

# De-Risking Energy Efficiency Finance

## Lessons from EEFIG and international stakeholder engagement

SEI Forum, Athens

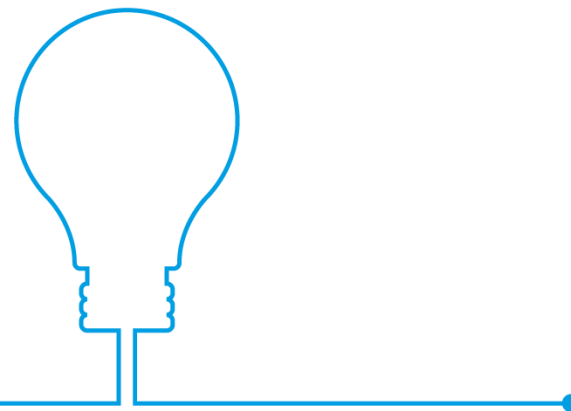


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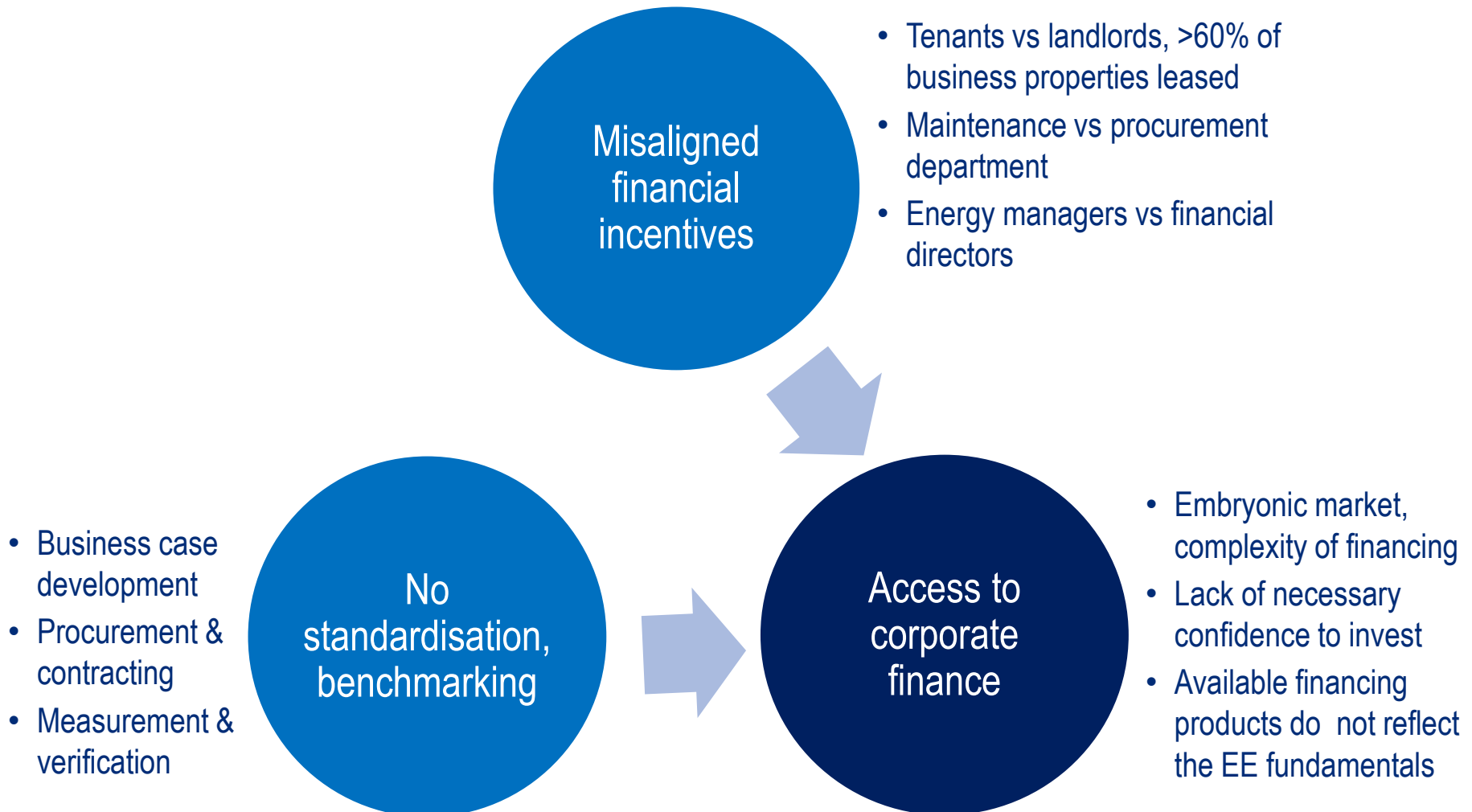
31 May 2018

- Recognised Barriers & Challenges
- EEFIG De-Risking Project
  - ✓ *Phase I*
  - ✓ *Underwriting Guide*
  - ✓ *DEEP*
- International Stakeholder Engagement (*Other*)
- Considerations

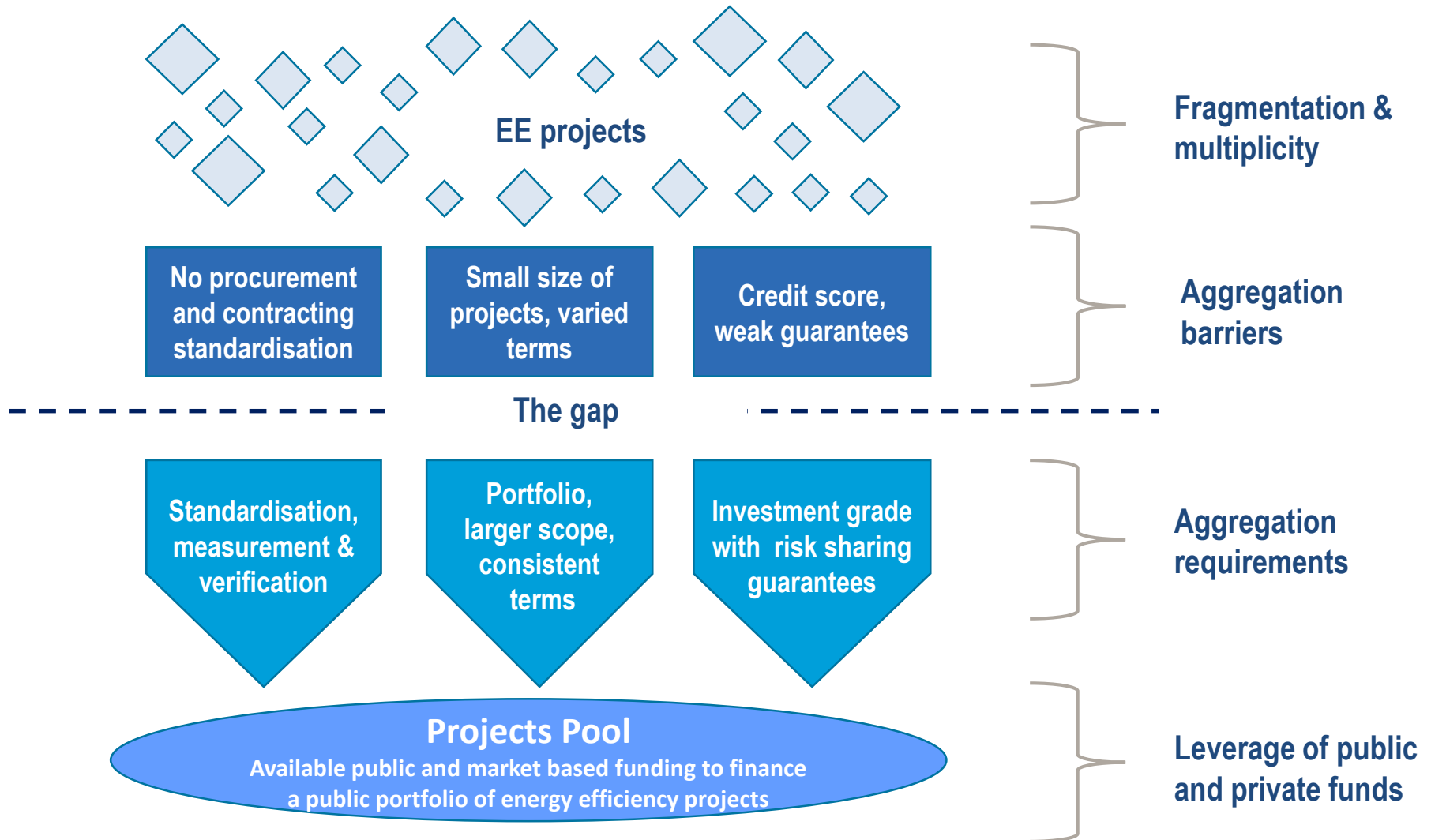
# Recognised Barriers & Challenges



# The general market barriers to EE finance uptake



# Need to overcome aggregation barriers



# Energy efficiency finance challenges in Europe

Event though the scale of investment needed to achieve Europe's 2020 energy efficiency target is estimated at €85-120 billion per year across economic sectors.

- The current investments are **below half** of this requirement.
- The current investments are **5 times lower** than required to deliver 2050 decarbonisation targets.
- **Common language** between project developers, project owners and financial institutions remains still a challenge.

# EEFIG and its De-Risking Project



# Energy Efficiency Financial Institutions Group (EEFIG)

## General background

- Established in 2013 by the European Commission (DG Energy) and United Nations Environment Program Finance Initiative (UNEP FI).
- Created an open dialogue and work platform for public and private financial institutions, industry representatives and sector experts
- Aimed to identify the barriers to the long-term financing for energy efficiency and propose policy and market solutions to them.
- EEFIG has engaged 120 active participants from 100 organizations to deliver clear and unambiguous messages.

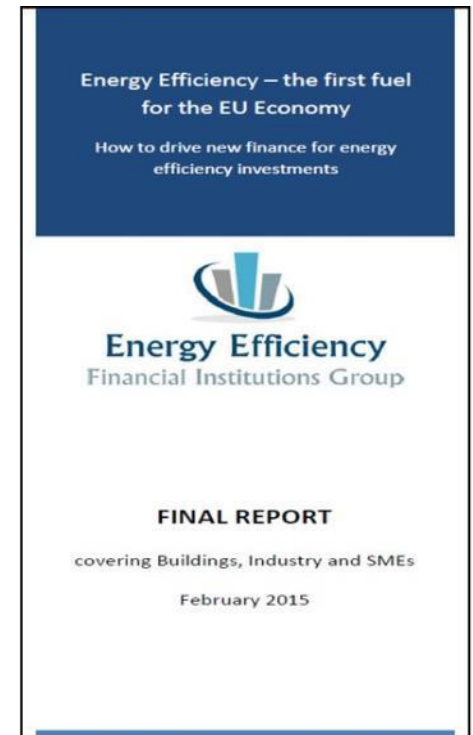


**Energy Efficiency**  
Financial Institutions Group



## Phase I report conclusions on barriers

- Lack of knowledge and information
- Lack of performance data
- High upfront investments
- Fragmentation, transaction costs
- Complexity of financing
- Longer payback periods for certain measures
- The market is not clear
- Available financing products do not reflect EE fundamentals



**Note:** <https://ec.europa.eu/energy/en/news/new-report-boosting-finance-energy-efficiency-investments-buildings-industry-and-smes>

## The EEFIG Phase I main findings

- Lack of evidence on the performance of energy efficiency investments makes the benefits and the financial risk harder to assess.



- Lack of commonly agreed procedures and standards for energy efficiency investment underwriting increase transaction costs.



## EEFIG Phase II, The De-risking Project

- In 2016, a consortium was formed – *EEFIG De-risking Project* – to pursue EEFIG's conclusions and create an evidence base that would de-risk energy efficiency investments for a new and emerging number of financial institutions entering this market.



- ✓ Creation of an open source **database** for energy efficiency investments performance monitoring and benchmarking



- ✓ Development of common, accepted and standardized underwriting and investment **framework** for energy efficiency investing

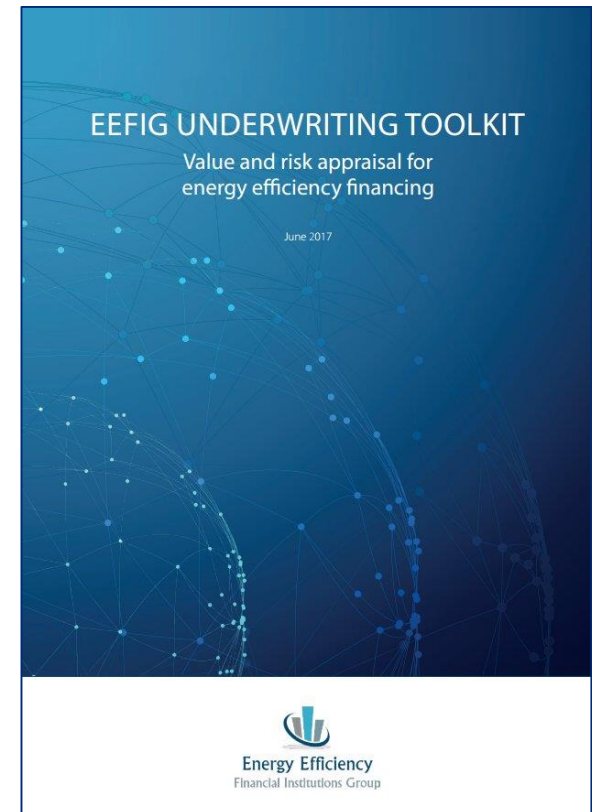




# EEFIG Underwriting Toolkit (Jun 2017)

## Designed to assist financial institutions to scale up their deployment of capital into energy efficiency:

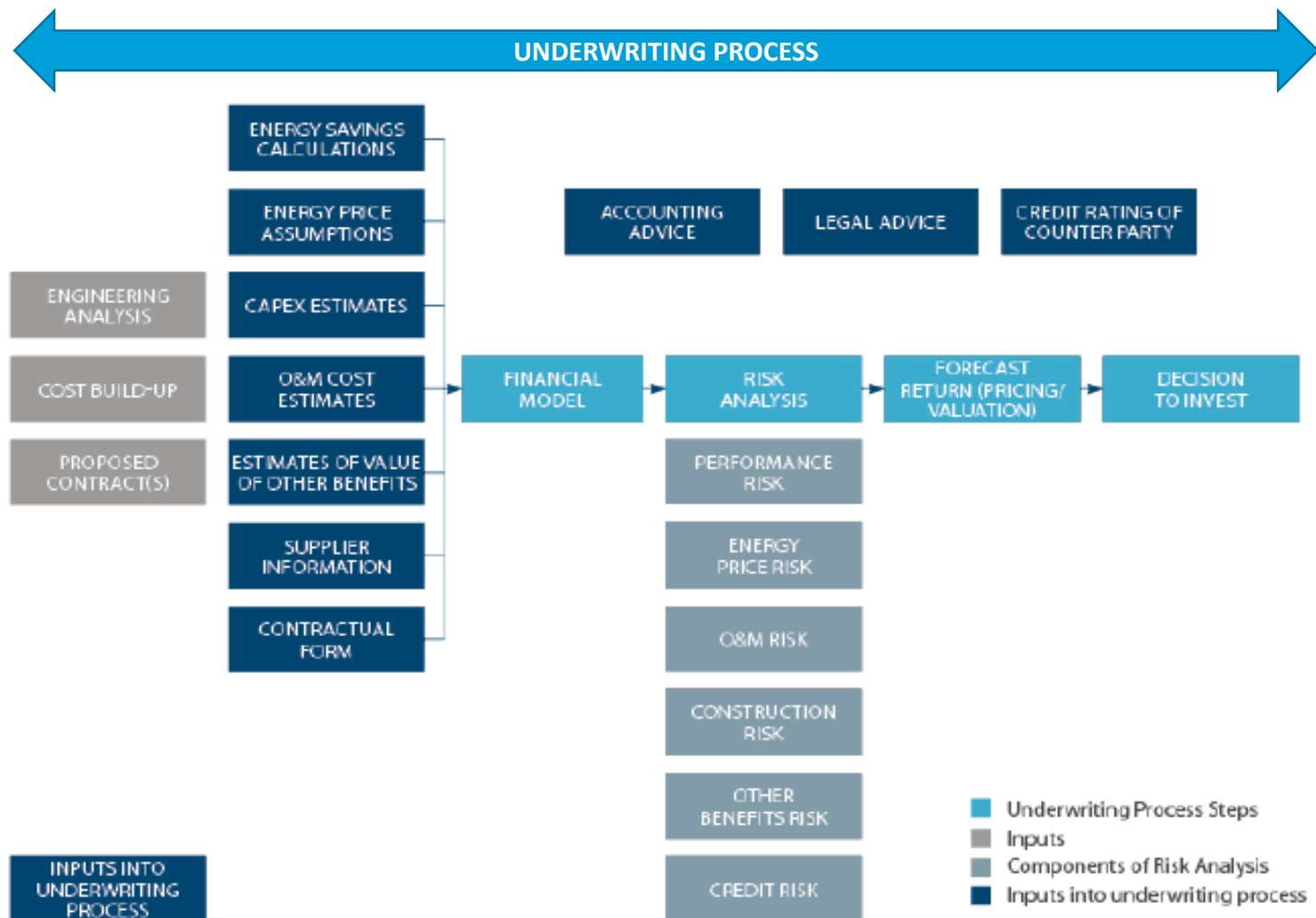
- to help originators, analysts and risk assessors better understand energy efficiency investments and therefore better evaluate both their value and the risks.
- to provide a common framework for evaluating energy efficiency investments and analysing risks to allow capacity building around standardised processes and understanding.
- to help developers and owners seeking to attract external capital to (develop) energy efficiency projects in a way that better addresses the needs of financial institutions.
- to foster a common language between project developers, project owners and financial institutions.





# Energy efficiency finance underwriting process

*Taken from EEFIG Value & Risk Appraisal Tool*





# Access on-line the EEFIG underwriting toolkit

<https://valueandrisk.eefig.eu/>

## EEFIG UNDERWRITING TOOLKIT Value and Risk Appraisal for Energy Efficiency Financing

A tool to assist financial institutions to scale up the  
deployment of capital into energy efficiency



Introduction



Financial Institutions  
and Energy Efficiency



Financing Energy  
Efficiency



The Project Life Cycle



Value and Risk  
Appraisal



Resources



“

I strongly recommend this toolkit to project promoters, banks, financial institutions and anyone else interested in financing energy efficiency.

Foreword by Maroš Šefčovič, European Commission VP



“

I recommend this toolkit to any policy maker, investor, business, developer or citizen seeking a more inclusive, green economy.

Foreword by Erik Solheim, UN Environment

# De-Risking Energy Efficiency Platform (DEEP)

The DEEP platform was launched\* in Nov 2016:

- An open-source database to up-scale energy efficiency investments in Europe through the improved sharing and transparent analysis of existing projects in Buildings and Industry.
- Offers to the user the following services:
  1. Key figures
  2. Data overview
  3. View Charts
  4. Add and manage projects
  5. Analysis toolbox
  6. Benchmark of projects

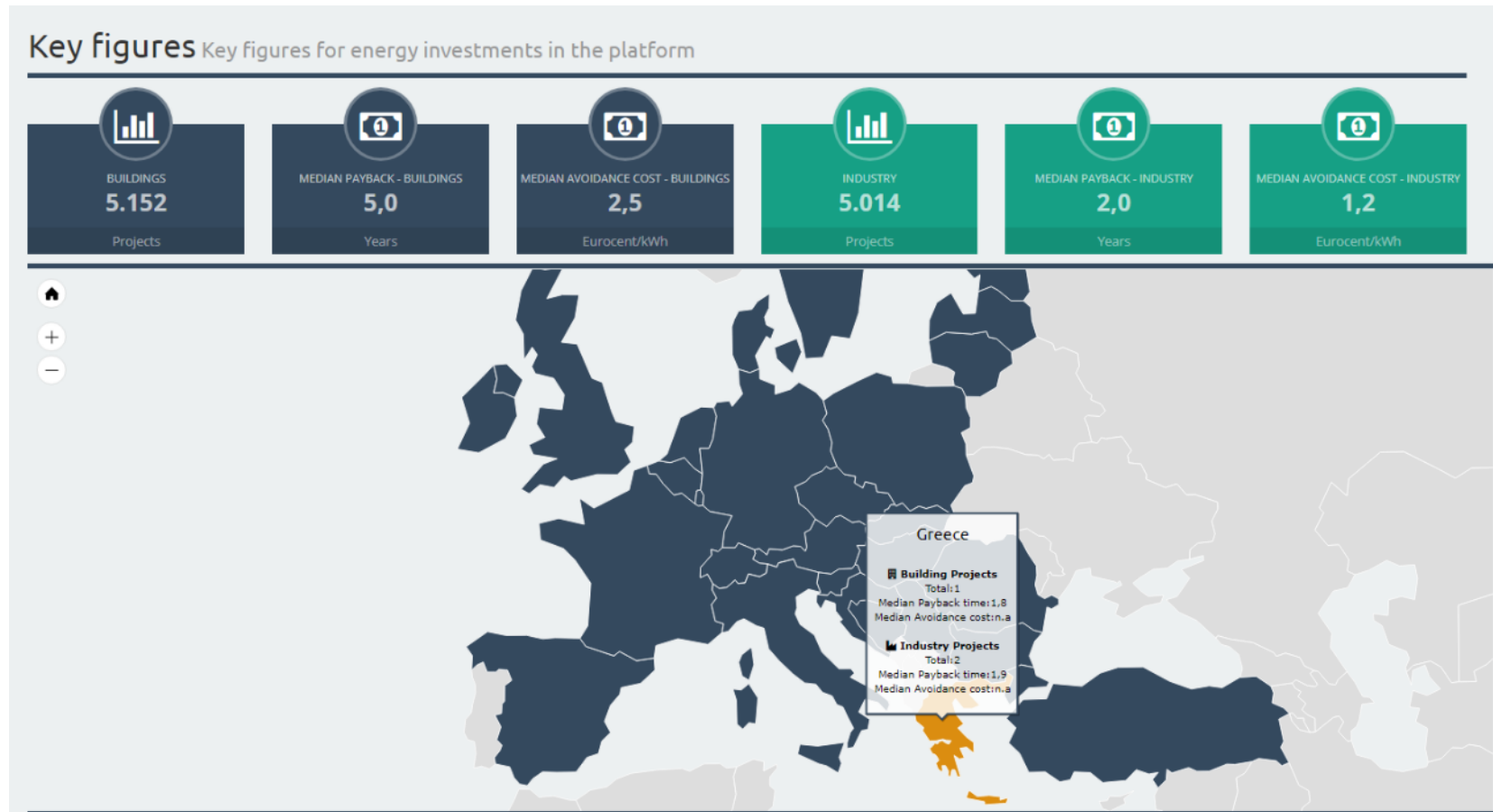


The projects are not a statistically representative sample of all energy efficiency projects in EU !



**Note:** In close coordination with the Commissions launch of the Clean Energy for All Europeans package.

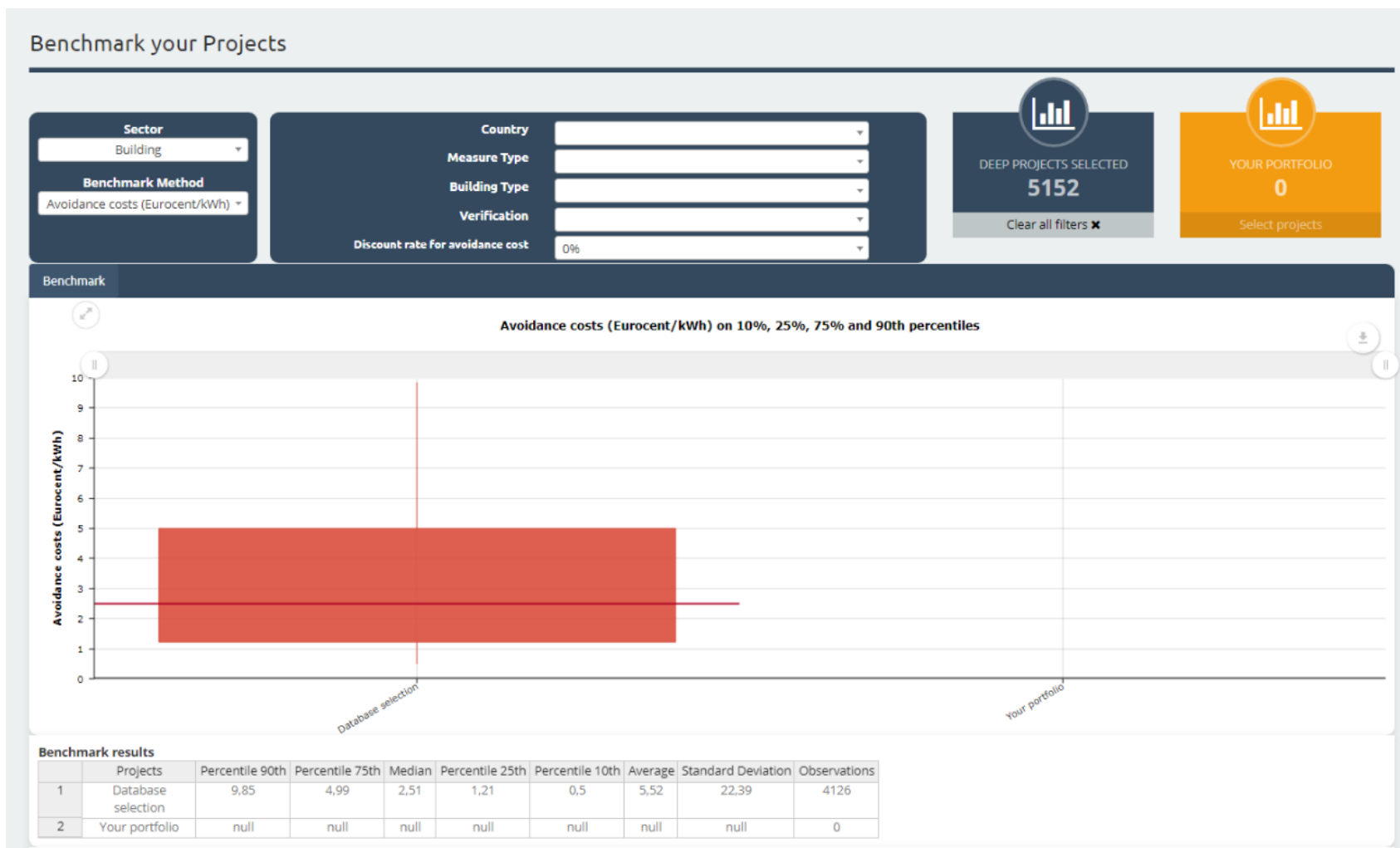
# Overview of the interface (1/2)



- ✓ More than 10,000 European EE projects included (May2018) described by public and private investment funds and financial institutions, national and regional authorities, as well as energy efficiency solution providers

Source: DEEP Output data on 25/05/2018

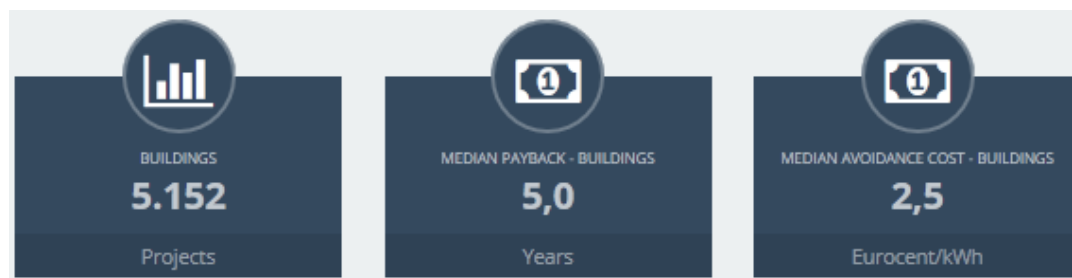
## Overview of the interface (2/2)



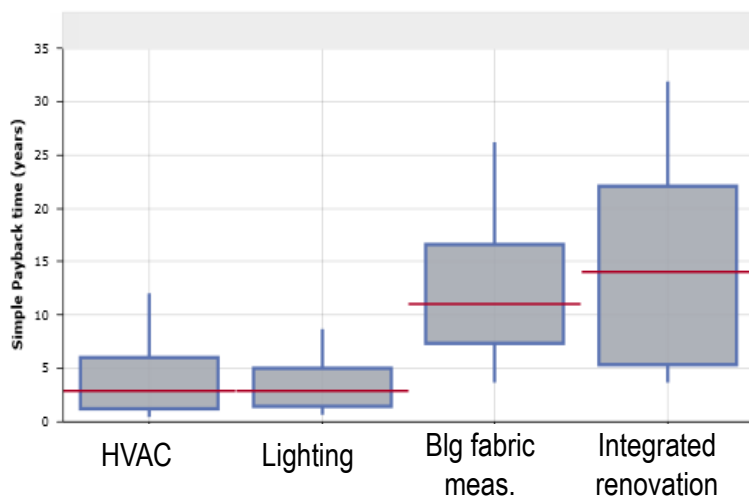
Source: DEEP on 25/05/2018

# Focus on building data - payback time\*

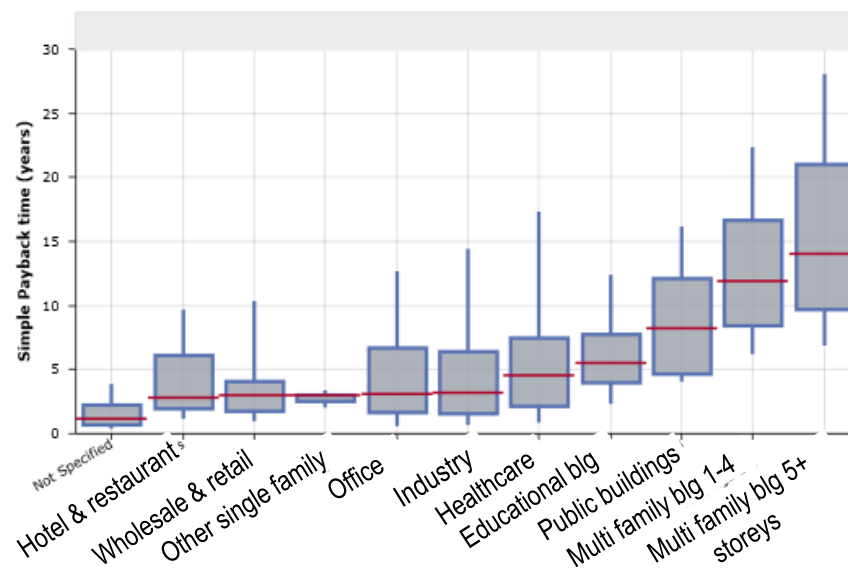
\* years required for the saving to pay for the investment without any interest costs



Distribution of payback time per measure type (in year)



Distribution of payback time per bldg type (in year)

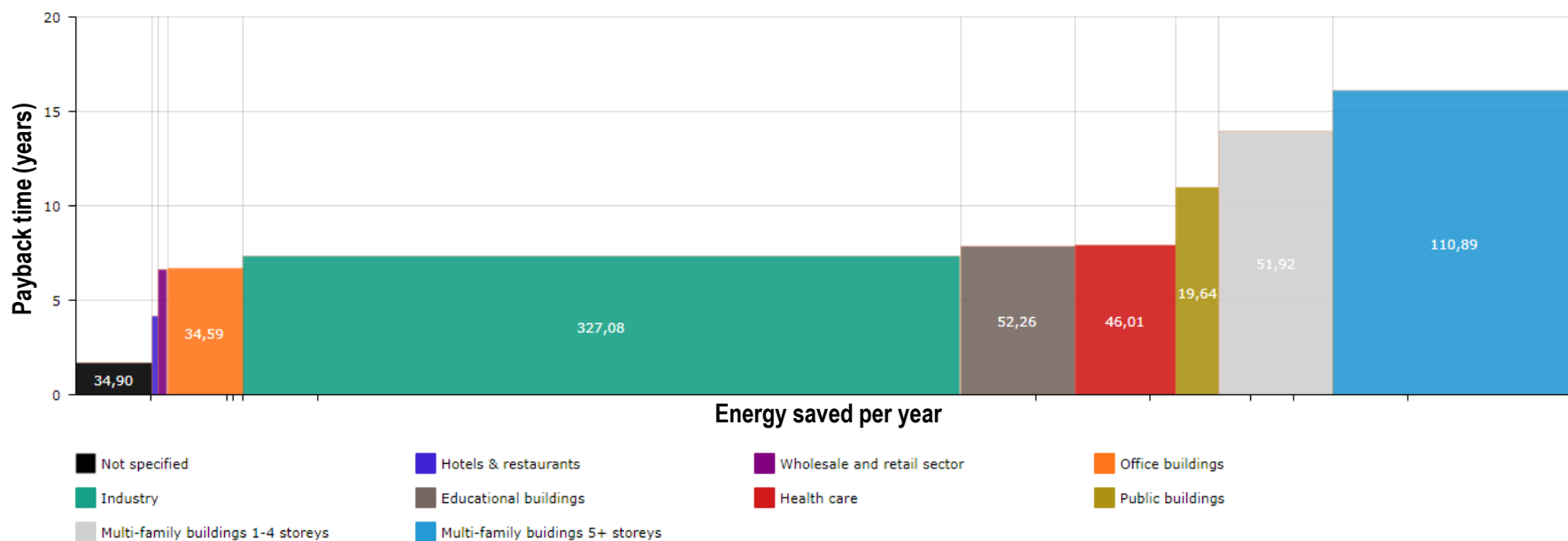


Sub-set of projects shown in Chart = 3,495 from a Database total of 10,166

Source: DEEP Output data on 25/05/2018

# Focus on building data – energy savings

Energy saving potential in building (GWh/year) by average payback time (year) and use

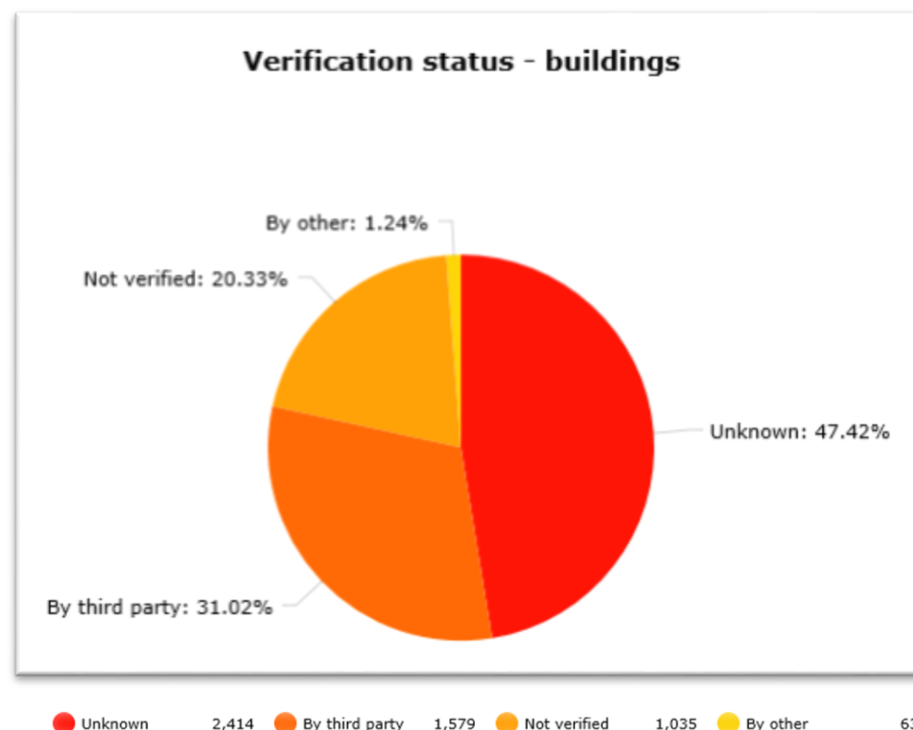


Sub-set of projects shown in Chart = 3,495 from a Database total of 10,166

Source: DEEP Output data on 25/05/2018

## Emerging results - Verification

- For buildings projects, savings have been **verified by third parties for 31%** of the projects and 20% have not been verified (status is unknown for almost 50% of the building projects).
- For industry projects, less than 1% of the projects have an independent ex-post verification of the energy savings.
- EE projects continue to lack sufficient monitoring of ex-ante and ex-post data, leading to higher risk perception.

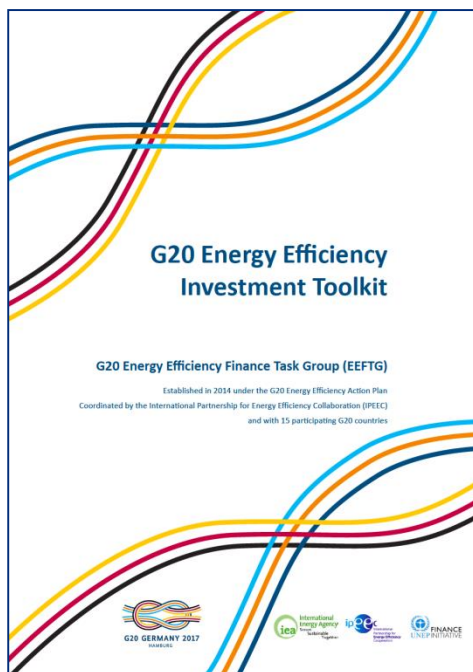


Note: Data providers can upload data for verification by the administrators of the platform

# International Stakeholder Engagement (Other)



# G20 Energy Efficiency Investment Toolkit (May 2017)



## In summary, the G20 Energy Efficiency Investment Toolkit:

- Launched for world's major economies to further develop USD 221bn energy efficiency opportunity
- A product of 15 country members collaborative work.
- A result of 3 years work of G20's Energy Efficiency Finance Task Group (EEFTG), constituted under G20's EE Action Plan in 2014 and reinforced through 2016 EE Leading Programme.
- Provides a framework and tools by which G20 countries can enhance capital flows for energy efficiency investments.
- Includes an assessment of current energy efficiency investment by sector and region.
- Published under the content direction of the International Energy Agency (IEA); the International Partnership for Energy Efficiency Collaboration (IPEEC); and the United Nations Environment Finance Initiative (UNEP FI).



# The UK Green Finance Taskforce

## Engaged stakeholders across industry

| VC and Fintech | Retail | Project & Commercial | Capital Markets | Institutional Investors | Insurance | TCFD, data and disclosure |
|----------------|--------|----------------------|-----------------|-------------------------|-----------|---------------------------|
|----------------|--------|----------------------|-----------------|-------------------------|-----------|---------------------------|

More than 300 individuals from over 150 organisations were consulted.



# The UK Green Finance Taskforce recommendations

## The Taskforce report (March 28<sup>th</sup>) outlined 30 recommendations under 10 themes

1. Relaunch UK green finance activities through a new unified brand
2. Improve climate risk management with advanced data and analytics
3. Implement the TCFD recommendations
4. Drive demand and supply for green lending products
5. Boost investment into innovative clean technologies
6. Clarify investor roles and responsibilities
7. Issue a sovereign green bond
8. Build a green and resilient infrastructure pipeline
9. Foster inclusive prosperity by supporting local actors
10. Integrate resilience into the green finance agenda



## Other examples of international engagements

*(funded by EC Horizon 2020)*

### ICP Europe

The Investor Confidence Project Europe unlocks access to financing for the building, industry, district energy and street lighting markets by standardizing how energy efficiency projects are developed, documented and measured. ICP has developed the Investor Ready Energy Efficiency™ Certification which can be granted to projects that are developed following ICP Protocols.



### Sustainable Energy Asset Framework

The project aimed to enable SMEs providing energy efficiency and other energy-related services to gain access to project finance through a streamlined software platform (SEAF tool) that enables independent project valuation, insurance and design standardisation. The overall objective of the SEAF tool is to support the acceleration of energy efficiency investments.



### Energy Efficiency Mortgages Initiative

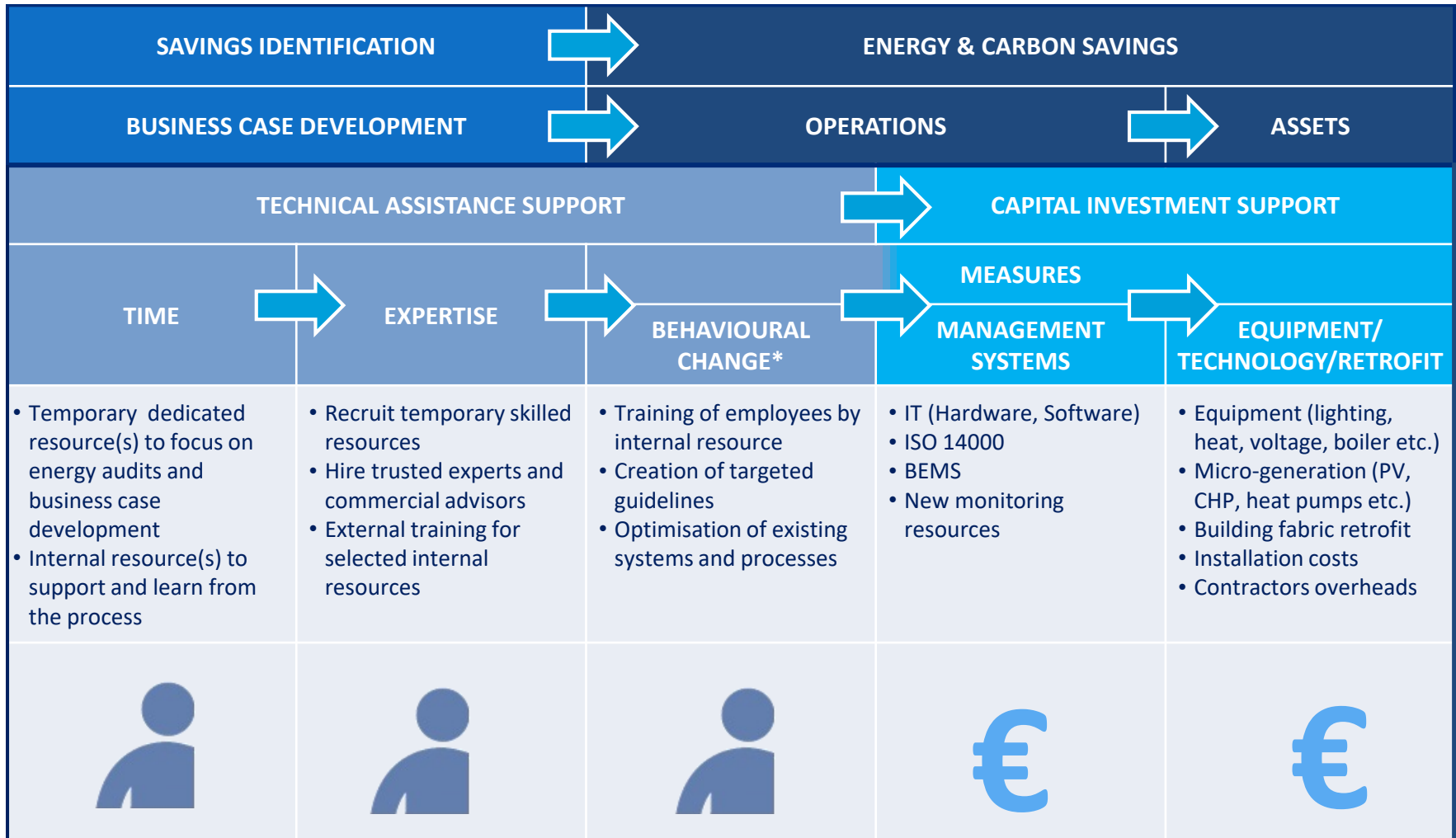
The EMF-ECBC has been working on the development of a standardised, pan-European mortgage financing mechanism, with preferential financial conditions linked to the mortgage. This mortgage financing mechanism will be supported by a data protocol and portal that will collect and access empirical evidence allowing for a comprehensive analysis of de-risking energy efficient features.



# Considerations



# Mapping energy efficiency support value chain



# Making the energy efficiency market investible

1

## Risks

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What are the main risks that investors face in a country / sector when investing in energy efficiency energy technologies?

2

## Triple-A

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What are the Triple-A investments?  
(investments that have an extremely strong capacity to meet their financial commitments, by attaining the expected performance targets)

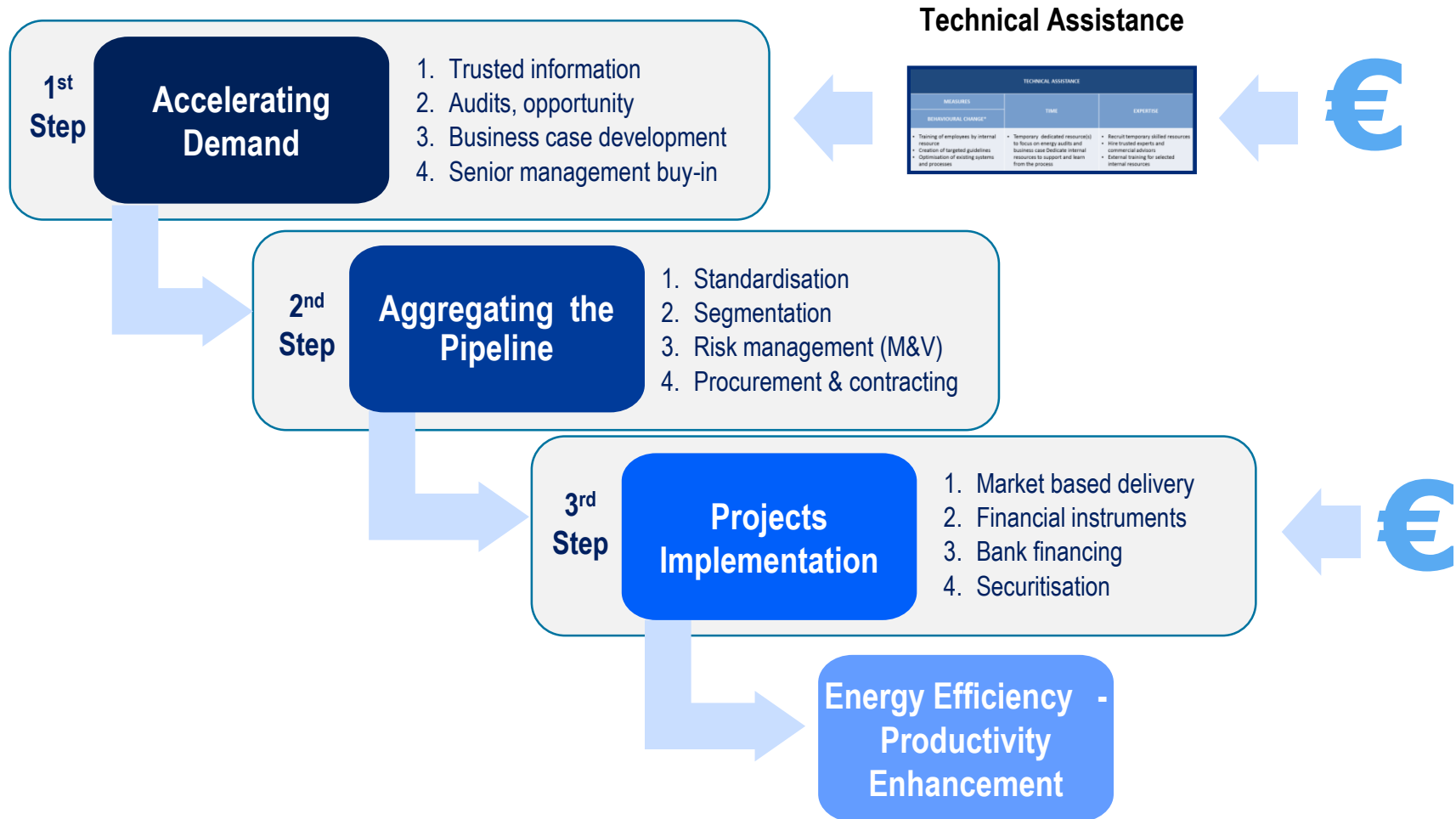
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## Answers

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- ✓ What energy efficiency investments are **realistic and feasible** in the country context and each sectors?
- ✓ How they could be **financed in practice** in the short/ medium term?

# A multi-step gradual approach



# De-Risking Energy Efficiency Finance

Thank You. Q&A

SEI Forum, Athens

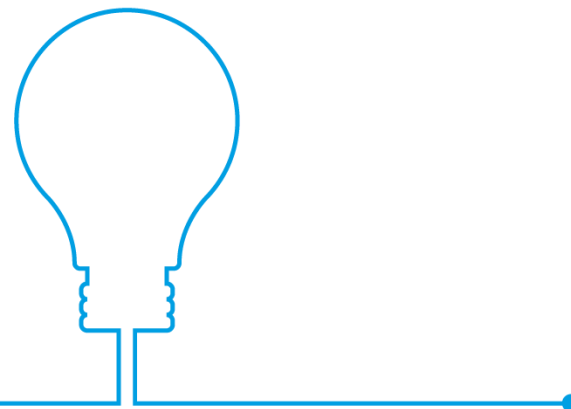


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