calculation the CO2-emission factors of different energy sources. Measurable improvement The 20% CO2-reduction target by 2020 was calculated to 111 718 t.

improvements in terms of energy efficiency (kWh saved)? (*)	
Other comments	

Transferable aspects

Please describe: *- Transferability of planning (forming a partnership, choosing priorities, setting up renovation building teams, etc.)* *- Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)* *- Transferability of results (good solutions, adaptability, change of behaviour, etc.)*	The transferability of the planning was ensured by using the common European methodology of calculation provided and published by the Covenant of Mayors. The Covenant is open and free for every European municipality.
Other comments	

Level of innovation

For example, novelty of energy efficient measures (in your region or at European/global level) of: *- the building envelope* *- the heating system* *- managing energy* *- regarding behavior*	
Other comments	

b. NEEDS

What current limitations should be tackled/ improved in reference to the current state of the art?	Overall public building energy audit- and energy management call, which would support long-term public building plan in terms of municipal and central government owned public building stock. Education: Introducing energy-based and more practical oriented education, instead of the current general educational structure. Legal regulations: Energy rules and regulations are now obligatory for all actors,

	but in a few cases they are overregulated; e.g. in case of modernization/updating, such restrictions should be applied that are not always logical and optimal from cost-benefit point of view, i.e. why should we replace a window that was installed 5 years ago, if – although we now improve the performance a little -, but comparing to the slight improvement, the costs are much higher. Suggestion: there should be an optimal interval (min.-max), where the expert can decide on his own about the necessity of the improvement in between. Financing: in the public sector payment should be made upon fulfilling the task and not after when they receive funding (reimbursement). Depending on project size, in an ideal case, approx. 6-8% of total costs would be optimal for planning only. It is rather interesting, that the public sector finds the planning costs rather high, but contradictory to this, from the planner's point of view, the current applicable fees do not reflect the reality. (Concrete example: e.g. since about 15 years, building engineers as planners have been trying to ask for 3% planning fee of the total costs of an investment, which during negotiations, is generally reduced to 1,5-2%. This is a usual figure on the market. Privately the 3% can be agreed, but only in the capital city). In the public sector, 4-6% can be asked for, but at the end only a minimal rate remains. Development of public database on the energy related data of public buildings (e.g. energy consumption, energy demand, floor area, energy class, CO2 emission etc.) Boosting the smart building energy management systems in public buildings in Hungary is a desired step beyond energy efficient operation and smart planning in municipalities. The proper operation of the National Energy Expert Network could help for municipalities in data management and prepare and implement energy saving plans. SECAPs are also important elements of local strategic planning.
Who should be involved to make these improvement (specify the target groups)?	County Government Offices as the management bodies of the National Energy Experts Network Municipalities as data providers National Statistical Office (KSH) County Development Agencies National Device Management Body as the body in charge of the governmental building maintenance Lajos Lechner Knowledge Centre as the documentation center of the EPCs
Other comments	

d. LINK WITH POLICY INSTRUMENT

What is the existing link between the state of the art and the policy instrument selected for the REBUS	The aim of the selected policy Instrument (TOP) is to help the energy refurbishment of the public building sector. Involving strategic planning tools and proper data collection tools helps to make well based decisions on both side: municipalities are able to select buildings for applications with the highest energy

project?	saving potential, and the application management bodies receive proper information to compare the applications.
What is the existing link between the relevant experience/s identified and the policy instrument selected for the REBUS project?	Development of SECAPs are on the priority list of the Operational Program. The examination and dissemination of the good practices in this field is useful the municipalities they are planning SECAP development.
What is the existing link between the needs identified and the policy instrument selected for the REBUS project?	Available information about energy performance and consumption of buildings and available financing for strategic planning and technical planning are essential elements to realize the saving potentials of the investments.

IV. Topic 2: IMPLEMENTING: Tendering & Financing

a. STATE OF THE ART

Please state the regulatory context regarding the implementation phase in terms of procurement rules, funding schemes available (including ESCO contracts/investments/grants), renovation works

Hungarian public procurement rules on national level:

Act CXLIII of 2015 on Public Procurement. This Act regulates procurement procedures and concession award procedures, furthermore, rules concerning the legal remedies related thereto. Amendments are expected on the 1st of November 2016 and on the 1st of February 2017 in order to broaden competitiveness and improve transparency.

Government Decree 321/2015 (30 October) on the way of certifying suitability and the non-existence of the grounds for exclusion as well as the definition of public procurement technical specifications in contract award procedures

Green Public Procurement:

In Hungary, the Act on Public Procurement (PP Act) has for long provided for the possibility of green public procurement (GPP). Nevertheless, the number of public procurement procedures that would fit the GPP criteria has been very small.
The amended PP Act of 2011 emphasizes the need for GPP by calling upon the government to issue a decree on green public procurement. A draft decree has been published so far, the final version is not in effect yet.[1]

There is no available and easy to use tool or methodological guidance for public bodies to fulfil the expectations of green public procurement.

Borsod-Abaúj-Zemplén County Self-Government Public Procurement rules.

Financing:
General lack of resources:
Traditional financial mechanisms in Hungary are not able to provide a stable financial background. State aids coming from central budget are very limited due to the unfavorable budgetary situation of the country. Although bank loans are available on the market, but the population, the public sector and the SMEs cannot match their funding, due to lack of own-resources. In terms of foreign currency loans, both the banks and population have negative experiences.
Due to **lack of clear political commitment and the institutionalization of the building energy program,** the situation is not predictable for financing necessary decarbonisation investments by the financial institutions. According to experiences, purely market-based energy building modernization is not realized in the necessary volume, thus there is a need to involve state intervention to achieve the objectives. In the current economic climate we cannot count on budgetary resources, therefore the potential resources of state intervention can be, the ETS and innovative financial mechanisms.
Financial tools and channels available for renovation of public buildings:

- State ESCO: With the coordination of a state ESCO, according to calculations, 100 buildings could be renovated annually.
- Commercial banks: until 2020, they could supply approx. 1000 billion HUF loan for building energy efficiency renovations.

[1] *Source: http://gpp-proca.eu/green-procurement/the-initial-situation-in-the-target-countries/hungary/*

	- Development banks are also needed for financing (HDB, KfW, EBRD, EIB). Grants: The 2014-2020 Operational Programmes are fundamental for the country's economic policy, since most investments involve EU funding. Challenges The government has a weak track record on providing effective innovative financing instruments for the public, and there is a danger that the issue will not get sufficient attention, in a climate of decidedly non-evidence based policy making. The government's key policy at present is the cutting of energy prices (the cut is currently -30%). This is done by administrative fiat, and regardless of the cost of power generation. These measures are naturally very popular, but they result in the drying up of investment and the reduced incentives for residential energy efficiency investments. The government largely eliminated the dialogue with its civil society partners, and as a result it is very difficult to influence it.
What tools are available for data collection?	The data of public procurements are available on the website of Public Procurement Authority (PPA). The yearly statistics of the Authority shows the numbers of green public procurements but the data are based on the answers of the procurers and not verified by the PPA.
What funding / budget are available for planning?	Tendering fees are usually built in the investment processes.
Other comments:	

b. RELEVANT EXPERIENCES

EXPERIENCE n°1 *(please copy all sections for each different experience)*

Sections marked with (*) are compulsory, while the rest can be left blank if no information is available. Relevant experiences identified will be investigated further afterwards in order to understand if some of them could also be considered as Good Practices.

Title(*)	Greening Public procurement in Hungary / PRIME'S – Play it More Efficient, Sam
Geographical coverage (i.e. local/ regional/ national) (*)	local (Szentendre Community)
Please describe the main features of this experience (e.g. objective, characteristics) (*)	The main focus for the PIME'S partners has been to deliver innovative, sustainable and solid demonstration project in line with the project name; CONCERTO communities towards optimal thermal and electrical efficiency of buildings and districts, based on MICROGRIDS. The Public Procurement Authority believes that green and socially responsible public procurements are of great importance, therefore it tries to inform stakeholders about these possibilities, current trends in EU legislation and policy in this respect, it organizes trainings, collects green statistics and is involved in green procurement projects (eg. BuySmart+).

Available budget (*)	
Other comments /links	http://www.pimes.eu/index.php/Projects/Szentendre/PIME-S-Szentendre

Availability of results

Please describe: *- What were the main problems (in terms of energy efficiency) to tackle? (*)* *- What are the key innovative energy efficiency measures undertaken through the renovation? (*)* *- What are the measurable improvements in terms of energy efficiency (kWh saved)? (*)*	
Other comments	

Transferable aspects

Please describe: *- Transferability of planning (forming a partnership, choosing priorities, setting up renovation building teams, etc.)* *- Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)* *- Transferability of results (good solutions, adaptability, change of behaviour, etc.)*	
Other comments	http://renovate-europe.eu/wp-content/uploads/2016/10/Erika-Honnay_201601010_RenoWatt_Renovate-Europe_EH.pdf

Level of innovation

For example, novelty of energy efficient measures (in your region or at European/global level) of: *- the building envelope* *- the heating system*	The retrofitting projects and the new buildings are all using front running technology for the various parts. Almost 30 kinds of innovative architect elements and building engineering solutions has been installed at the demonstrations of Szentendre Community, the five most important are the following: hybrid solar cells; heat pump based on treated sewage water; visible PV for shading and seasonal shading with textile or PV; double glazed climate facade, tilted windows, green facades and roofs as different kinds of protection against summer

- managing energy *- regarding behaviour*	overheating; heat recovery ventilation.
Other comments	

EXPERIENCE n°2 *(please copy all sections for each different experience)*

Sections marked with (*) are compulsory, while the rest can be left blank if no information is available. Relevant experiences identified will be investigated further afterwards in order to understand if some of them could also be considered as Good Practices.

Title(*)	Implementation of the European Green PROCA Project in Hungary
Geographical coverage (i.e. local/ regional/ national) (*)	National
Please describe the main features of this experience (e.g. objective, characteristics) (*)	The aim of the Green PROCA project was to help municipalities and their institutions in implementing green aspects in the public procurement processes. The project partners provided information and assistance to public procurers. The project provided several free services for procurers and other experts of public institutions in Hungary: trainings and specific consultations were provided, municipalities were invited to joint to the project with best practices and lighthouse projects and a national award was organized for green public procurement projects.
Available budget (*)	The budget for Hungary 50 000 EUR.
Other comments /links	http://gpp-proca.eu/

Availability of results

Please describe: *- What were the main problems (in terms of energy efficiency) to tackle? (*)* *- What are the key innovative energy efficiency measures undertaken through the renovation? (*)* *- What are the measurable improvements in terms of energy efficiency (kWh saved)? (*)*	Problems and barriers: However a lot of investments are implemented with green objectives in Hungary, only a few investment projects are going under really green procurement process. The green decision process needs more time and high level of knowledge about the market, available technologies, prices, certification systems, regulations etc. on the side of procurers. Most decisions in procurements are based on the lowest price and the procurers are not open to run more difficult proceedings. Lack of time in investments also doesn't help for the Innovative aspects The trainings provided the up-to-date knowledge to the audience about the recent EU and national regulations in field of green public procurement and building energy requirements.
Other comments	

Transferable aspects

Please describe: *- Transferability of planning (forming a partnership, choosing priorities, setting up renovation building teams, etc.)* *- Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)* *- Transferability of results (good solutions, adaptability, change of behaviour, etc.)*	The project followed a common working methodology. All the activities (trainings, best practice project descriptions helpdesk) were based on a common knowledge and were tailored to the national specific aspects. A steering committee was established at the beginning of the project with representatives of different public and private bodies. The committee ensured the visibility of the working system. The services of the project were open for every public institutions and municipalities. After closing the project the knowledge is still available on the website. The project is repeatability and adaptable in whole Europe.
Other comments	

Level of innovation

For example, novelty of energy efficient measures (in your region or at European/global level) of: *- the building envelope* *- the heating system* *- managing energy* *- regarding behaviour*	
Other comments	

c. NEEDS

What current limitations should be tackled/ improved in reference to the current state of the art?	Easy to use tools and methodological guidelines for public procurers in order to rise the numbers of green and innovative public procurements. Financing sources for municipalities and governmental bodies in order to cover the additional efforts (extra work, time and expertise) for preparing green and innovative public procurements.
Who should be involved to make these improvement (specify the target groups)?	In B-A-Z county, the Financial and Social Committee, within the County Self-Government, who monitors the procedures regulated by the Public Procurement Rules. Public Procurement Authority

	Public Purchasers Municipalities with experience in green public procurement
Other comments	

d. LINK WITH POLICY INSTRUMENT

What is the existing link between the state of the art and the policy instrument selected for the REBUS project?	Raising the number of green public procurements is on the list of horizontal goals of the selected policy instrument. The higher energy efficiency requirements and stronger green aspects in investments lead to higher amount of CO2 savings.
What is the existing link between the relevant experience/s identified and the policy instrument selected for the REBUS project?	The selected Green Proca project aimed to deliver basic information for municipalities about GPP. The curriculum of this training was appropriate for raising awareness as a first step.
What is the existing link between the needs identified and the policy instrument selected for the REBUS project?	The raising number of green public procurements is only available with delivering relevant and practical information for an extensive group of stakeholders in public procurement processes. Trainings and easy to use tools could help to implement the GPP in practice. Only a slightly number of municipalities were taking part in trainings in field of green public procurement.

V. Topic 3: MONITORING

a. *STATE OF THE ART*

Please state the regulatory context regarding the monitoring phase in terms of selection/usage of tools that can monitor impact and consumption	Monitoring of real the effects of investments is a weak point on municipal and institutional level. However the Operational Programme defines several monitoring actions in the decision making in accordance to the requirements of the European Council, it doesn't affects the long term follow up of the projects on local level. Building requirements and calculation methodologies are regulated by the Decree No. 7/2006. (V. 24.). The EPC or the calculated energy demand is a required part in the building investment process and it helps to get information about the savings. Beyond this methodology there is a strong need to follow up the real energy consumptions and real savings as the impact of the refurbishments. Smart metering or smart energy management systems are suitable tools for monitoring the energy consumption, but these tools are installed only in very few public buildings in Hungary.
Who is/are the body(ies) in charge of designing, managing and implementing the process?	Municipalities and governmental bodies are responsible for the documentation of the energy consumption of the public buildings. The National Energy Expert Network is responsible to provide the online tool for data collection, but it still not available. National Statistical Office as data source
What tools are available for data collection?	National Statistical Office provides information about energy consumption of settlements on request. The National Public Procurement and Supply Department (KEF) is responsible for the building stock of the central government
What funding / budget are available for planning?	No specific funding for monitoring is available. The funding for SECAP development could be used for the long term monitoring of the energy consumption.
Other comments:	

b. *RELEVANT EXPERIENCES*

EXPERIENCE n°1 *(please copy all sections for each different experience)*

Sections marked with (*) are compulsory, while the rest can be left blank if no information is available. Relevant experiences identified will be investigated further afterwards in order to understand if some of them could also be considered as Good Practices.

Title(*)	Monitoring of SEAP of City of Budaörs
Geographical coverage (i.e. local/ regional/ national) (*)	Local
Please describe the main features of this experience (e.g. objective, characteristics) (*)	In 2016 the SEAP of the City of Budaörs was monitored and the current GHG emission levels were evaluated. The main objective was to fulfil the obligation of the interim monitoring and to get an overview about the results of last years. The SEAP was accepted first in 2012, the baseline year was 2009. As a member of the Covenant of Mayors, the city has a voluntary target to reduce its CO2-emissions

	by 20% until 2020. According to the available data, the CO2-emission of the city in 2014 - the year of the last available data - was 15% less, compared to the baseline year of 2009. This is due to several building retrofits in the municipal and residential sectors, the installed solar panels on rooftops and energy efficient investments in the tertiary sector. The future plans of Budaörs include a wide range of interventions, e.g. providing financial support for further energy retrofits of households, developing the e-transport in the city, creating new bike roads and extending renewable capacities.
Available budget (*)	n.a.
Other comments /links	
Availability of results	
Please describe: *- What were the main problems (in terms of energy efficiency) to tackle? (*)* *- What are the key innovative energy efficiency measures undertaken through the renovation? (*)* *- What are the measurable improvements in terms of energy efficiency (kWh saved)? (*)*	The monitoring has a common European methodology elaborated by the Covenant of Mayors. The monitoring was based on public data from the National Statistical Institutions and data communication of the municipality. The monitoring report was accepted in September 2016 by the city council.
Other comments	
Transferable aspects	
Please describe: *- Transferability of planning (forming a partnership, choosing priorities, setting up renovation building teams, etc.)* *- Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)* *- Transferability of results (good solutions, adaptability, change of behaviour, etc.)*	
Other comments	

Level of innovation

For example, novelty of energy efficient measures (in your region or at European/global level) of: *- the building envelope* *- the heating system* *- managing energy* *- regarding behaviour*	
Other comments	

b. RELEVANT EXPERIENCES

EXPERIENCE n°2 *(please copy all sections for each different experience)*

Sections marked with (*) are compulsory, while the rest can be left blank if no information is available. Relevant experiences identified will be investigated further afterwards in order to understand if some of them could also be considered as Good Practices.

Title(*)	Development of register of public buildings in BAZ-county
Geographical coverage (i.e. local/ regional/ national) (*)	Regional
Please describe the main features of this experience (e.g. objective, characteristics) (*)	The Government Office of BAZ County developed a building register of the public buildings owned by the central government in the county. The aim of the register was to get a clear picture of energy performance of the stock, estimation of the energy savings and set up a detailed plan for the neccessary energy retrofits.
Available budget (*)	100 000 000 HUF (333 000 EUR)
Other comments /links	

Availability of results

Please describe: *- What were the main problems (in terms of energy efficiency) to tackle? (*)* *- What are the key innovative energy efficiency measures undertaken through the renovation? (*)*	

- What are the measurable improvements in terms of energy efficiency (kWh saved)? (*)	
Other comments	

Transferable aspects

Please describe: *- Transferability of planning (forming a partnership, choosing priorities, setting up renovation building teams, etc.)* *- Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)* *- Transferability of results (good solutions, adaptability, change of behaviour, etc.)*	
Other comments	

Level of innovation

For example, novelty of energy efficient measures (in your region or at European/global level) of: *- the building envelope* *- the heating system* *- managing energy* *- regarding behaviour*	
Other comments	

c. NEEDS

What current limitations should be tackled/ improved in reference to the current state of the art?	The long term follow up of building investment projects in public buildings should be developed. Rising number of (smart) energy management systems in public buildings is desirable. Development of public database of energy and CO2 savings in public buildings

	could help the transparency of the projects and would be helpful for finding good practices and for communication the results.
Who should be involved to make these improvement (specify the target groups)?	Municipalities National Energy Expert Network National Statistical Office National Public Procurement and Supply Department (KEF)
Other comments	

d. LINK WITH POLICY INSTRUMENT

What is the existing link between the state of the art and the policy instrument selected for the REBUS project?	One of the main goals of the selected policy instrument is to develop the level of energy efficiency in public buildings and raise the rate of renewable energy sources in the energy mix and realize CO2 savings in the building stock.
What is the existing link between the relevant experience/s identified and the policy instrument selected for the REBUS project?	The SECAP is an easy to use tool in the hand of municipalities to take a look on their buildings, energy consumption and As SECAP needs a monitoring in every second year its suitable for monitoring the public building stock and the real achievements in energy efficiency and renewable investments.
What is the existing link between the needs identified and the policy instrument selected for the REBUS project?	The Operational Programme could help in financing building energy monitoring systems.

VI. Topic 4: HORIZONTAL THEME - CAPACITY BUILDING

a. STATE OF THE ART

Please state the regulatory context regarding initiatives in terms of awareness raising and skills building on energy related issues among civil servants involved in the management of the building stock	Strategy of the Government of the Republic of Hungarian for lifelong learning (September 2005); The Government Regulation No. 2069./2008. (VI. 6.) on joining the European Qualifications Framework and forming the National Qualification Register; Government Regulation No. 1229/2012. (VII. 6.) on the tasks related to introduction of the National Qualification Register and on Amendment of the Government Regulation No. 1004/2011. (I. 14.) on forming and introducing of the National Qualification Register Vocational training act The Law on vocational training No CLXXXVII./ 2011. shall apply to vocational training provided in the school system (vocational training), in case of vocational trainings performed out of the school system, it applies to the state-recognised qualifications (vocational training according to the National Qualification Register) to be obtained within the National Qualification Register, as well as to master training. National Qualification Register Description of qualifications of the National Qualification Register is specified by the Government regulation No. 150/2012. (VII. 6.) on the National Qualification Register and on Amendment of procedures of the National Qualification Register. Professional requirements related to the qualifications of the National Qualification Register are laid down in the Government regulation No. 217/2012. (VIII. 9.) (regulation for modules) on professional requirement modules of state-recognised qualifications. The 27/2012. (VIII. 27.) regulation of Ministry for National Economy on 'professional and examination requirements of professional qualifications' (SzVK regulation) establishes appropriate interface between these two government regulations. tional Qualification Register Adult education act According to Law on vocational training, further rules of non-school vocational training system are determined by the Law on adult education. Definition and institutional system of adult training is stipulated by the Act No. CI., 2001 on Adult education.
Who is/are the body(ies) in charge of designing, managing and implementing the process?	ÉMI – Building Quality Management Office National Statistical Office National Office of Vocational and Adult Education Municipalities Chamber of Engineers, Chamber of Architects
What tools are available for data collection?	National Statistical Office: employment statistics
What funding / budget are available for planning?	n.a.

Other comments:	

b. RELEVANT EXPERIENCES

EXPERIENCE n°1 *(please copy all sections for each different experience)*

Sections marked with (*) are compulsory, while the rest can be left blank if no information is available. Relevant experiences identified will be investigated further afterwards in order to understand if some of them could also be considered as Good Practices.

Title(*)	Renovate Europe Campaign (raising awareness); **Build up Skills (developing trainings in the building sector)**
Geographical coverage (i.e. local/ regional/ national) (*)	International
Please describe the main features of this experience (e.g. objective, characteristics) (*)	The Renovate Europe Campaign is an initiative of EuroACE, the European Alliance of Companies for Energy Efficiency in Buildings. Its headline ambition is to reduce the energy demand of the EU building stock by 80% by 2050 as compared to 2005 levels, to increase renovation rate from 1% to 3% per year by 2020 and maintain that rate to 2050, to ensure that all renovations are deep or staged deep renovations to avoid "lock-in", to drive the formulation and implementation of an effective policy and legal framework. Hungary is also participating in this campaign through several organisations working for energy efficiency, in particular in the building sector (e.g. HUGBC - Hungarian Green Building Council, MÉASZ – Hungarian Alliance of Building Material Producers, TLE – Society for the Building and Renovation of Homes, MAPASZ – Hungarian Passive House Alliance), with awareness raising leaflet sent to the Hungarian Managing Authorities and to the Head of State for the EU Summit on the 20th and 21st March 2014. **The BUSH project, including the Roadmap aims in particular the development of building industry trainings in order to enable the building industry to contribute to Hungary's 2020 national climate and energy policy objectives to the extent necessary to carry out the plan. The building industry may contribute to realisation of these goals by improving the energy performance, as well as establishing an increasing contribution of renewable energy sources to the energy supply of buildings.**
Available budget (*)	n/a
Other comments /links	http://renovate-europe.eu/

Availability of results

Please describe: *- What were the main problems (in terms of energy efficiency) to tackle? (*)* *- What are the key innovative energy*	

efficiency measures undertaken through the renovation? (*) *- What are the measurable improvements in terms of energy efficiency (kWh saved)? (*)*	
Other comments	

Transferable aspects

Please describe: *- Transferability of planning (forming a partnership, choosing priorities, setting up renovation building teams, etc.)* *- Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)* *- Transferability of results (good solutions, adaptability, change of behaviour, etc.)*	
Other comments	

Level of innovation

For example, novelty of energy efficient measures (in your region or at European/global level) of: *- the building envelope* *- the heating system* *- managing energy* *- regarding behaviour*	
Other comments	

EXPERIENCE n°2 *(please copy all sections for each different experience)*

Sections marked with (*) are compulsory, while the rest can be left blank if no information is available. Relevant experiences identified will be investigated further afterwards in order to understand if some of them could also be considered as Good Practices.

Title(*)	EC-LINC Energy Check for Low Income Households
Geographical coverage (i.e. local/ regional/ national) (*)	International
Please describe the main features of this experience (e.g. objective, characteristics) (*)	The project "Energy-Check for Low Income Households" (EC-LINC) established tailored information and consultation approaches to assist low income households in saving energy and water at home. No- and low-cost measures have been combined within an advice service that is especially designed to bring practical knowledge on energy efficiency and viable tips to households who may be in fuel poverty. During the home visits, advice is provided on the efficient use of energy and water. Low cost devices such as compact fluorescent lamps (CFLs), switchable plug connectors and tap aerators have also been provided for free. Data collected in the households on consumption and installed measures was processed electronically. By this means, each household received an individual household report with a description of their potential savings and further tips for changing behaviour. The EC-LINC pilot projects in Berlin, Antwerp, Budapest, Vienna, Lower Austria and Carinthia provided motivation and knowledge to people on low incomes to live more energy efficiently by applying no-cost or low cost solutions. In some of the projects long-term unemployed people were trained to become energy advisors, so the consultation could be carried out peer-to-peer and the advisors themselves could improve their employment prospects.
Available budget (*)	n/a
Other comments /links	https://ec.europa.eu/energy/intelligent/projects/en/projects/ec-linc

Availability of results

Please describe: *- What were the main problems (in terms of energy efficiency) to tackle? (*)* *- What are the key innovative energy efficiency measures undertaken through the renovation? (*)* *- What are the measurable improvements in terms of energy efficiency (kWh saved)? (*)*	Barriers and problems: Getting in touch with the target group is challenging. The energy advisor has to have specific skills: excellent communication and emotional skills in order to get in touch and deliver relevant information to the target group and also to have relevant technical knowledge to give relevant advise. The key innovation in this project was to involve social workers in an energy related service. Results during the 3 year long project Total of 1,019 consultations, average power savings of 284.81 kWh/household/year, 290 MWh over project Average heat saving 1,021 kWh/hh/year, 1,040 MWh over the project
Other comments	

Transferable aspects

Please describe: *- Transferability of planning (forming a partnership, choosing priorities, setting up renovation building teams, etc.)* *- Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)* *- Transferability of results (good solutions, adaptability, change of behaviour, etc.)*	The initiative project methodology was elaborated by Berliner Energieagentur, and adapted by the other European partners. All in the participant countries several stakeholders were involved to the work. Technical and social organizations were worked together, housing associations were involved in the communication. The members of the target group were contacted by open or personal calls There was a strong cooperation and knowledge exchange with the European sister project (ACHIVE). The communication plan and the communication activities ensured the visibility of the project during and after the project life. The project is repeatability and adaptable in whole Europe.
Other comments	

Level of innovation

For example, novelty of energy efficient measures (in your region or at European/global level) of: *- the building envelope* *- the heating system* *- managing energy* *- regarding behaviour*	
Other comments	

EXPERIENCE n°3 *(please copy all sections for each different experience)*

Sections marked with (*) are compulsory, while the rest can be left blank if no information is available. Relevant experiences identified will be investigated further afterwards in order to understand if some of them could also be considered as Good Practices.

Title(*)	Training for the employees of Local Energy Management Agency in Rácalmás
Geographical coverage (i.e. local/ regional/ national) (*)	Local
Please describe the main features of this experience (e.g. objective, characteristics) (*)	In 2016 City of Rácalmás established a Local Energy Management Agency. The employees of the Agency were taking part on a five day training in order to receive the required knowledge and skills for the operation. Training methodology was built up by theoretical and practical modules:

	• Energy and climate: how influences the energy use the climate of the Earth and what kind of local impacts are forseen • Energy and climate policies: EU and Hungarian policies, strategies, targets and tools • Energy production, demands and supply in Hungary and Europe, different scenarios • Saving potentials in buildings • GPP • Strategic planning in Energy Management Agencies • Communication: channels, campaigns, adaptable experiences • Project development • Field trip
Available budget (*)	n/a
Other comments /links	http://greeningregions.eu/?page_id=8&lang=hu

Availability of results

Please describe: *- What were the main problems (in terms of energy efficiency) to tackle? (*)* *- What are the key innovative energy efficiency measures undertaken through the renovation? (*)* *- What are the measurable improvements in terms of energy efficiency (kWh saved)? (*)*	Barriers and problems: The local energy management agency needs several up-to date and far-reaching knowledge for different target groups. A five day training is only a "starter pack" to set up the agency. Based on the experiences and in response on the local needs further specific trainings are necessary. As the agency has two employees with several further task in the municipality the knowledge management is a challenge in the proper operation.
Other comments	

Transferable aspects

Please describe: *- Transferability of planning (forming a partnership, choosing priorities, setting up renovation building teams, etc.)* *- Transferability of the process of renovation (management structure, monitoring system, implication of end users, participation, etc.)* *- Transferability of results (good solutions, adaptability, change of behaviour, etc.)*	The municipality of Rácalmás is open to disseminate the experiences of the local energy management agency in the future. The training methodology is adaptable for every Hungarian municipalities and could be tailored to other countries. The project is repeatability and adaptable in whole Europe.

Other comments	

Level of innovation

For example, novelty of energy efficient measures (in your region or at European/global level) of: *- the building envelope* *- the heating system* *- managing energy* *- regarding behaviour*	Innovation: The Energy Management Agency of Rácalmás is the first local energy agency funded by a Hungarian Municipality.
Other comments	

b. NEEDS

What current limitations should be tackled/ improved in reference to the current state of the art?	Reform of professional training system (e.g. for architects, electrical engineers) building engineer is the only appropriate base Trainings for local stakeholders in field of local energy management Cooperation between energy expert and social sector against fuel poverty Up-to-date knowledge in the training system of vocational schools
Who should be involved to make these improvement (specify the target groups)?	Municipalities Social NGOs Local Development Agencies Chamber of Architects and Engineers
Other comments	

d. LINK WITH POLICY INSTRUMENT

What is the existing link between the state of the art and the policy instrument selected for the REBUS project?	Trainings help to reach the overall aims of the TOP.
What is the existing link between the relevant experience/s identified and the policy instrument selected for the REBUS project?	The training projects are adaptable for the TOP.

What is the existing link between the needs identified and the policy instrument selected for the REBUS project?	Raising awareness and knowledge is necessary to utilize the saving potential in buildings. The quality of energy related projects depends on the knowledge of the human resource both in investment and operation.