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ENERFUND
An ENERgy Retrofit FUNDing rating tool
The problem

There is a gap between the
• public’s expectations, lack of awareness and mistrust,
• trustworthy and financially sound retrofit opportunities
• and the provision of funding investments and incentives
• for deep renovation of buildings
Partnership
Overall goal

ENERFUND is a tool that rates and scores deep renovation opportunities

It is based on a set of parameters

By providing a rating for deep renovation opportunities:

- **funding institutes** can provide targeted loans,
- **retrofit companies** can identify sound opportunities,
- **municipalities** can promote targeted incentives and the
- **public's** trust for retrofitting will be enhanced.
Architecture

- Based on mapping capabilities
- Everything geocoded
- Open source
- Adaptable & flexible to any data type
- Easy-to-use

FROM THIS

TO THIS
7,896,176 EPCs
73,119,740 unique building data
## The data

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<th>Country</th>
<th>Current rating</th>
<th>Potential rating</th>
<th>ENER-FUND score</th>
<th>Walls energy eff.</th>
<th>Windows energy eff.</th>
<th>Roof energy eff.</th>
<th>Main fuel type (heating)</th>
<th>Area (m²)</th>
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Features

- With ENERFUND you can access a wide range of information for a predefined area.
Features

- Filtering based on:
  - Energy rating
  - Potential energy rating
  - Ownership status
  - Windows energy efficiency
  - Roof energy efficiency
  - Walls energy efficiency
  - Main heating fuel
  - Type/usage of buildings
  - Floor area
  - Year of construction
  - ENERFUND score

- Comparing and exporting/printing results
Example - Demonstration
Main outcomes

• Open Source, fully dynamic user-friendly online GIS application

• Analyzed the outcomes of existing initiatives.

• Conducted market research for the needs of retrofit companies, financial institutions and municipalities/regional authorities

• Developed and promoted the ENERFUND tool, to all relevant stakeholders
Potential Features

• Drag and click selection/Polygon selection
• .csv custom dataset export (1 GB raw data)
• Custom reports based on interests
• Inclusion of other types of data, e.g. noise levels, average renovation costs, etc.
• Aggregation of data by post code or street
• Combination/correlation of EPC data with other data
Policy Recommendations

- Limited availability of open data
- Available data not geocoded
- Many databases are outdated, esp. on funding schemes and incentives
- No energy related open data e.g. certified installers
- The availability of transparent data is urgently needed for the definition of climate policy targets
- Need for alignment with INSPIRE directive
- Geocoded energy data should become compulsory within EU directives and programs
- EU Commission to issue Guidelines on Environnemental Information/INSPIRE/PSI/GDPR Directives
Thank you

We will be happy to receive your feedback!

http://enerfund.eu/fb/

http://www.enerfund.eu/

https://www.facebook.com/enerfund

https://twitter.com/enerfund

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Energy efficiency of traditional buildings and cultural heritage preservation

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Webinar: Using ENERFUND to identify Energy non-Efficient buildings - 22/10/2019
VISION
«To contribute actively to the conservation of energy resources, the protection of the environment and the improvement of the quality of life»

OBJECTIVES
«Promotion of renewable energy sources and sustainable transport, improvement of energy efficiency, and contribution to the mitigation and adaptation to climate change»
EU’s energy and climate targets for 2020, 2030 and 2050:

2020:
• 20% cut in greenhouse gas emissions (from 1990 levels)
• 20% improvement in energy efficiency
• 20% share for renewable energy

2030:
• 40% cuts in greenhouse gas emissions (from 1990 levels)
• 32.5% improvement in energy efficiency
• 32% share for renewable energy
• 12% share for renewable energy in transportation

2050:
• Reducing greenhouse gas emissions by 80-95% (from 1990 levels)
New European Directive on Energy Efficiency


(18) Research into, and the testing of, new solutions for improving the energy performance of historical buildings and sites should be encouraged, while also safeguarding and preserving cultural heritage.
VIOLET Project
[Interreg Europe, 2017-2021]

- Challenge: to create a building culture that is sympathetic to modern requirements for **improved energy usage and reduced carbon emissions**, without endangering architectural heritage
- How: *multi-sector approach* & integrated planning
- **Overall aim:** to **improve regional public policy** to enhance energy efficiency in traditional buildings, by addressing both low carbon and cultural preservation actions
- **Main output:** an *Action Plan* describing the policy actions required to improve energy efficiency in traditional buildings
VIOLET Project
[Interreg Europe, 2017-2021]

For the majority:

- There are plans for mobilizing investments for the energy renovation of the existing building stock
- Traditional/historical [T/H] buildings are exempted from meeting the minimum requirements of energy performance
- The improvement of thermal performance [and thermal comfort] of the historic building stock proved to be feasible
- Feasibility studies are needed for each individual case to ensure that the interventions for energy upgrades will not alter the building’s character
- There is no intention to eliminate the special approach towards historic and preserved buildings as they form part of the culture and history of an area
- Their usability contributes to their preservation, therefore they should be able to meet modern requirements for acceptable indoor environmental quality and energy efficiency
VIOLET Project [Interreg Europe, 2017-2021]

At local level:

- Action Plan based on the amendment of the **new directive of the Energy Performance of Buildings**
- Proposals regard the Annex II 'Categories of buildings exempted from the obligation to meet the minimum energy performance requirements and the issuance of a building energy performance certificate'
- **Suggested**: declared buildings should **NOT be excepted** from having an EPC when they will be sold or rented, or if they are public buildings
- **Suggested**: in the case of **Listed Buildings or Ancient Monuments**, the exception of meeting the Minimum Energy Efficiency Requirements, during restoration/renovation phase, will **only be applied if the Competent Authorities certify** that this action will unacceptable alter their nature or appearance
VIOLET Project
[Interreg Europe, 2017-2021]

Currently:
The above proposals were incorporated to the draft version of the Regulation and are currently to the Legal Service for legal scrutiny. It will then be sent to the Cabinet for approval and then to the Parliament for voting.

By late 2019 – early 2020, it is expected to know the results.
VIOLET Project [Interreg Europe, 2017-2021]

• Different Approaches ↓
Connection to ENERFUND

Baseline establishment: Necessary for policy change and prioritization of actions
‘cultural heritage preservation’
not only on buildings scale!
What makes a city sustainable?

1. Inclusive City - Cities made for and by the people
2. Healthy City - Human wellbeing and environmental health are indistinguishable
3. Resilient City - Climate change adaptation across actions
4. Compact Green City - Balancing density and green infrastructure
5. Mobility City - Safe and clean transport for all
6. Low Carbon City - Growth without increasing emissions
7. Circular Economy City - Turning waste into a valuable resource
8. Smart City - Smart technologies create opportunities for collaboration
9. Design City - Human-centric and functional urban design
14 of the 17 Goals proved to be relevant to heritage conservation ‘pillar of sustainability’

The Sustainable Development Goals

**Goal 11.1:** By 2030, ensure access for all to adequate, safe and affordable housing and basic services, and upgrade slums

**Goal 11.4:** Strengthen efforts to protect and safeguard the world’s cultural and natural heritage

**Goal 11.7:** By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities
Sustainable Historic Districts [peculiarities]

The present position

Built and natural heritage is under increasing threat due to:

- rapid urbanization
- environmental decay
- climate change
- lack of policies
- lack of suitable schemes [maintenance, preservation and restoration]
- wrong priorities

What can nations/regions/cities do?

- Adopt policies regarding the protection of cultural heritage [tangible and intangible]
- Promote an understanding that culture plays a role in sustainable local development
- Recognise public spaces as key resources for cultural interaction and participation
- Recognise historic districts as key resources for economic and social development and innovation
Pedestrians first, cars second
Oslo, Norway

The Oslo city centre will be car-free by 2019. Under development, the city is removing all on-street parking and narrowing car lanes to build new bicycle paths and prioritise pedestrians.

What makes a sustainable city?
Nordic Innovation, www.nordicinnovation.org
Sustainable Historic Districts Project
[EIT Climate KIC, 2018-2020]

- Addresses common challenges in the historic districts of six cities from five EU Mediterranean countries
- Working within a shared framework to transform the historic districts towards more sustainable, climate resilient and inclusive ones
- It places sustainable development at the heart of the districts, by taking integrated approaches instead of responding to isolated challenges
Sustainable Historic Districts Project [EIT Climate KIC, 2018-2020]

- Implementation of a participatory process for the further involvement of citizens and interested members in energy and environmental issues
- Assessment of the challenges of the Historical Centre and identification of solutions
- Identification of opportunities and preparation of suggestions for exclusive implementation of sustainable & NBSs in the historic centre
- Raising awareness of climate change mitigation and adaptation among the citizens & engaged them to ensure the continuous implementation of actions in the historical centre

“Nicosia: An inclusive, accessible, urban regenerated city…”
Sustainable Historic Districts Project [EIT Climate KIC, 2018-2020]

“Re-activation of buildings and spaces with-and-for the community & citizen-applied NBS”

Community Engagement  Community Participation  Events [NBS Pilots]  VISION [Roadmap]

Old City facing the modern city, Lefkosia, Cyprus
Prioritize Actions // Achieve transformation

1. How to engage citizens in the co-designing process for adaptation and improved life quality?

2. How citizens’ views can be transformed to solid actions for adaptation and improved life quality?
Place Standard tool

“Tool that is used to assess the quality of a place. It can assess places that are well established, undergoing change, or still being planned. The tool can also help people to identify their priorities for a particular place”

https://www.placestandard.scot/
Sustainable Historic Districts Project
[EIT Climate KIC, 2018–2020]

- Breeam Communities
- One Living Planet
- DPL
- LEED for Neighbourhood
- HQE Aménagement
- Green Star
- Ecodistricts
- Living Community
- Ecoquartiers
- DGNB-NSQ
- CASBEE for Cities

CERTIFICATION SCHEMES FOR CITIES [Different criteria & Different Scope]

Sassari District, Sardine, Italy
[CEA Archive]
Thank you!

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