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ERP - Energy Renovation Path

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THE ERP

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REBUS supports local authorities in designing an **Energy Renovation Path (ERP)** To plan, implement and monitor **renovation works in public buildings** Tackling horizontal theme of **capacity building**

REBUS uses interregional exchange on partners' experiences to help public authorities improving the following aspects of their energy policy:

- ✓ raise **awareness** on potential savings/ efficient use of resources;
- ✓ collect feedback and stream line data on **energy efficiency needs** in the public buildings;
- ✓ use this feedback to **select buildings** for renovation;
- ✓ draft **tenders** for renovation works that include energy efficiency baselines, targets and monitoring measures;
- ✓ **manage** the buildings in a more efficient way after renovation.

The ERP in pills

The Energy Renovation Path:

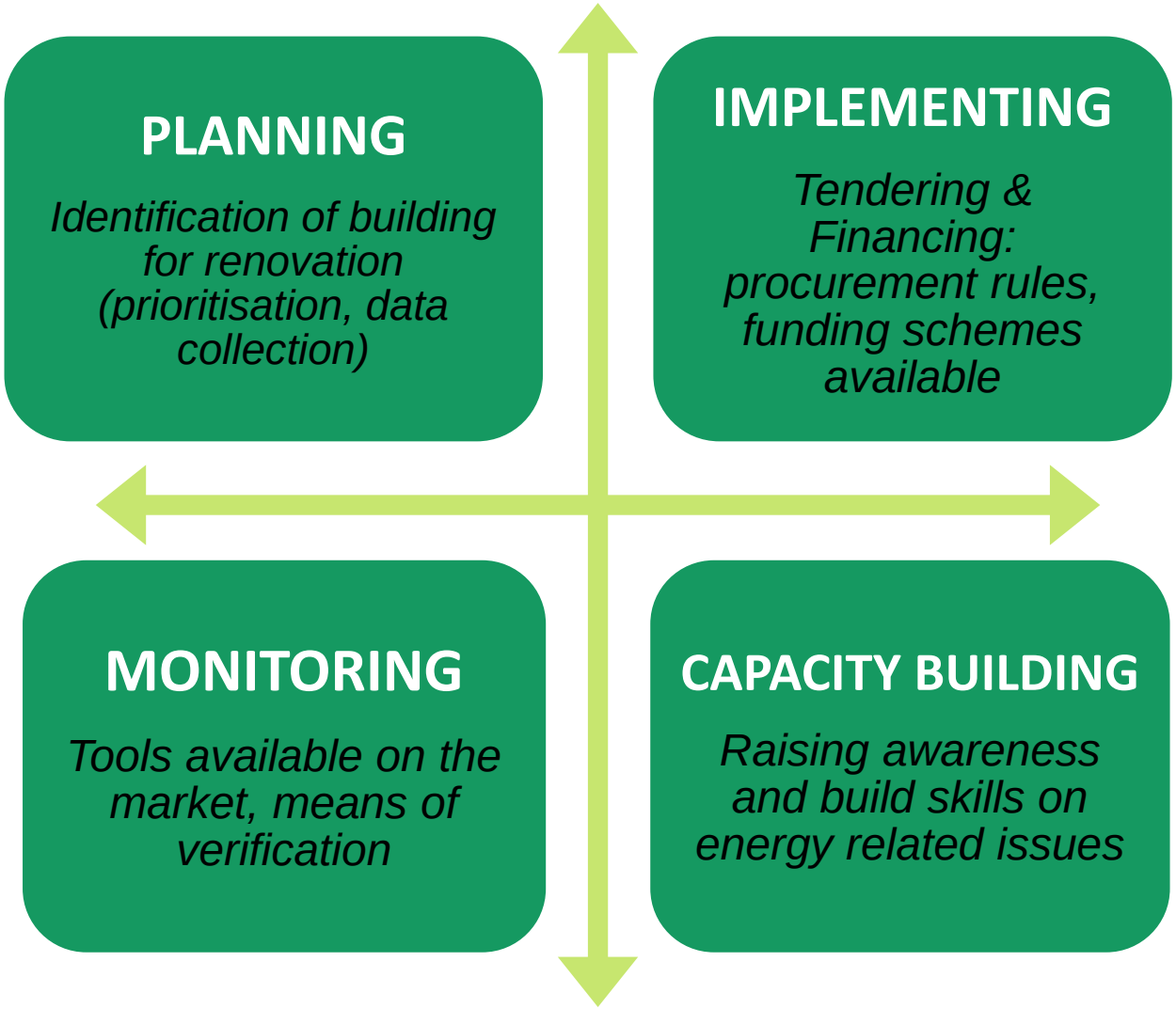
→**collects experiences** from Good Practices identified

→ **provides guidelines** on planning, implementing and monitoring renovation works in public buildings

→ pretends to be a **guiding document for policy makers** and public authorities in charge of designing policies on energy efficiency for public buildings

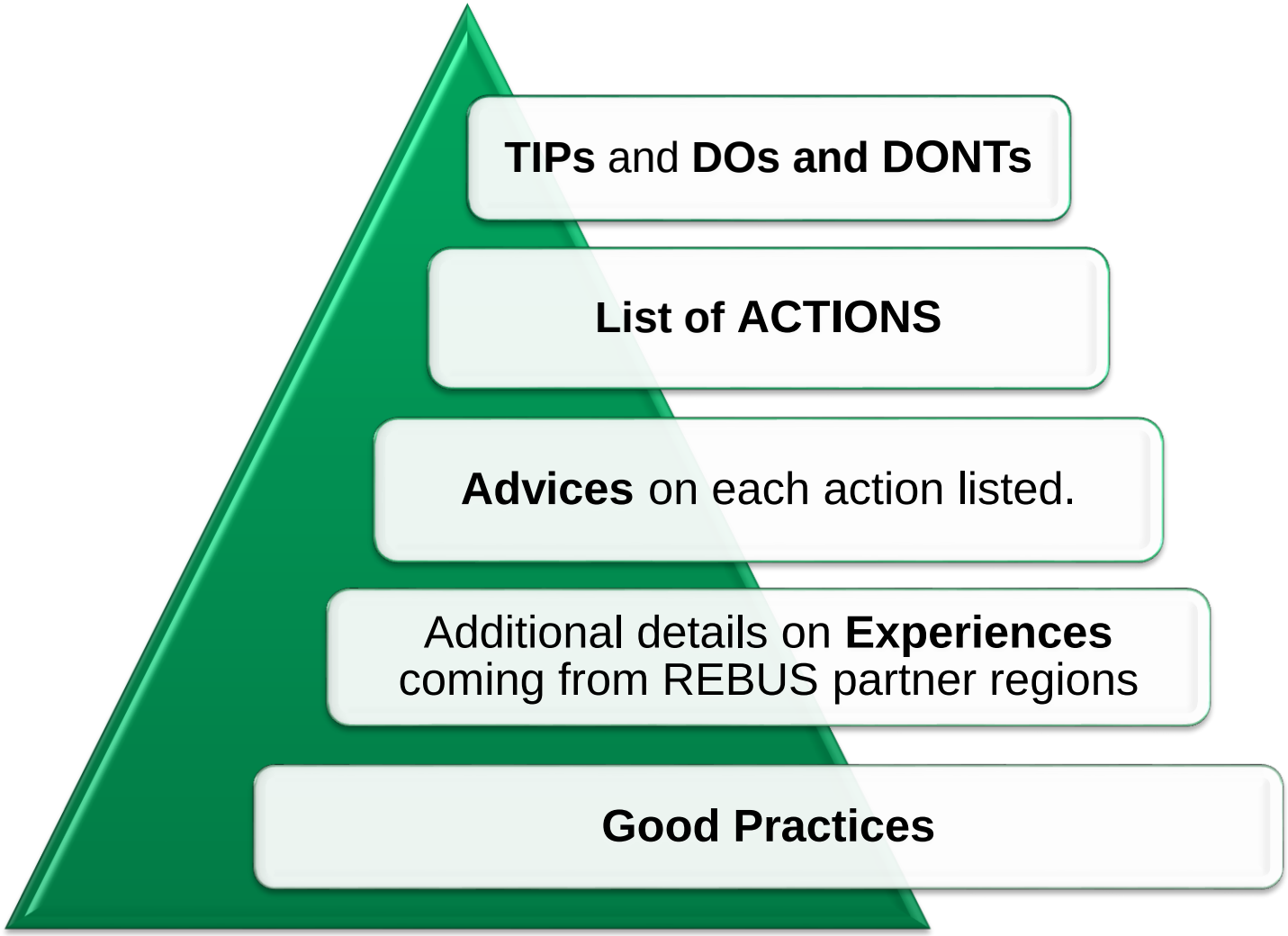
The ERP structure

The ERP is divided into the 4 topics identified.



The ERP structure

For each topic:



How does it work?

Managing Authority wishing to improve local policies on energy efficiency of public buildings

Let’s consult the ERP!

How does it work? …Tips

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PLANNING

✓ **TIPS**

- Clear definition of criteria for prioritising buildings, based on real data. Involve experienced experts and relevant stakeholders in the planning process.
- Develop different working process for different types of buildings and different needs
- Use nuanced and holistic views when selecting buildings for renovation.
- Define early what you are going to do.
- Communicate and involve all USERS related to the building (tenants, technicians, users, caretakers etc.).
- Scale up, if possible.
- Build or improve the Strategy for energy efficiency at any level (European, National, Local): planning and plans.
- Foresee good energy audit analysis for any building.
- Set up an energy team (at any possible level).
- Raise building users knowledge and awareness on energy issues (develop ad-hoc campaigns including information on how to use the money saved).
- Foresee Long-term temperature measurements and energy use assessment.
- Look for good practice in Europe with PH or NZEB standards.
- Develop an integrated approach with other policies.
- Consider Passive House standards that are the most clearly defined and have the Retrofit methodology, including a tool for calculating the energy balance and solutions called PHPP.
- Keep it simple
- *… (continue)*

How does it work? …Actions

List of ACTIONS	Experiences/ Advices
Defining criteria for building selection (e.g. the biggest energy consumer in absolute terms or per m^2, etc.)	See **experiences** 
Definition of Tools for data collection, setting up the inventory/ database	Is the database fit for purpose, user friendly, readily available and compatible with existing databases? See **experiences**
Consultation with building users, particularly those who will be responsible for technology.	For such databases to work effectively, those who have access to it must receive training so that they are familiar with the programme and know how to interpret it, and feel comfortable to ask questions so that the software remains accessible. Master users need to be aware of any staff changes so that building managers remain aware and proactively involved with their building energy management.
Is the proposed project appropriate to business and user needs?	Important to identify any conflicts between business and user needs

How does it work?... experiences

In 2018 Tuscany Region launched a call for improving energy efficiency of public buildings (call drafted with the support of Rebus project). Among the evaluation criterion, additional scores were included as follows:

1. Technical quality of the project in terms of objectives: Reduction of non-renewable global primary energy requirements (EPgl, nren);
2. Project planning and workability: Advancement of the design level of the interventions at the time the application is submitted.
3. Energy class of the building: more points for the lower class.
4. Building volume: Greater gross volume of the building
5. Project concerns building intended for school, sporting and hospital use: 0-4 points : • Scholastic = 4 points • Hospital = 4 points • Sport facilities = 2 points • Other type = 0 points
6. Project involving the transformation of the building into a nearly zero energy building = 3 points
7. Project providing context for seismic prevention interventions = 0-4 points:
   a project that provides for the context of earthquake prevention measures for which an application has been submitted to the call for applications as per DD13747 / 2016 and at least the technical and economic feasibility project is approved on the date of submission of the application = 4 points
1. A project that provides for interventions for seismic prevention at the same time, for which at least the economic technical feasibility project is approved at the date of submission of the application to this announcement = 2 points
2. The project also provides for interventions for the removal of asbestos = 2 points
3. Project involving the use of monitoring and control systems for the energy consumption of the building and the plants = 2 points
4. Project concerning buildings already included in the SEAPs adopted and / or approved by the Municipality = 3 points

How does it work? …GPs

List of ACTIONS	Experiences/ Advices	Good Practice
Defining criteria for building selection (e.g. the biggest energy consumer in absolute terms or per m^2, etc.)	See **experiences**	**See GPs from South-East Romania**
Definition of Tools for data collection, setting up the inventory/ database	Is the database fit for purpose, user friendly, readily available and compatible with existing databases? See **experiences**	
Consultation with building users, particularly those who will be responsible for technology.	For such databases to work effectively, those who have access to it must receive training so that they are familiar with the programme and know how to interpret it, and feel comfortable to ask questions so that the software remains accessible. Master users need to be aware of any staff changes so that building managers remain aware and proactively involved with their building energy management.	

How does it work? …GPs

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SEAP to implement local policies including the Urban Development Strategy of the Municipality in the field of energy efficiency and environment protection.

Launched by the European Commission, the Covenant of Mayors is recognised as a success story of multilevel governance and an important step to meet the EU objectives for 2020. The signatory Municipalities of the Covenant of Mayors commit to: overcome the EU objectives for 2020, reducing at least with 20 % the

SHARE

n their territories until 2020; elaborate an Inventory of Emissions; develop the

Project	REBUS
Main institution	Buzau Municipality
Location	Sud-Est, Romania (România)
Start Date	November 2016
End Date	Ongoing

Further information

How does it work? …DOs & DONTs

DOs:	DONTs:
✓ Create a complete and updated database. ✓ Plan for continuous training of the personnel. ✓ Find the most appropriate financial schemes. ✓ Consult with building users. ✓ Set up specific energy goals on every building. ✓ Collect real data, with state-of the art methodologies and tools ✓ Involve an experienced energy expert, with relevant references ✓ Cooperate with stakeholders (users/workers, etc.) in order to plan better and based on real demands ✓ Have a long-term and holistic vision about all energy efficiency initiatives, including retrofitting of public buildings ✓ The goals of the retrofitting must be known and accepted by all parts ✓ Make a nuanced categorisation of buildings, so you can see what buildings is worth retrofitting ✓ *… (continue)*	○ Don't go for the low hanging fruits, as it usually lacks of quality. ○ Avoid ad-hoc decisions ○ Avoid quick solutions without involving the experienced experts ○ Avoid partial retrofitting solutions (e.g. insulation of only one side of a building, or partial replacement of windows and doors). ○ Avoid not providing adequate information and not to cooperate with the users of the building ○ Don´t try to "go around" the public procurement process. Try to take advantage of it ○ Don't keep the project within a small silo/ group of specialists ○ Don't go too big too quickly. Start small and build upon successes and lessons learnt. ○ Frame the benefits only economically or environmentally ○ Don't rush

Where are we now?

- The ERP is in draft version
- Partners continue working on improving description of experiences and GPs available
- The final version will be ready by the end of 2018

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Thank you!