Task 3.1: Market uptake through certifying bodies: implementation and testing on the non-residential sector (offices and hotels)

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CertiVeA

Final event
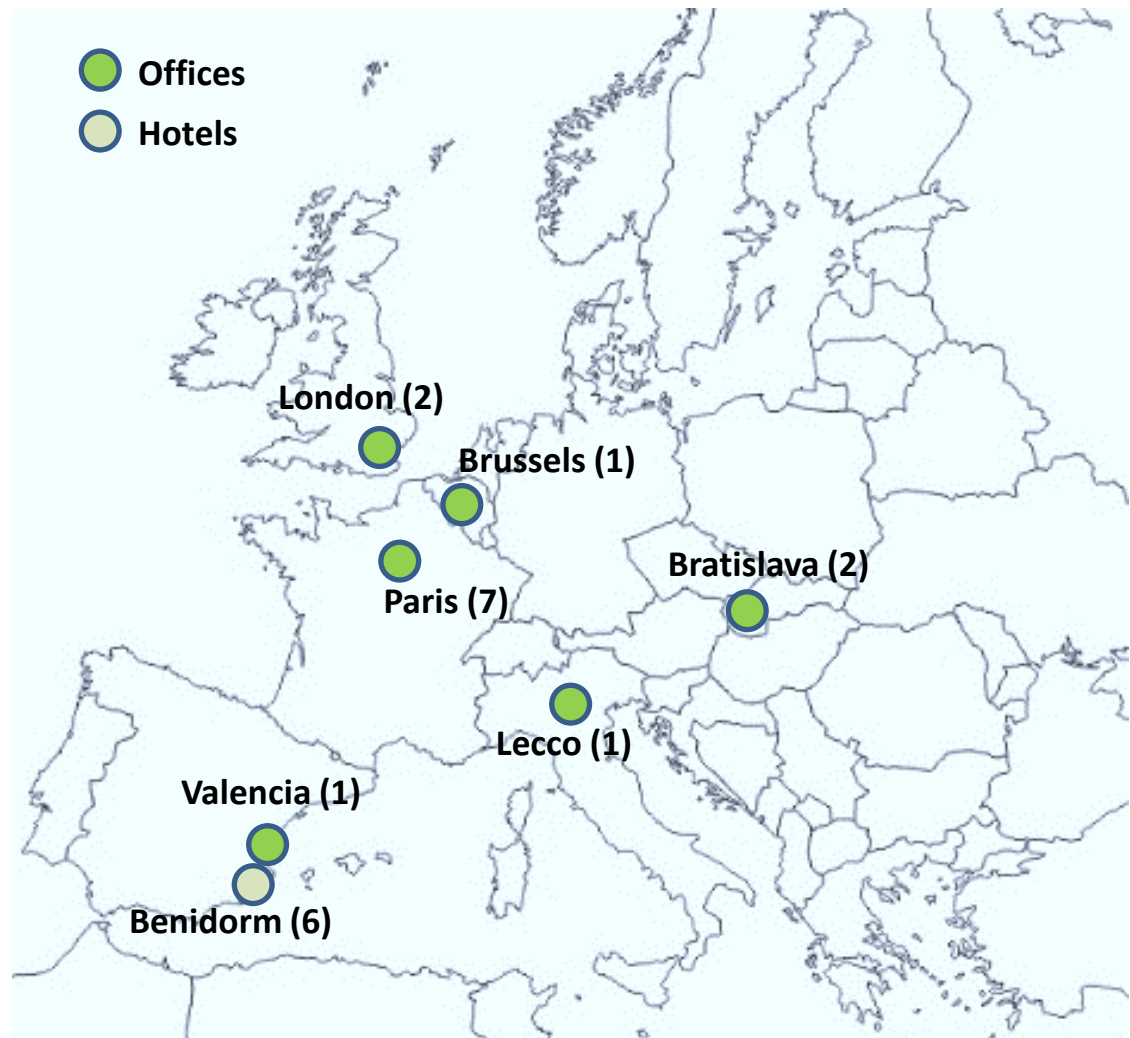**2020 09 29, Christophe GERARD, Certivea**

Task 3.1

1. **Pilot buildings**

2. **Main results**

3. **Main feedbacks and improvements brought by pilot studies**

4. **Market uptake**

Pilot buildings

- 20 pilots in 6 European countries
- 14 offices, 6 hotels
- All renovation phases concerned (decision, design, works, operation)
- Average area *: around 11000 m² (**≈** 11800 m² for offices and 9500 m² for hotels)
- All ALDREN tasks applied

* GIA: Gross Internal Area (m²)

Offices

Hotels

London (2)

Brussels (1)

Bratislava (2)

Paris (7)

Lecco (1)

Valencia (1)

Benidorm (6)

Pilot buildings

Registration
(June 2018 – June 2019)

- Looking for pilots
- Meetings to explain the pilot phase
- Pilot buildings register officially

Data collection and tests
(Novembre 2018 – June 2020)

- Collecting data from buildings
- Data collection meetings between ALDREN consortium members in charge of the tests and pilots
- On-site audits/visits
- Exchanges between ALDREN consortium members and pilot teams (design teams, Consultants, building managers, owners) to verify the data completeness
- Test of ALDREN methodologies
- Meetings during the tests between ALDREN members and pilots to optimize tests and discuss about intermediate results
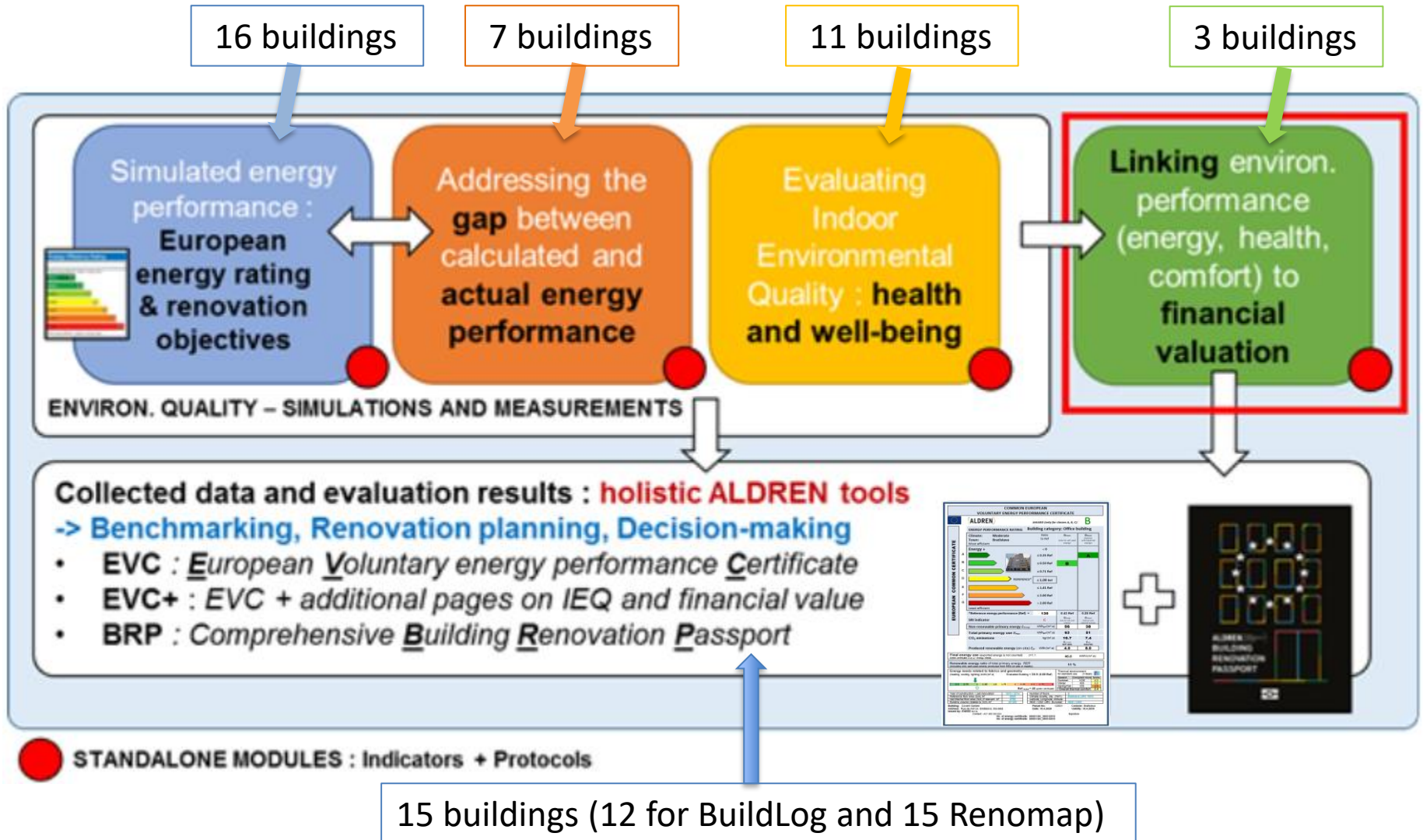
Feedback
(July 2020 – September 2020)

- Meetings with each pilot building to explain results
- ALDREN final event with delivery of the ALDREN pilot "award" (BRP)

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Tasks applied

16 buildings

7 buildings

11 buildings

3 buildings

ENVIRON. QUALITY – SIMULATIONS AND MEASUREMENTS

Simulated energy performance : **European energy rating & renovation objectives**

Addressing the **gap** between calculated and **actual energy performance**

Evaluating Indoor Environmental Quality : **health and well-being**

Linking environ. performance (energy, health, comfort) to financial valuation

Collected data and evaluation results : holistic ALDREN tools
-> Benchmarking, Renovation planning, Decision-making
- EVC : *European Voluntary energy performance Certificate*
- EVC+ : *EVC + additional pages on IEQ and financial value*
- BRP : *Comprehensive Building Renovation Passport*

STANDALONE MODULES : Indicators + Protocols

15 buildings (12 for BuildLog and 15 Renomap)

Main results

Energy savings triggered by the project (before/after renovation)

-120 kWh$_{EP}$/m².y
(-26.62 GWh$_{EP}$/y)
=
Gain of **3 to 4 classes** on EVC rating

Majority of buildings reach **Class A** or **B**

	Area (m² GIA)	Before (kWhEP/m².y)	After (kWhEP/m².y)
Total	220770	259,41	144,41
Offices	164013	213,36	105,01
Hotels	56757	392,49	258,25

Average values: around -110 kWh$_{EP}$/m².y for offices and -150 kWh$_{EP}$/m².y for hotels

Main results

Renewable energy production triggered by the project

+4.13 GWh_{EP}/y

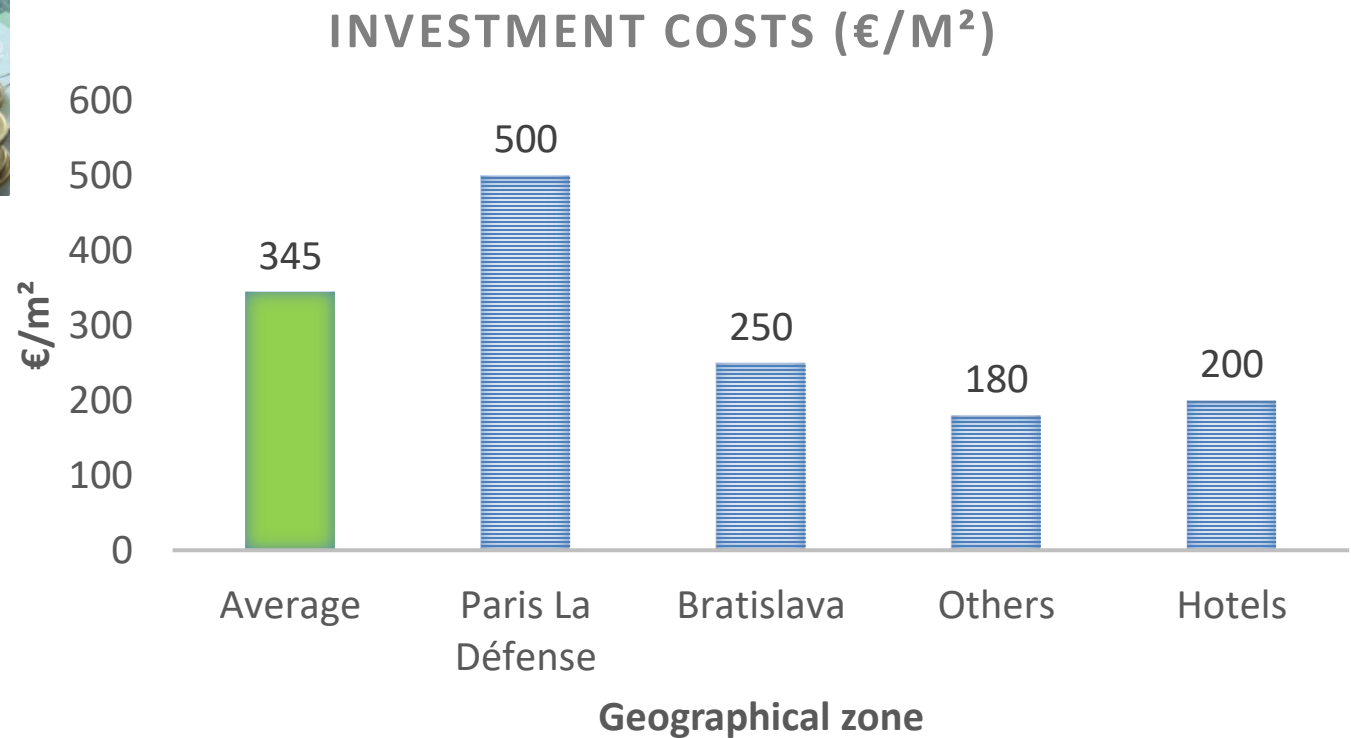(PV panels, and district heating for 1 pilot)

Main results

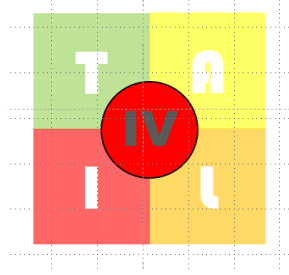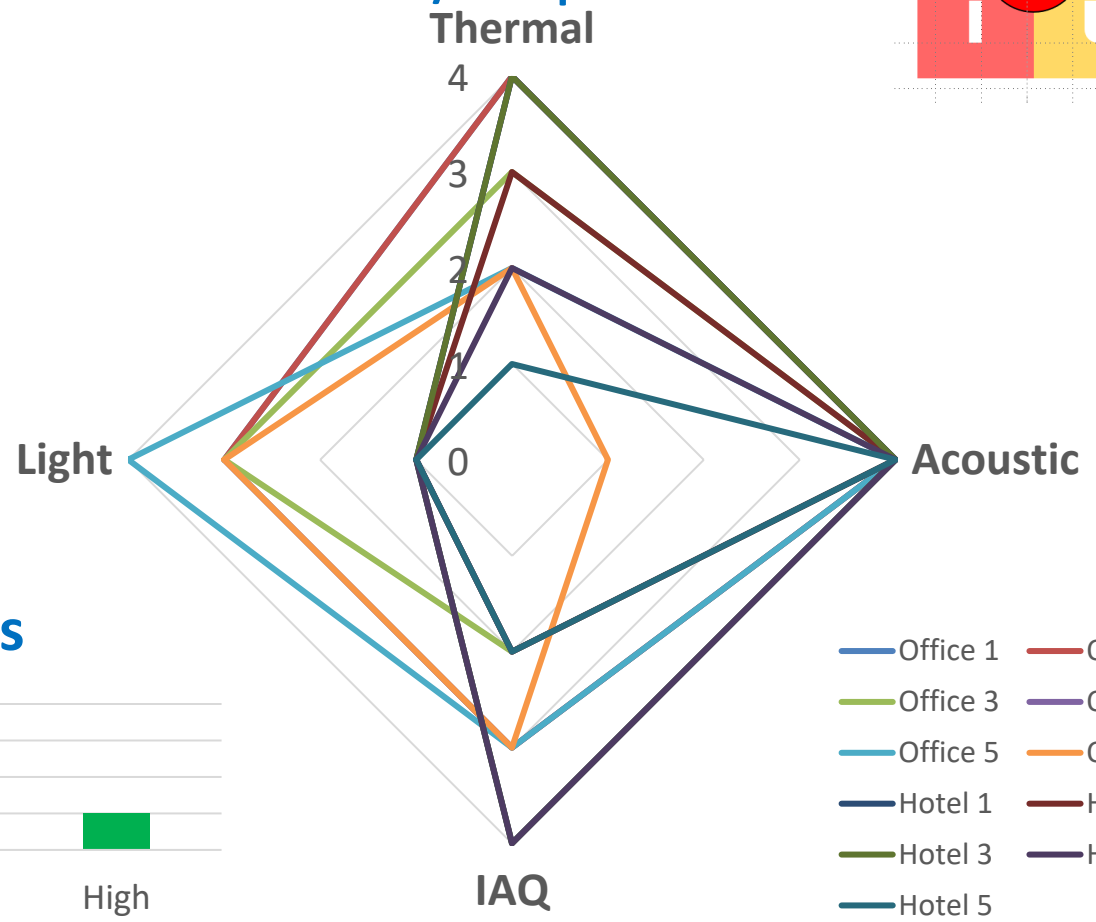## Investment costs triggered by the project

69.3 M€

INVESTMENT COSTS (€/M²)

Chart — €/m² by Geographical zone:
- Average: 345
- Paris La Défense: 500
- Bratislava: 250
- Others: 180
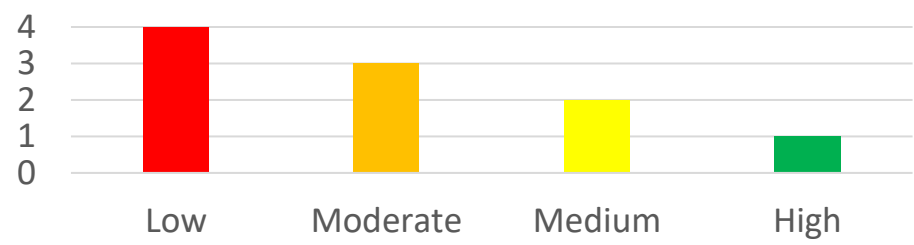- Hotels: 200

Main results

Poor IEQ in existing buildings

Tail score / component

Overall TAIL scores

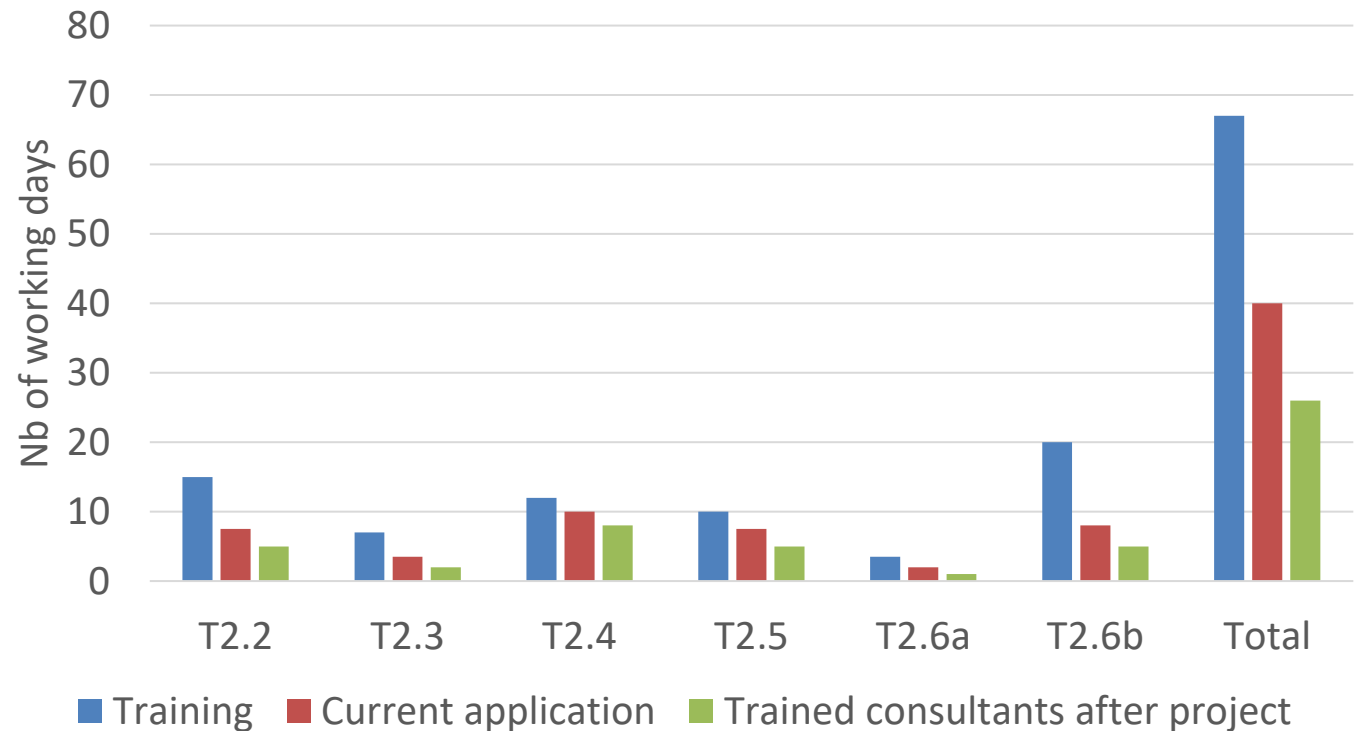*1 Office in « Moderate » all other buildings in « Low » quality (5 offices and 5 hotels)*

Main results

Working days to apply ALDREN tasks on pilot buildings

≈ -50%
during project

≈ -75%
after project

Bar chart — Nb of working days

Task	Training	Current application	Trained consultants after project
T2.2	15	7.5	5
T2.3	7	3.5	2
T2.4	12	10	8
T2.5	10	7.5	5
T2.6a	3.5	2	1
T2.6b	20	8	5
Total	67	40	26

■ Training   ■ Current application   ■ Trained consultants after project

Feedbacks brought by pilot studies

Lack of knowledge on buildings

On-site audits are necessary

Use digital platforms, online data bases

Poor technical data quality, meters

Financial data are very sensitive

Engage ALDREN in an early stage of the project

Technical and financial skills necessary

Meetings, briefings with pilots teams

Collaboration and training are necessary
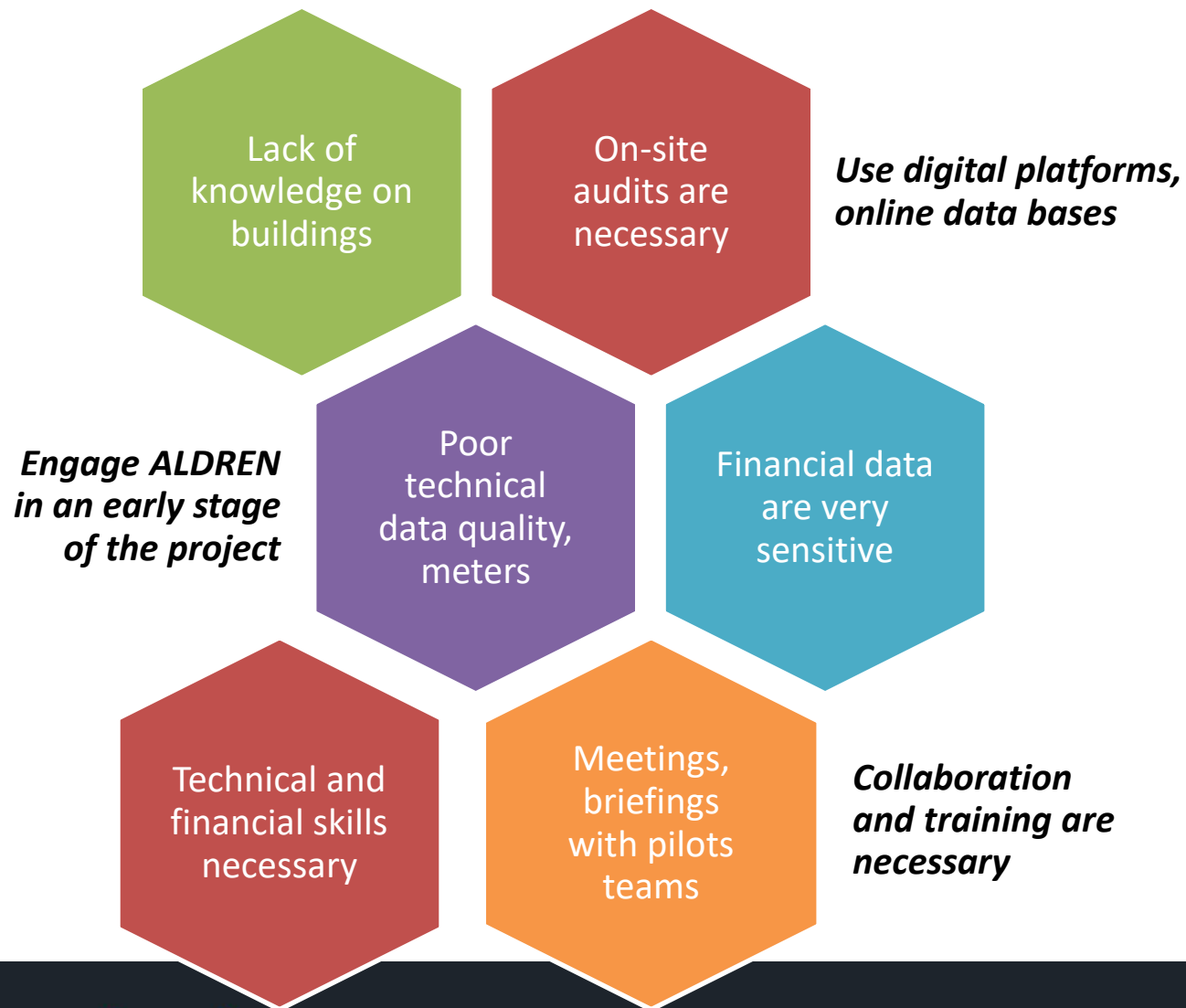
Some major improvements of ALDREN protocols brought by the pilot studies

Optimization of EVC scale (especially for hotels)

Optimization of assessment classes of Performance Verification Tool

Adjustments of TAIL protocol and addition of PredicTAIL

Adaptation of 2.5 protocol for hotels

Structure of BuildLog

New structure and interactions matrix of the Renomap
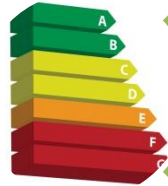
Final model of BRP

…

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Interests of pilot buildings owners in ALDREN

Better knowledge of their buildings and their operating

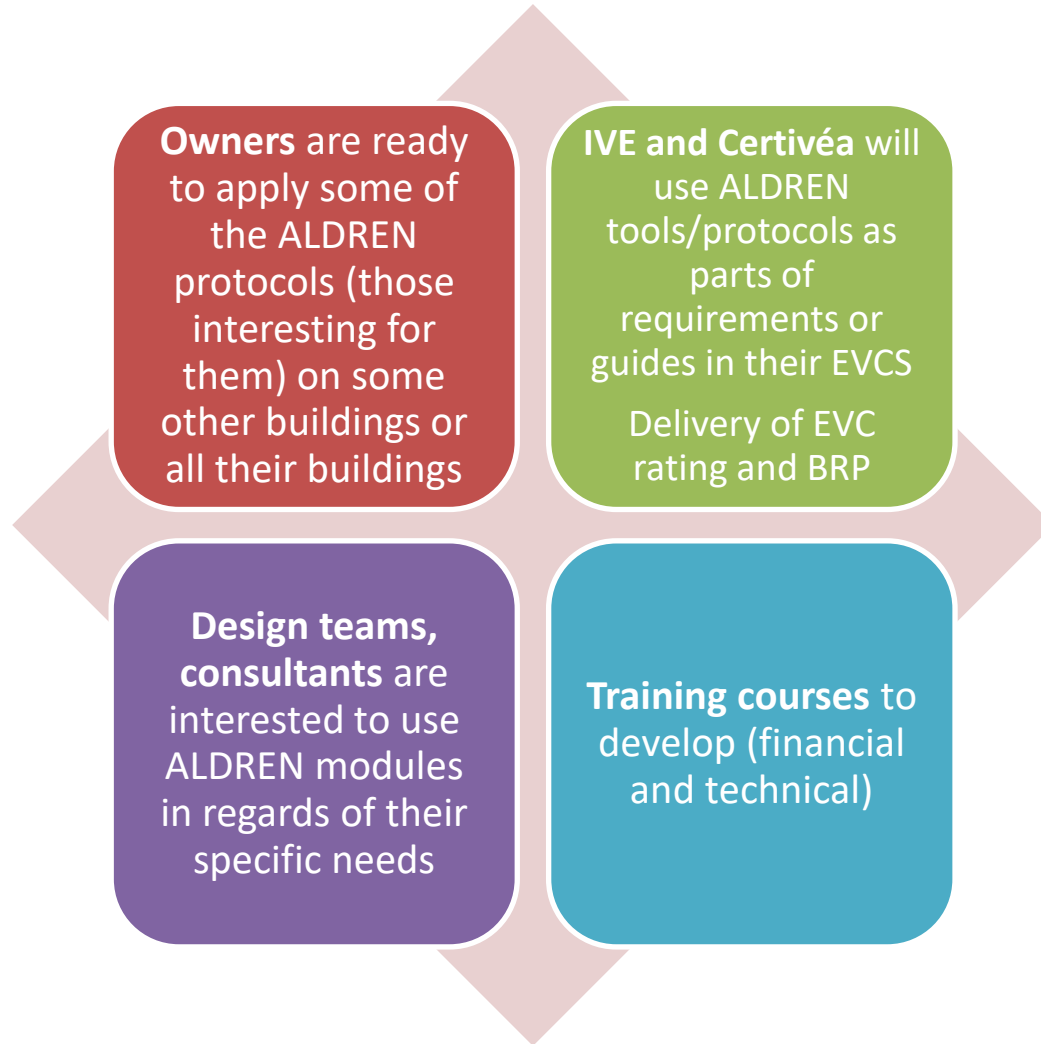Clear vision of possible performance and renovation actions to reach it in a timeframe

To be competitive in real estate market compared to neighbour new buildings in terms of energy performance, health and comfort

Link between renovation actions and costs / value of the building to discuss with investment / property funds

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Conclusions / Market uptake

Owners are ready to apply some of the ALDREN protocols (those interesting for them) on some other buildings or all their buildings

IVE and Certivéa will use ALDREN tools/protocols as parts of requirements or guides in their EVCS

Delivery of EVC rating and BRP

Design teams, consultants are interested to use ALDREN modules in regards of their specific needs

Training courses to develop (financial and technical)

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Thank you!

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The information in this publication does not necessarily represent the view of the European Commission.