

Sustainable Places 2021

Sep. 28 – Oct. 1



Data collection to support Energy Efficiency
finance in the building sector

Eddie Streng
Joule Assets Europe



This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 885395



Facilitating innovative financing for sustainable energy projects
in Europe and the UK



What we do



Support ESCo's growth

We work with Energy Service Companies and project developers to access appropriate project investment by providing third-party valuation, performance insurance, project certification, and due diligence.



Research and Innovation for Public and Government Agencies

We participate to publicly-funded initiatives to contribute to the development of sustainable energy and sustainable finance markets



Policy and regulatory groups

We are members of European and National Associations shape policy concerning the scale-up and innovating financing of energy efficiency and renewables projects





Increasing Energy Efficiency Investments

Data collection and standardization

EN-TRACK will address the **lack of statistical data** pointing to the energy and cost savings with an **interoperable ecosystem of data and tools that can support building refurbishment decision-making**.

Budget: 1.4 million €

Duration: 36 months



Project Consortium:



This project has received funding from the **European Union's Horizon 2020 Research and Innovation programme** under Grant Agreement No **885395**



Challenges

Lack of statistical data on the actual energy and costs savings. Only a small part can be used to produce reliable empirical evidence on the performance of the energy efficiency investment.



Solution

EN-TRACK will meet this challenge by enabling an interoperable ecosystem of data and tools supporting building refurbishment decision making, putting it into practice with the financial sector.



Methodology

The process is designed to **make data input simpler, more attractive and cost-effective** and to make the outputs more valuable by making them compatible with emerging market leader applications such as DEEP, eQuad and EnerInvest.



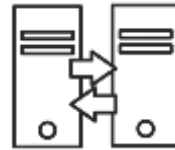
Challenges


Why is this?

 Data **standardisation**

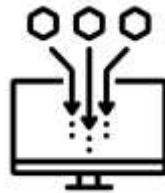


 Lack of open source operational databases



 Enabling continuous data **collection** from public authorities

Why focus on public buildings?



 Empirical data gap



 **Interoperability** of databases and tools



The lack of statistical data on the actual energy and costs savings

In conclusion

The overall aim of the project is to enable an interoperable ecosystem of data and tools



How we will meet the challenges



EN-TRACK builds on an existing proven infrastructure developed by CIMNE (SHERPA & EDI-Net platform)

- Make the platform **interoperable** and complementary to the EEFIG-DEEP, eQuad and EnerInvest platforms.

And then what?



- Promote and incentivise the widespread adoption of the platform

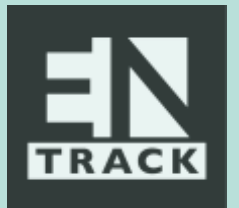
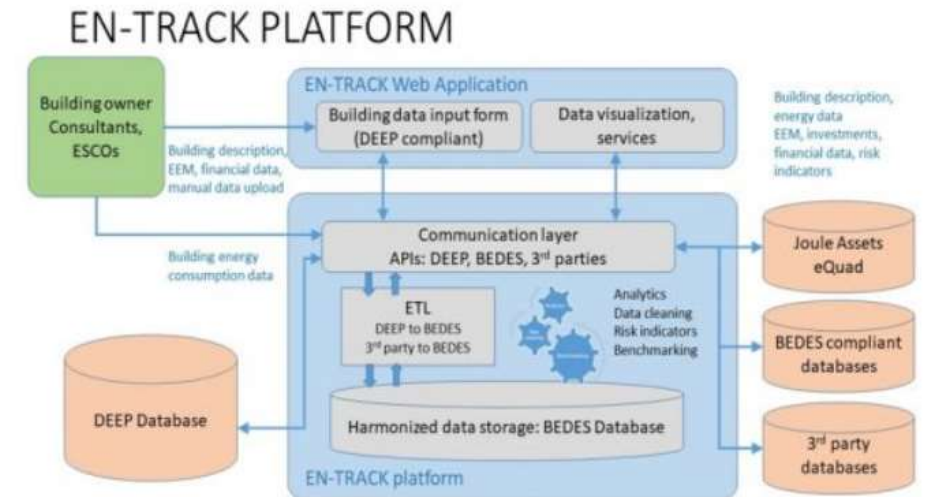
- Provide **capacity building** for investors and building owners



- Make the platform economically **sustainable**



Build on what we have



The platform



Who is it for?

 Building owners and operators



- Benchmark and compare the performance of buildings before and after EEMs

 Financial institutions

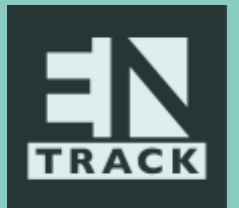


- Benchmark and compare the financial performance of EEMs

 Policy makers



- Track the impact of subsidies and incentives



Why is it useful?

Savings of various EEM portfolios

The outcomes and returns of EEMs in various settings

The risks and sensitivity of various EEM portfolios in various settings

Assessing the energy/carbon savings of various EEM portfolios

The impact of grant funding/certification on project indicators

Identifying the characteristics of under-performing buildings that may represent an investment opportunity

- ✓ Access data
- ✓ De-risk investments
- ✓ Make informed decisions

Financial Institutions



 **Directly involve over 35 financial institutions and 100 key stakeholders.**

By doing this the EN-TRACK project will develop and shape a one-stop-shop platform specifically designed for the needs of the market players.

What do they want?



CO2 Tracking



Impact measurement



Simplicity/Comprehensive



Analysing trends



Grants/Eligibility



Quality and sustainability





Building insights



Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
 Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Compare

+3000

Public buildings

15

Building typologies



Schools



Hospitals



Sport center



Office



Explore

+3500

Energy Efficiency Measures

56

EEM typologies



Glazing



Inner Insulation



Outer Insulation



Lighting



H Heating & Cooling ducts insulation
15

H Heating Ducts substitution
34

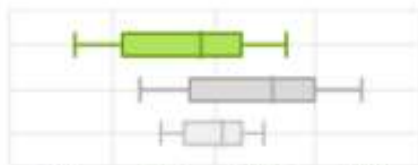
W Wall External insulation
124
Buildings with this Measure



Energy savings per area
kWh/m²

1.026
870

570

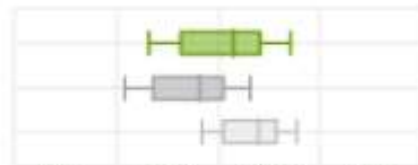


| Min. | P25% | P75% | Max. |
|------|------|------|------|
| 341 | 440 | 682 | 830 |

Payback time
years

12
7

6

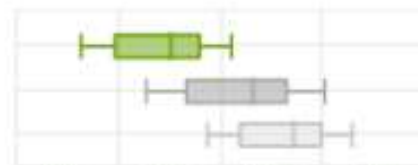


| Min. | P25% | P75% | Max. |
|------|------|------|------|
| 341 | 440 | 682 | 830 |

CO₂ savings
tonCO₂/m²-y

1.5

0.6

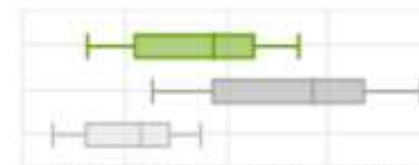


| Min. | P25% | P75% | Max. |
|------|------|------|------|
| 341 | 440 | 682 | 830 |

IRR
%

43.8

62.3



| Min. | P25% | P75% | Max. |
|------|------|------|------|
| 341 | 440 | 682 | 830 |

5 comments

Offices
215

Primary schools
134

H Hospitals
24
Buildings in this tipology



Country: ALL | Year of construction: ALL | Retrofit: ALL

Energy use
kWh/y

KPI 2
years

CO₂ emissions
tonCO₂/m²-y

KPI 4 ⓘ
%

1,026
870

12
7

1.5
1.2

43.8
75.8

570

6

0.6

62.3

| | | | |
|------|-----|----|----|
| Max. | 830 | 83 | 83 |
| P75% | 682 | 34 | 34 |
| P25% | 440 | 34 | 34 |
| Min. | 341 | 34 | 34 |

| | | | |
|------|----|----|----|
| Max. | 12 | 83 | 83 |
| P75% | 9 | 34 | 34 |
| P25% | 5 | 34 | 34 |
| Min. | 4 | 34 | 34 |

| | | | |
|------|----|----|----|
| Max. | 83 | 83 | 83 |
| P75% | 68 | 34 | 34 |
| P25% | 44 | 34 | 34 |
| Min. | 34 | 34 | 34 |

| | | | |
|------|----|----|----|
| Max. | 83 | 83 | 83 |
| P75% | 68 | 34 | 34 |
| P25% | 44 | 34 | 34 |
| Min. | 34 | 34 | 34 |



Subscription

Contact

Energy Efficiency Performance-Tracking Platform for Benchmarking Savings and Investments in Buildings

Energy Efficiency Measures

Buildings Energy Performance

Gencat

English

Welcome Gencat

UPLOAD MORE

Number of buildings

570

Number of EEM

87

Buildings with EEM

64

Energy kWh/year

17.256.000

KPI 2 %

87

KPI 3 %

64

Gencat Table league

| Rank | Building | KPI |
|------|-------------------|-----|
| 1 | St. Andreu School | |
| 2 | Phelps Swim Pool | |
| 3 | Démbelé Pavillon | |
| 4 | B0 UPC nord | |
| 5 | Eurotrading | |

[See full list +](#)

ENTRACK Table league



Gencat building portfolio

- D** Démélé Pavilion
rue du France, 621 23666
- P** Phelps Swim Pool
Kingsland, 521 E21
- A** St. Andreu School
C/ Almogavers, 57 36002



Energy use
kWh/y



Abcde
Years



CO₂ emissions
tonCO₂/m²-y



Abcde
%



Gencat building portfolio



St. Andreu School

This text is a general description of the building. It can include which types of energy uses, year of construction. Even this text should be introduced by the building manager, so appearing could be conditional to type it.



St. Andreu School

C/ Almogavers, 57 36002

Building relevant figures summary: (Content proposal)

| Energy kWh/year | KPI 2 % | KPI 3 % |
|--------------------|------------|------------|
| 17.256.000 | 87 | 64 |

Building information: (Content proposal)

1. Year of construction
2. Area
3. Number of floors
4. Number of occupants
5. ...

The idea is to have and collect relevant information about the building, so it can be interesting to expand EN-TRACK services

Building data charts: (Content proposal)

1. Historical data chart
2. Benchmark with similar buildings for energy, finance, emissions
3. Model forecast vs actual for energy, finance, emissions
4. ...

[ADD MORE DATA](#)

How can you be involved?



FINANCIAL INSTITUTIONS FORUM

PROGRAMME

SEPTEMBER 2021
INTRODUCTION TO PLATFORM
FUNCTIONALITIES

DECEMBER 2021
IDENTIFYING OPPORTUNITIES
USING EN-TRACK

MARCH 2022
PLATFORM INTERFACE
WALKTHROUGH

JUNE 2022
USERS AND SUBSCRIPTIONS

SEPTEMBER 2022
DEMO AND FEEDBACK SESSION

DECEMBER 2022
VALUE PROPOSITION FOR
FINANCIAL STAKEHOLDERS

MARCH 2023
FINAL PLATFORM OVERVIEW

JUNE 2023
LESSONS LEARNED

SEPTEMBER 2023
PROJECT CONCLUSION
AND FUTURE DEVELOPMENT

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We have no requirements, only invitations. By joining you will receive our newsletters, invitations to share your expertise at workshops and more. We would be happy to have you in this collective and exciting project.




Thank you

 Eddie Streng

 estreng@jouleassets.com

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