TIMEPAC The new EPC for Europe

Creation of short and long-term plans for implementing improvements

Building Renovation Hierarchy exercise

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Agenda

Let's meet

The canvas we will use

Case study 1

Case study 2

Conclusions

Let's meet

Associate Professor at the Cyprus University of Technology, working primarily on
(a) predicting energy production from solar systems and

(b) how innovation and entrepreneurship can assist in our efforts for decarbonization.

Dr Alexandros Charalambides

Cyprus University of Technology

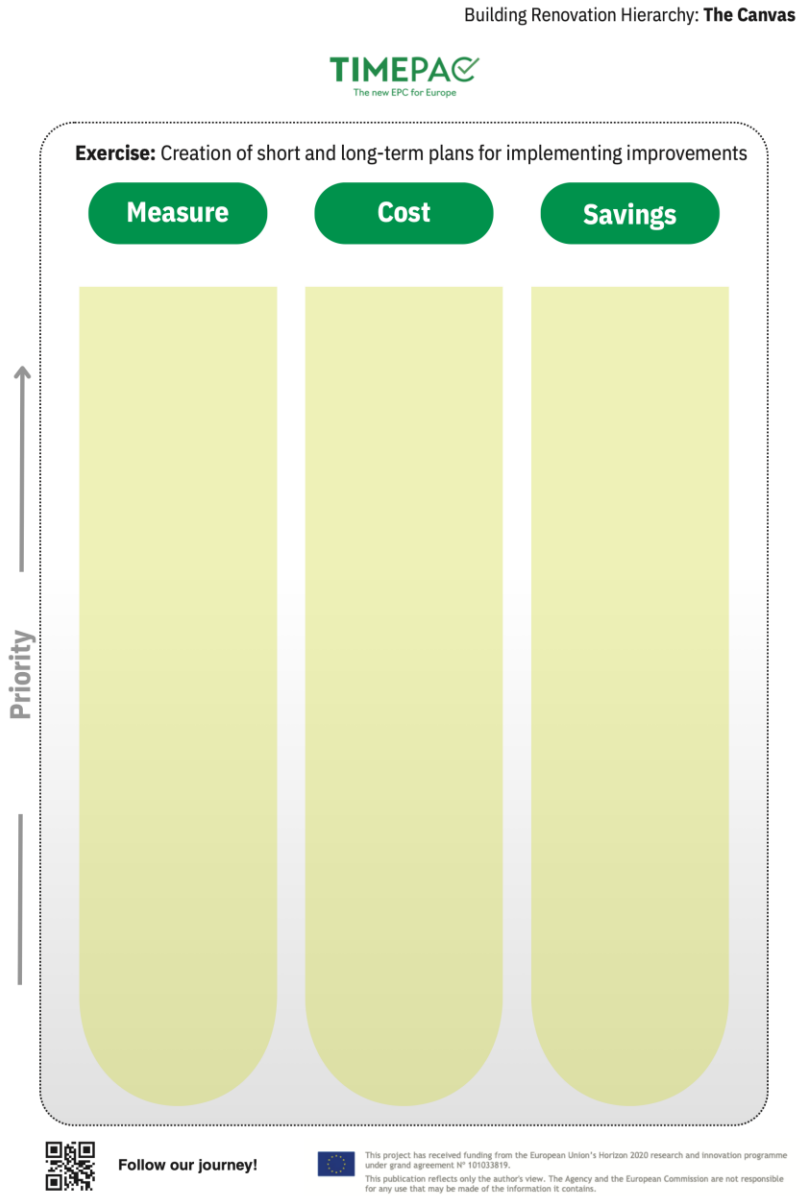
What we will do

We will work through **2 real-world case studies** to identify and prioritize energy efficiency improvements, considering factors such as building components, financial constraints, and opportunities for savings.

The canvas

6 Areas

1. Windows
2. Cooling/heating
3. Lighting
4. PV
5. Green roof
6. Insulation



Instructions

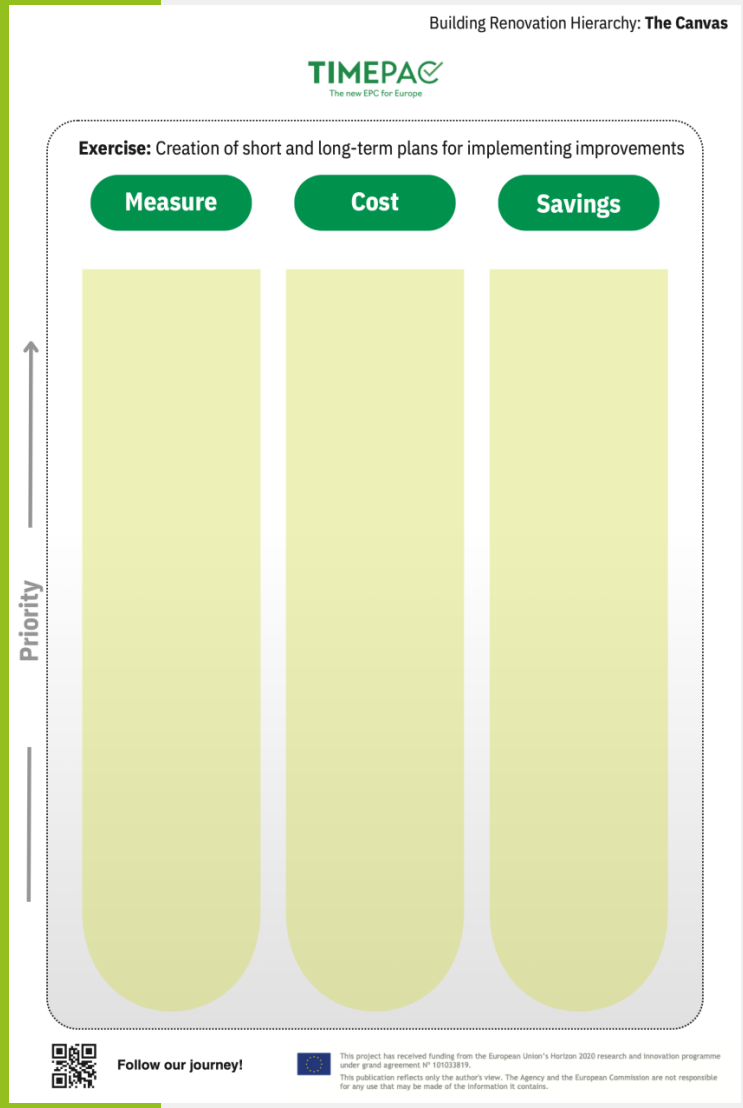
Measure / Which category of the previous 6 does the measure target?

Cost / Complete with 1-3 € symbols depending on the investment needed for this measure

(€ low, €€ medium, €€€ high)

Savings / Complete with 1-3 % symbols depending on the savings expected from this measure

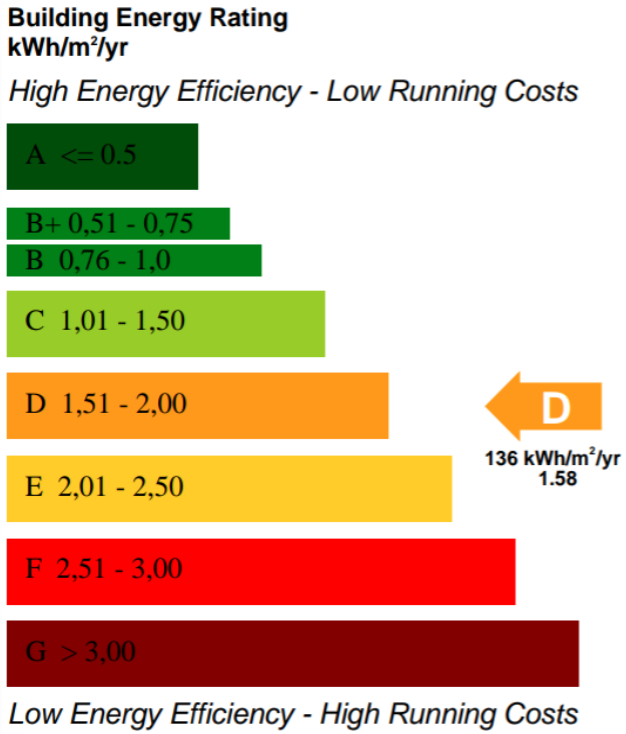
(% low, %% medium, %%% high)



1. Get into teams of 4-5 people
2. Brainstorm renovation measures with you team using post-its
3. Write 1 measure you propose for each of the 6 categories along with their associatted cost and savings expected.

Case study 1

Public school in the suburbs



Built in 1969

Hosts 200 students

Annual consumption of primary energy 136kWh/m2/yr (136 conventional energy, 0 RES)

Issues with moisture

Single-glazed windows

Case study 1 / Public school in the suburbs

Case study 1 / Public school in the suburbs

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Ενεργειακή Απόδοση Κτιρίου
kWh/m²/yr

Ψηλή Ενεργειακή Απόδοση - Χαμηλό Λειτουργ

Building Energy Rating
kWh/m²/yr

High Energy Efficiency - Lo

A <= 0.5
B+ 0,51 - 0,75
B 0,76 - 1,0
C 1,01 - 1,50
D 1,51 - 2,00
E 2,01 - 2,50
F 2,51 - 3,00
G > 3,00

Low Energy Efficiency - Hig

A <= 0.5
B+ 0,51 - 0,75
B 0,76 - 1,0
Γ 1,01 - 1,50
Δ 1,51 - 2,00
E 2,01 - 2,50
Z 2,51 - 3,00
H > 3,00

A
43 kWh/m²/yr
0.50

Priority

Χαμηλή Ενεργειακή Απόδοση - Ψηλό Λειτουργικό Κόστος

Exercise: Creation of short and long-term plans for implementing improvements

Measure	Cost	Savings
Insulation	€€€	%%%
Windows	€€€	%%%
Lighting	€€	%
PV	€€	%%
Green Roof	€	----
Cooling / Heating	X	X

Case study 2

Office in historic city centre

Located in Nicosia **city centre**

Detached with **listed buildings**

Single-glazed windows

Hosts 10 people (in rotation)

Low air quality

Total energy consumption 160kWh/m2/yr

(160 conventional energy, 0 RES)

Case study 2 / Office in historic city centre

Case study 2 / Office in historic city centre

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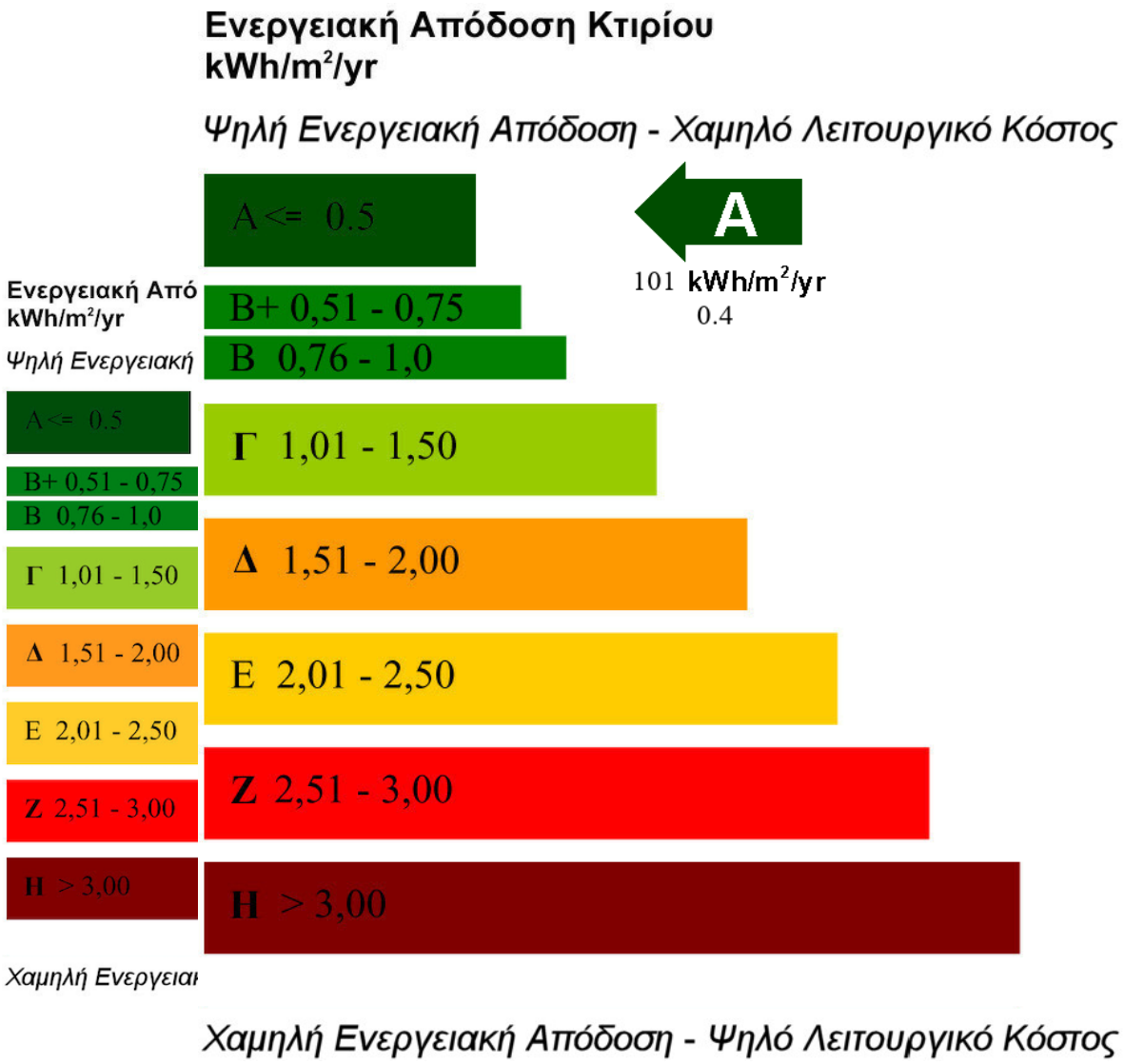

Exercise: Creation of short and long-term plans for implementing improvements

Measure	Cost	Savings
Windows	€€	%%%
Cooling/Heating	€	%%
PV	€€	%%%
Lighting	€	%
Green Roof	€€€	----
Insulation	X	X

Case study 1 / Public school in the suburbs

Case study 1 / Public school in the suburbs

Case study 1 / Public school in the suburbs

Case study 1 / Public school in the suburbs

Case study 2 / Office in historic city centre

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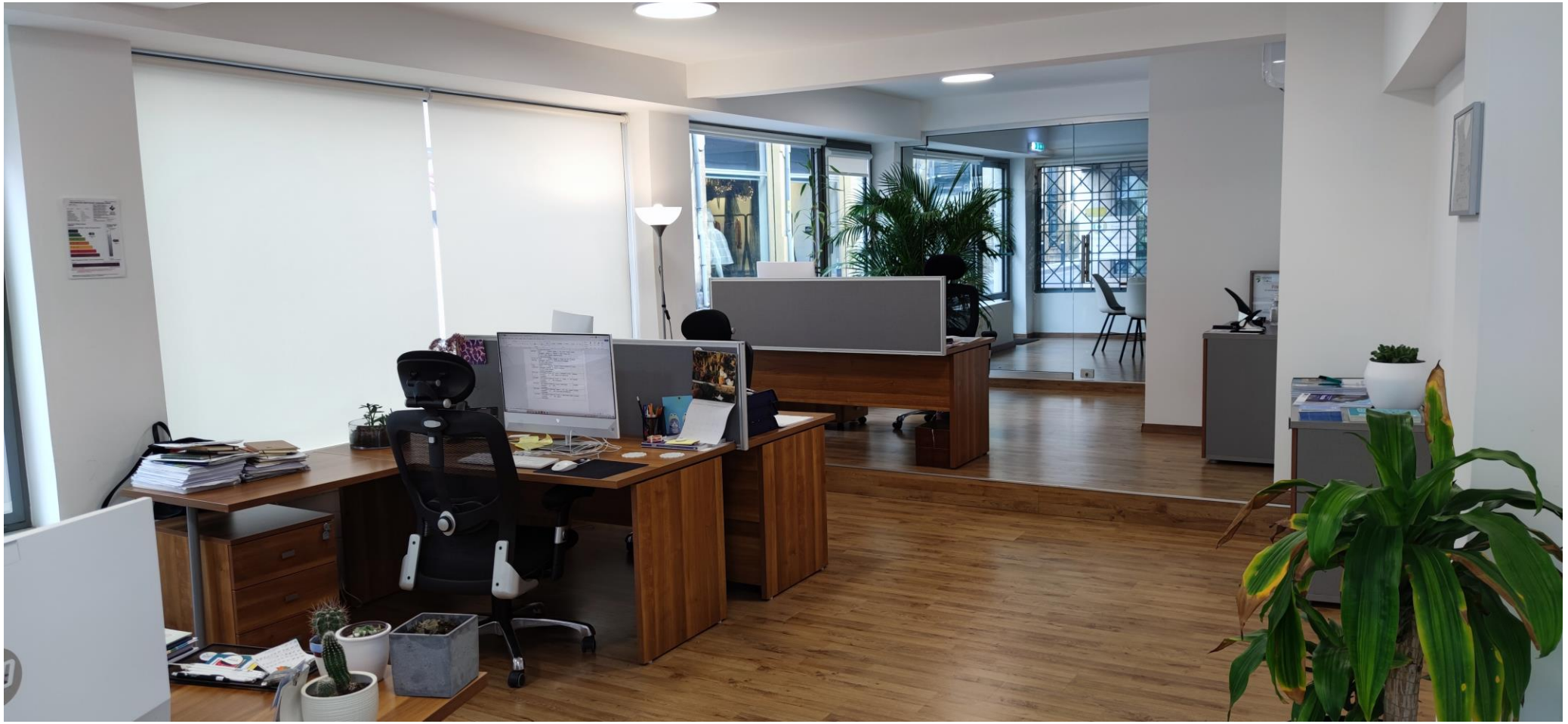

Case study 2 / Office in historic city centre

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Conclusions

Every building is unique, and t**here is no one-size-fits-all solution.**

Customizing short and long-term plans for improvements is essential, taking into account specific **priorities and constraints.**

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If you would like more information, please visit www.timepac.eu or contact us at

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Thanks for your attention!

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