

TAKING  
**COOPERATION**  
FORWARD



Paks, 5 July 2017

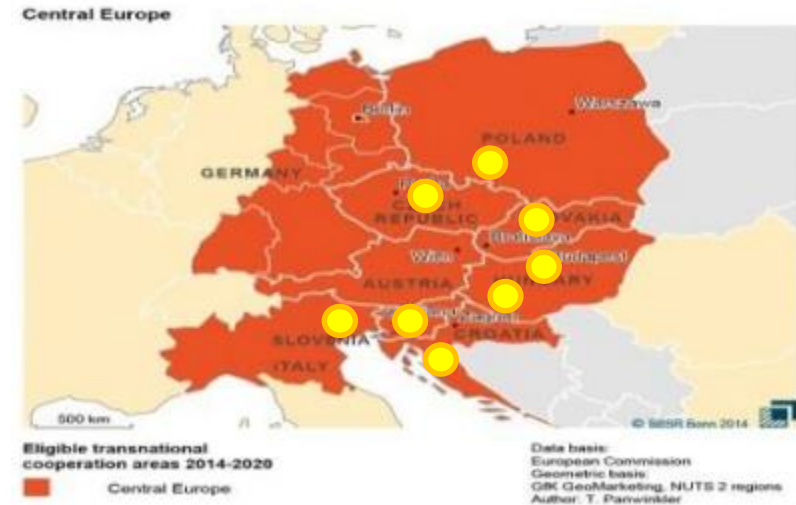


## **TOGETHER project: Smart metering and Demand Side Management at Paks**



Balázs Borkovits, University of Pécs (Municipality of Paks)

1. Province of Treviso IT - LP
2. Energy Agency Vysočiny CZ - PP2
3. University of Maribor SI - PP3
4. City of Zagreb HR - PP4
5. Association of Municipalities Polish Network “Energie Cités” PL - PP5
- 6. South Transdanubian Regional Development Agency HU - PP6**
7. Municipality of 12 th District of Budapest HU - PP7
8. Slovak Innovation and Energy Agency - PP8
- 9. Municipality of Paks HU - PP9**



Project budget: € 2.330.175,75

ERDF: € 1.958.599,64

Project duration: 36 months



# REASON FOR COOPERATION

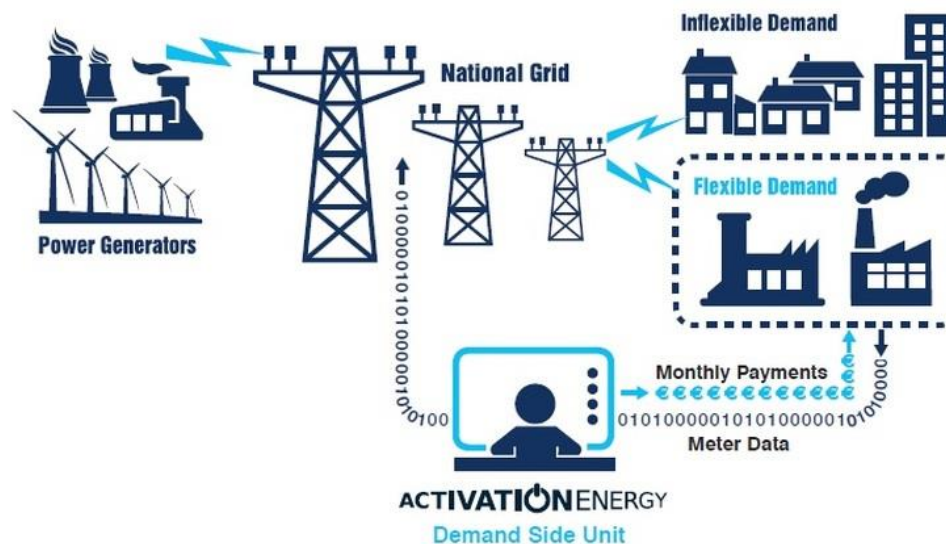
The current **economic situation** is forcing public authorities to limit EE investments on their assets, including buildings. **Public opinion** is asking for increased efficiency in the public sector where the energy bill is an expensive budget item. In addition, austerity policy hinders EE investments that could reduce **emissions** and management costs and support EU climate and energy strategies also at local level.



However, in the Central Europe (CE) area there is a lack of uniformity in approaches and capacities among regions&municipalities for **improving EE in buildings by low cost actions**.



TOGETHER aims at increasing the skills of the involved institutions to manage the complexity of their building stock and innovate their management system by **integrating different tools such as space/time organisation of the buildings and Demand Side Management (DSM)** i.e. the modification of the consumer demand for energy through various methods such as financial incentives and education.



There is evidence that technical interventions alone have a **minor impact if carried out in isolation** without a holistic vision of the infrastructure and if the integral players' chain - owners, managers and users - is not engaged in the EE process.



On the contrary, when all the concerned players are involved, it is possible to achieve better energy efficiency goals.

The main objective of the project TOGETHER is to encourage CE Public Administrations to **adopt managerial EE solutions for their buildings stocks, involving users in the energy management process**, tapping into potential energy performance and jointly reaping benefits in terms of payback and public money savings.



# CONSUMER BEHAVIOR

## LIGHTING with enough SUNSHINE

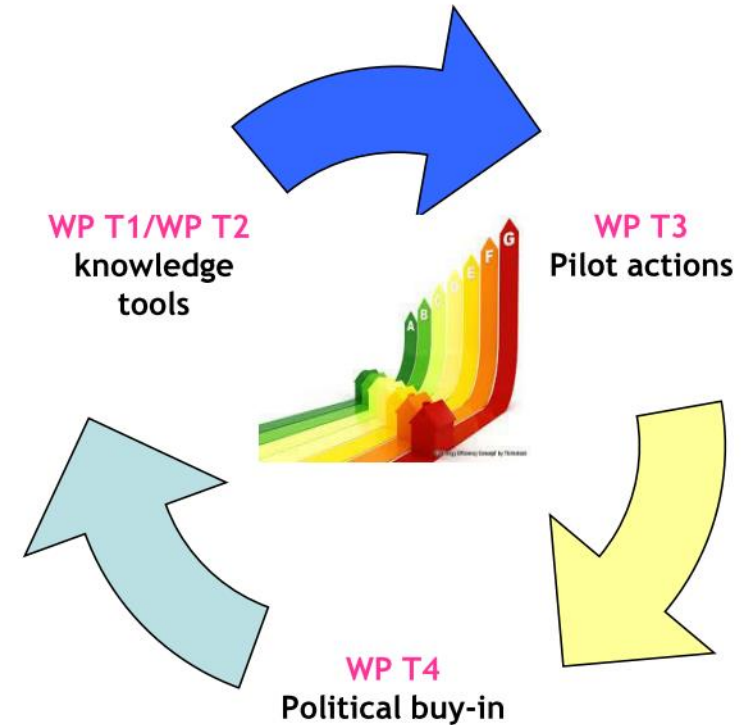






# INTERVENTION LOGIC

Providing public infrastructure owners and operators and related entities with the **necessary expertise** for reducing energy consumption and/or increasing local energy production with renewable sources, by strengthening competences (training, job shadowing and peer exchange), developing and implementing **management approaches** (Smart Toolkit), **innovative buildings governance strategy** (Buildings Alliance) and **financing schemes** (the EPIC scheme integrated with DSM goals), which will serve as a seedbed for achieving a higher level of EE (follow-up **Reinvestment Action Plan**)





# INTERVENTION LOGIC

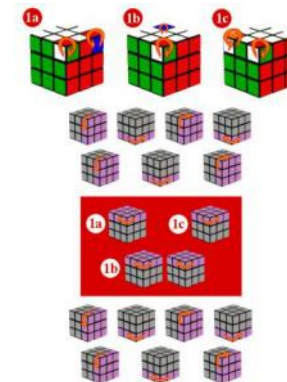
To increase energy efficiency and secure investments thanks to improved multidisciplinary **in-house staff skills** and thanks to an Alliance system with more **engaged and motivated buildings users**



To produce and **test** the most appropriate **combinations of technical, financial and DSM tools** for the improvement of the energy performance of public infrastructures



To codify the project outcomes into a comprehensive **policy package for a large-scale implementation**, bringing local building governance practices to the center of ambitious energy saving policies



M - Management

T1 - Capacity building for an enabling environment

T2 - Elaboration and Integration of tools for EE in public buildings

T3 - Implementation of Pilot Actions (PAs) to measure energy performance

T4 - Political buy-in to a Strategy for Energy Efficiency in Public Buildings

Coordinated by Paks.

I5 - Investment in an **energy monitoring system** for pilot actions (11 buildings)

I6 - Improving energy management through energy audit in public buildings at  
(thermo camera, CAD software, WinWatt)

C- Communication



Interdisciplinary  
transnational  
**Training model &  
toolbox** on  
energy managerial  
Competencies



Train the Trainers&  
**local training** paths  
for energy managerial  
Competencies / know-  
ledge advancement  
(12x8 hours)



**Toolkits** containing 3  
Energy Management  
System models, 4  
Intergated Financial &  
contracting tools, 3  
DSM tools



**Energy certifications**  
for 11 involved  
buildings at Paks  
**Modelling**  
recommended  
investments with CAD  
software



**Pilot actions** for  
improving the  
energy performance  
of public buildings  
in involved Pas  
**SMART METERS**

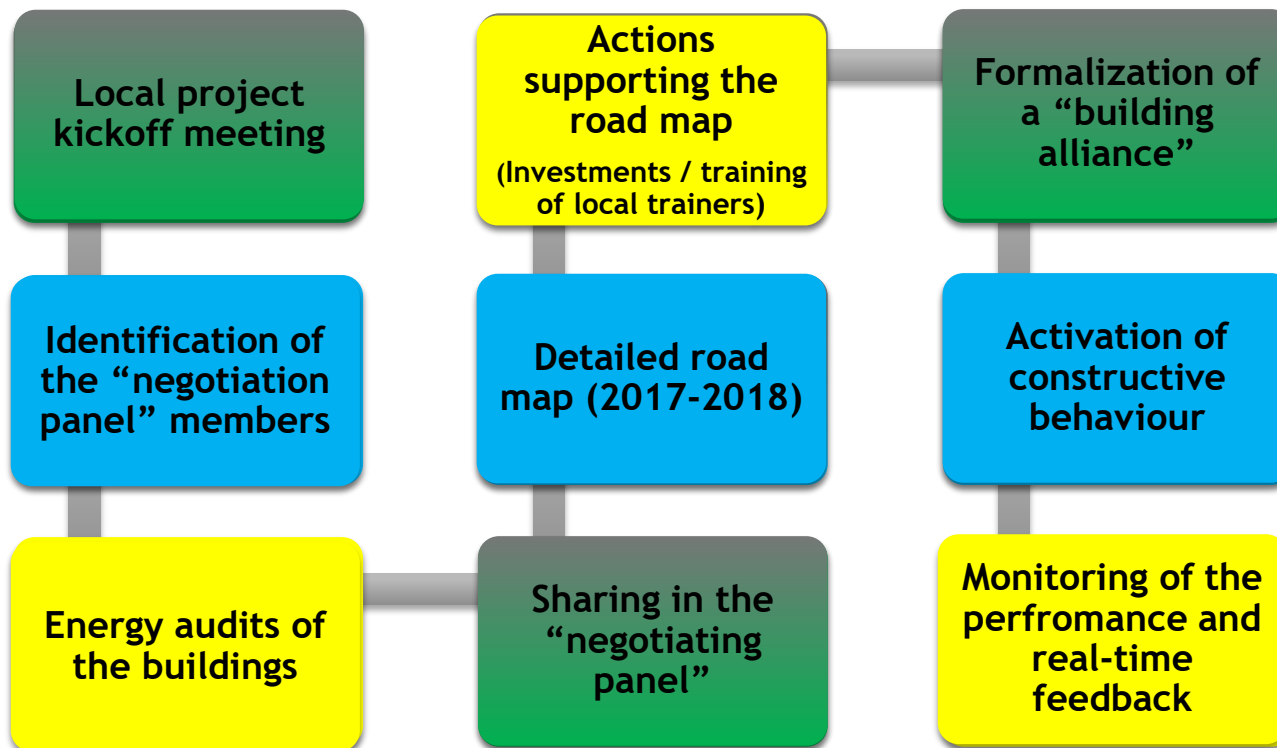


Low cost or no-cost **EE  
interventions** by  
involving the building  
managers and users  
(DSM)



**Transnational Strategy**  
on how to increase EE  
in public buildings  
through integrated  
approaches  
**Policy Package**





Municipality of  
Paks



## Objectives:

- Supporting the road map objectives through:
  - Technological investments (primarily: “**smart meters**” and related “real time” monitoring service - pursuant to a usage agreement with the bodies)
  - Actions of “**training to the local trainers**” (12 days divided into 3 modules, with the resources and the tools acquired during the Krakow event in February 2017 and based on a requirements analysis performed by Agenda 21)
  - Possible links to **investments** (already) planned by the owner

## Expected results:

- Facilitating the achievement of the road map objectives
- Making it possible to objectively compare the improvements obtained and the related rewards



# FORMALIZATION OF A “BUILDING ALLIANCE”

Municipality and  
building  
stakeholders

## Objectives:

- **Engaging** reciprocally the municipality and all the building stakeholders (involved in the “negotiating panel”) in achieving the detailed **road map objectives and in sharing the benefits**, after implementing

## Expected results:

- Definition of the method for calculating and sharing the benefits deriving from the road map in favour of the building stakeholders
- Transformation of the alliance into a commitment for all the stakeholders





## Building stakeholders

### Objectives:

- **Implementing** the activities planned in the detailed **road map** (made possible by the technological investments and the training) and achieving the relevant results through a collective effort of all the building stakeholders

### Expected results:

- Achievement of the detailed road map objectives
- Achievement of the benefits related to the performance
- Implementation of the necessary behavioural and/or organisational changes related to the building management



# ACTIVATION OF VIRTUOUS BEHAVIOUR



Municipality of  
Paks



## Objectives:

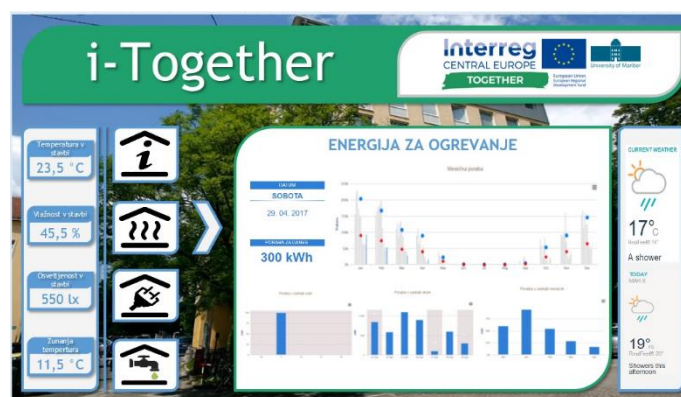
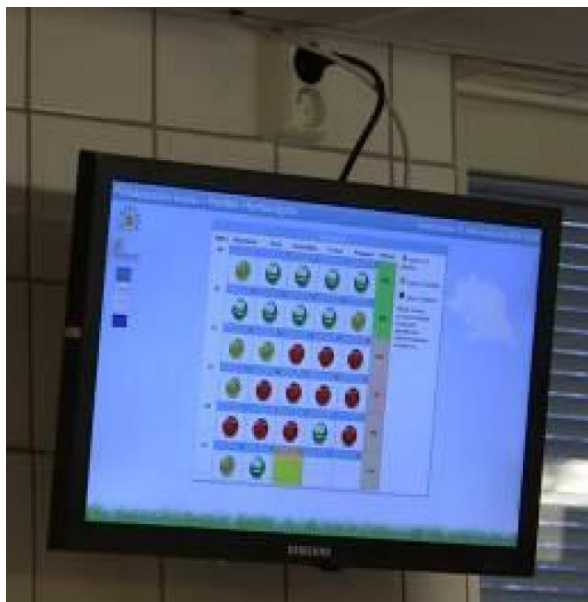
- Performing **periodic checks on the characteristics, curves and patterns** of consumption and energy efficiency in the building
- **Communicating** transparently and with the frequency set in the road map, the monitoring results to all the involved stakeholders

## Expected results:

- Speeding up the achievement of the objectives or the correction of possible deviations during the implementation
- Spreading the culture and awareness of the importance of measuring the results as a guide to changing actions

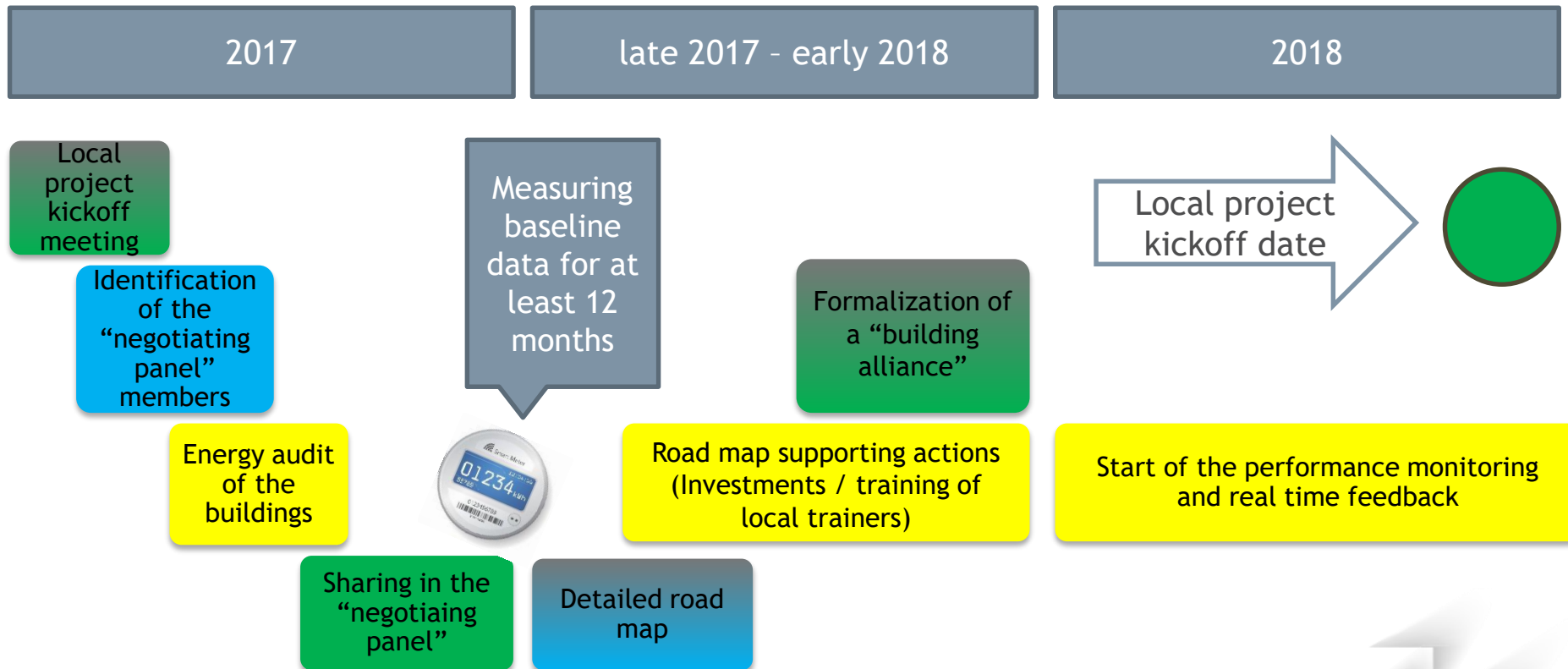


# ACTIVATION OF VIRTUOUS BEHAVIOUR



# SUMMARY OF THE PROJECT

## GANTT Diagram



# THANK YOU FOR YOUR ATTENTION



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Project TOGETHER



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# PROJECT PARTNERS



European Union

**Interreg**  
CENTRAL EUROPE

**TOGETHER**



PROVINCIA  
DI TREVISO



Energy Agency Vysočiny



Univerza v Mariboru



City of Zagreb

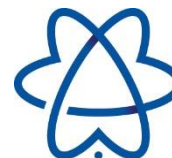


Polska Sieć  
Energie Ciepłej



South Transdanubian Region

*South Transdanubian Regional Development Agency*



**PAKS**

*az együttműködés városa*



Budapest XII. Hegyvidék



SLOVAK INNOVATION AND ENERGY AGENCY



TAKING COOPERATION FORWARD