

eQuad

De-risking energy efficiency investments

Joule Assets Europe

National Roundtable on Financing Energy Efficiency in
Greece

Athens, 25/10/2018

Company Offering Joule Assets Inc.

Joule makes the energy efficiency market scale, through proprietary software, business tools and processes that intelligently simplify everything energy related. Using our market intelligence, expertise, and performance-based financing approach, Joule enhances projects by generating and integrating new value and revenue streams. Each business unit — JouleSmart Solutions, JouleCommunity Power, and **Joule Europe** — supports Joule's overarching mission.

Currently valued at €8 billion, the **European** energy efficiency markets have lagged due to a slow sales cycle and high due diligence costs blocking access to capital and complicating project finance. To address this market failure, Joule Assets Europe provides strategic support to enable investment for Energy Reduction Assets projects, including energy efficiency, distributed renewables, storage, and building control measures. Joule's online platform, eQuad, provides access to third-party project valuation, performance insurance, project certification, due diligence, and introductions to prequalified capital sources in the form of off-balance sheet financing.

Company Offering Joule Assets Inc.

- Based out of New York, offices London, Italy, and Brussels
- Began as a financial fund manager of Energy Reduction Assets (ERA)
- US deploys PV and clean energy with municipalities as clients
- Today acts as conduit for finance in Europe, a project developer and financier in the US
- Runs the eQuad platform
- Forwards policy: Board Member and Chair of Smart Homes and Buildings Committee at SmartEn association in Brussels
- EU Project partner: NOVICE H2020, EuroPACE H2020, Flexiciency





Bridging the Finance Gap

- The SEAF Project was funded by the European Commission*
- **Budget:** €1.700.000
- **Duration:** 28 months

**eQuad launched
May 2018**



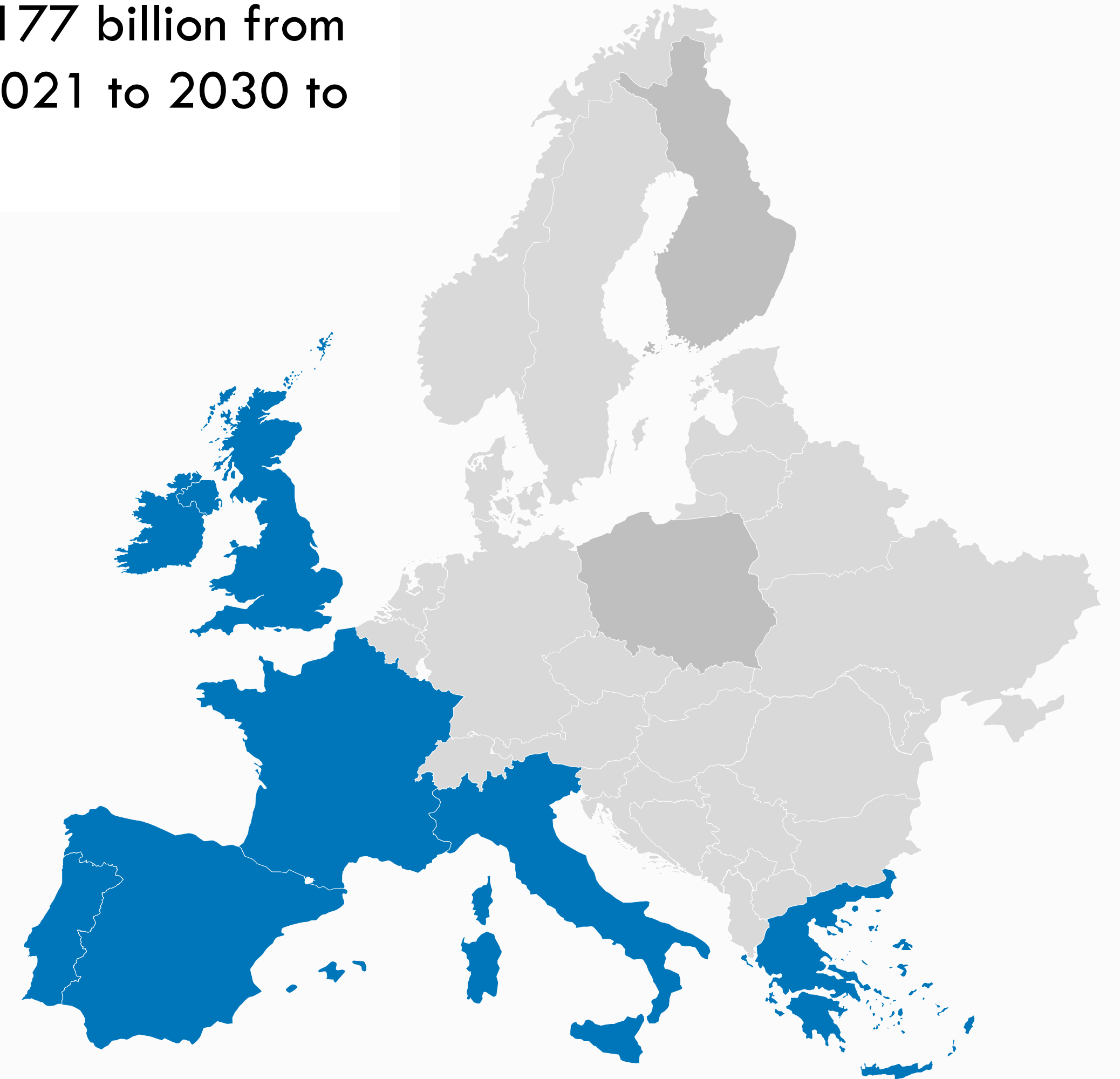
eQuad

The eQuad platform:

The EU Commission estimates that “the mobilisation of an extra €177 billion from public and private investment sources is needed **annually** from 2021 to 2030 to reach the 2030 climate and energy targets.”*

What if ALL viable projects successfully accessed finance?

- **Fund managers: successfully finance only 5%-15% of all projects reviewed – representing a significant upfront cost and reduction of profits**
- **Project developers: often self finance their projects or use bank loans due to perceived difficulties in accessing appropriate finance**

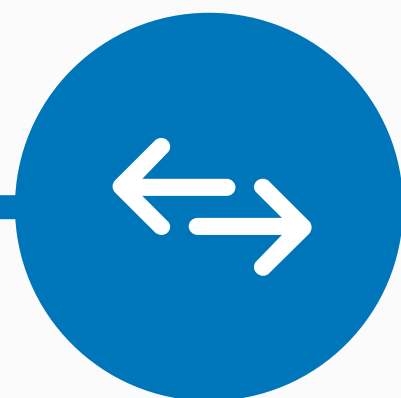


**eQuad is active today in:
Italy, UK, Ireland, France, Portugal, Greece and Spain**

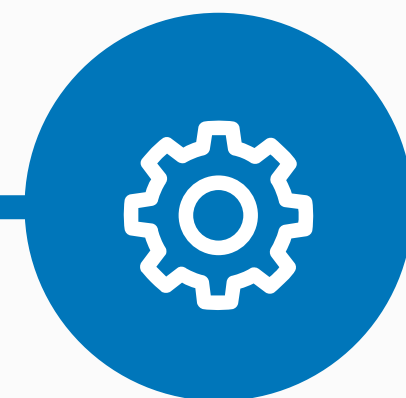
The Journey: Project Developer

A project's journey toward finance

We help ESCOs, engineering firms, and construction companies across Europe access appropriate project investment by providing third-party valuation, performance insurance, project certification, and due diligence that facilitate and expedite funding for energy efficiency projects.



VALUATION



CONTRACT
DEV.
SUPPORT



STANDARDISATION



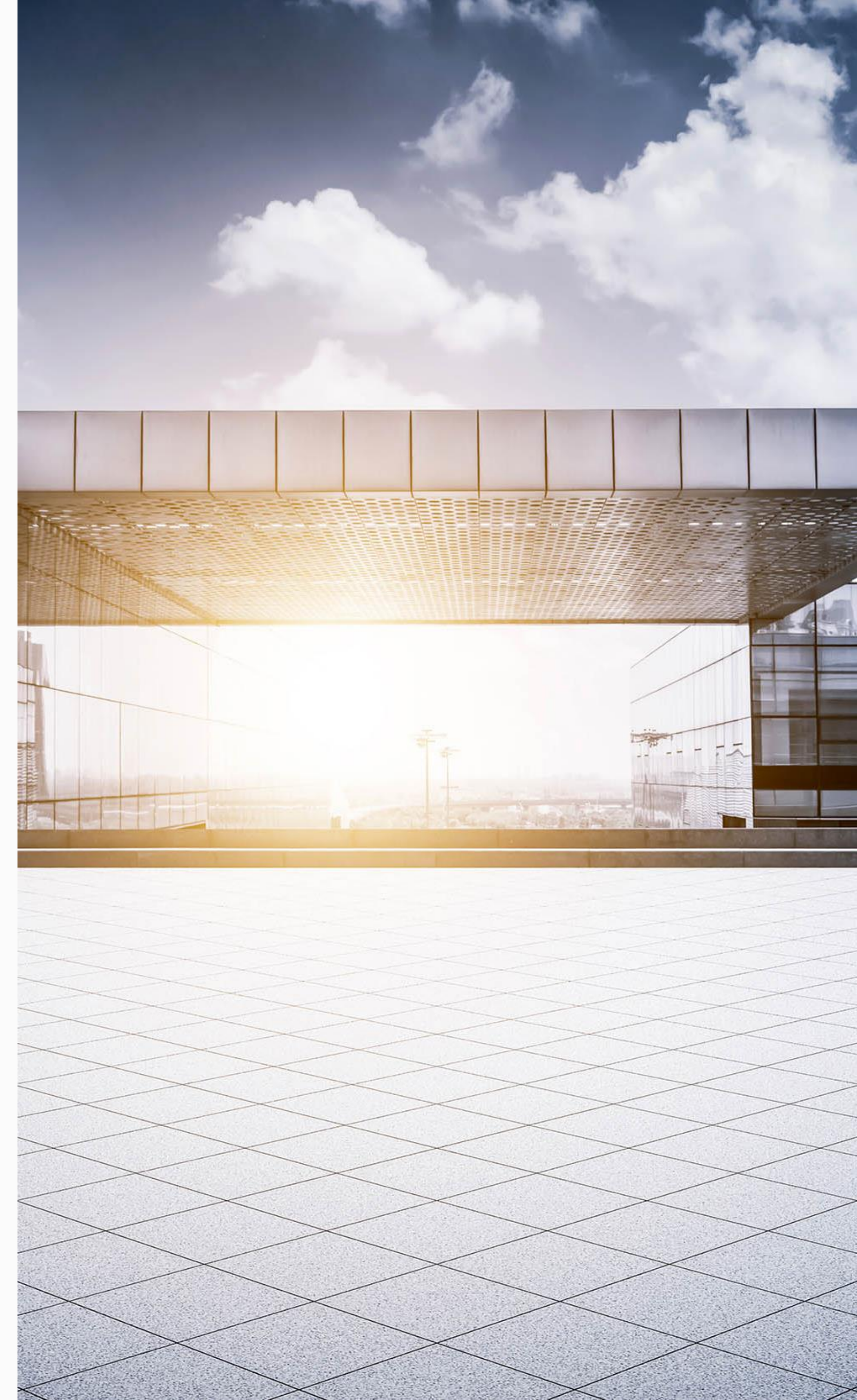
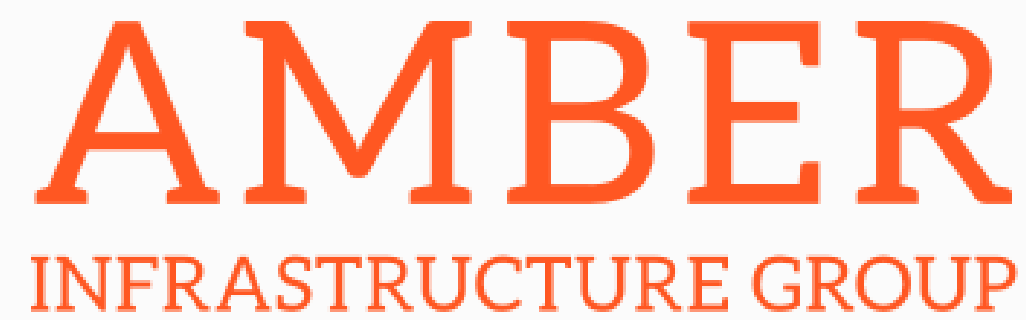
INSURANCE
QUOTATION



INVESTOR-PROJECT
HANDSHAKE



eQuad Investor Network



Results: For Investors

- **Lowered project processing fees**
- **Vetted, viable opportunities**
- **Risk mitigation:** Meet the fund's financing requirements
- **Due diligence:** Have had technical due diligence preformed by accredited ICP rep.
- **Insurance:** Have the option of a insurance quotation for performance insurance
- **Standard Contracts:** Can be structured according to the fund's contractual requirements

Investor Journey



ESCO Finance needs

The key to growth is not technical it is contractual!

Innovation in deal structure:

- Umbrella contracts to bundle projects with equal capabilities
- Clear risk mitigation strategies which fits their projects/profile
- Performance risk mitigation through performance insurance
- EPC contracts: off balance sheet and performance based
- SPV structures: Align requirements between projects

Technical criteria:

- Portfolio appropriate rates
- Project appropriate duration
- Partnership



Investor requirements

Main criteria:

- Strong project pipeline to pay for upfront engagement
- Credit worthiness of end-client
- Credit worthiness of the ESCO
- Low payback time (3-7 years depending on technology type)
- Longer payback time may be accepted for larger projects with higher returns (in the millions)
- Robustness of the project design
- Project investment is part of ESCO's core growth strategy

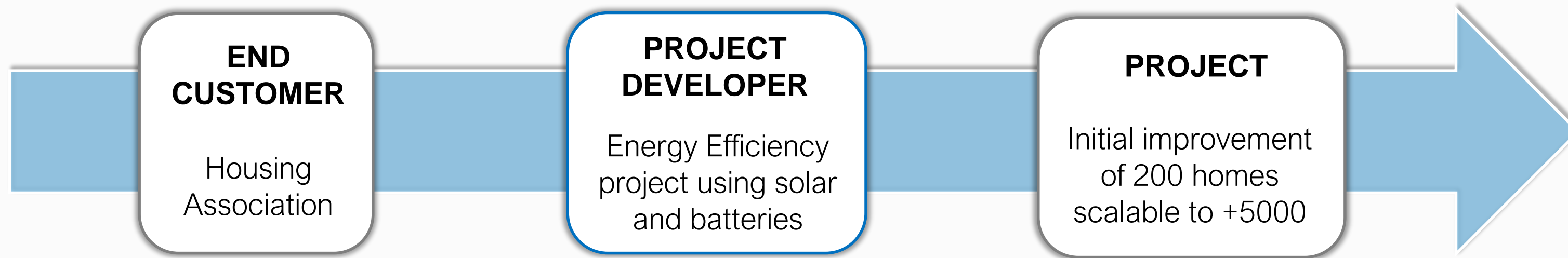


Case studies

before & after financing deal



Case Study: Hybrid Home

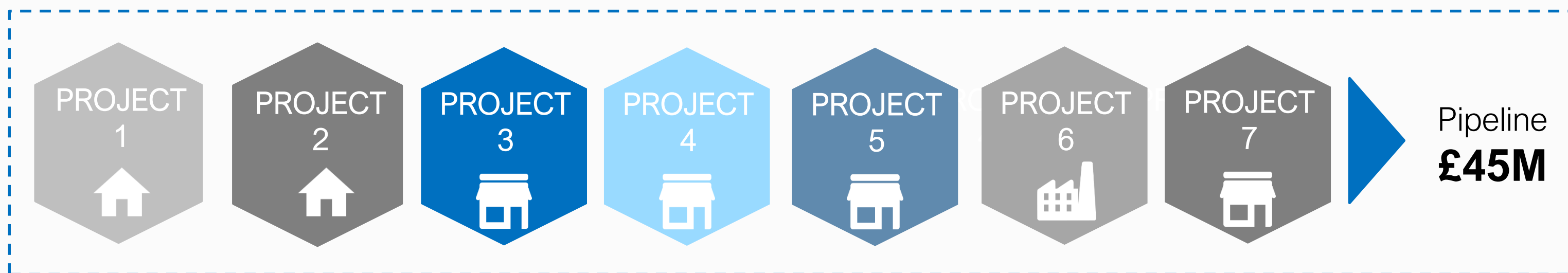


BENEFITS

- Lower utility payments
- Improved comfort for families
- Ability to carry out Demand Response
- Solid client credit rating

PROJECT DETAILS

Total Initial Investment	£ 12,000
IRR	14 %
Payback Time	7-9 years
Contract Period	20 years



MARKET REALITY

- ✓ **Financing model mismatch:** not only the projects are highly specific. Funds are as well
- ✓ **Different requirements,** risk mitigation strategies and appetite, money types (debt, equity) contract types (SPV, EPC...)
- ✓ **Investment size:** The investment may be too small/large, in the wrong country, wrong technology...
- ✓ **Stage of the fund:** The fund may either be in too early, too late a stage in their own fund deployment

EXAMPLES OF WHAT CAN BE MITIGATED

- **Credit risk of client CRITICAL:** What happens if the low income families don't pay their bills?
 - Have a portion of each payment go to an account to protect against default
 - Housing association will step in after this
 - Default in reality for this group is very low
- **Credit risk of contractors:** A minor technology supplier in the group is a small company: will they last?
 - Be ready to change out one technology provider for another
- **Contractual risk:** Investors need protection through your client contract
 - Have a clear and fair contract, deals with default risk, reputational risk
- **Technological risk:** This could be a lot of technology risk – what are your guarantees?
 - Include performance insurance and technology insurance



CONCLUSIONS

Hybrid Homes bring real societal benefits and returns – also with today's prices

- Technology providers focus on:
 1. The technological solution
 2. Creating a good offering for customers
 3. Gaining access to strong customers and to market market share

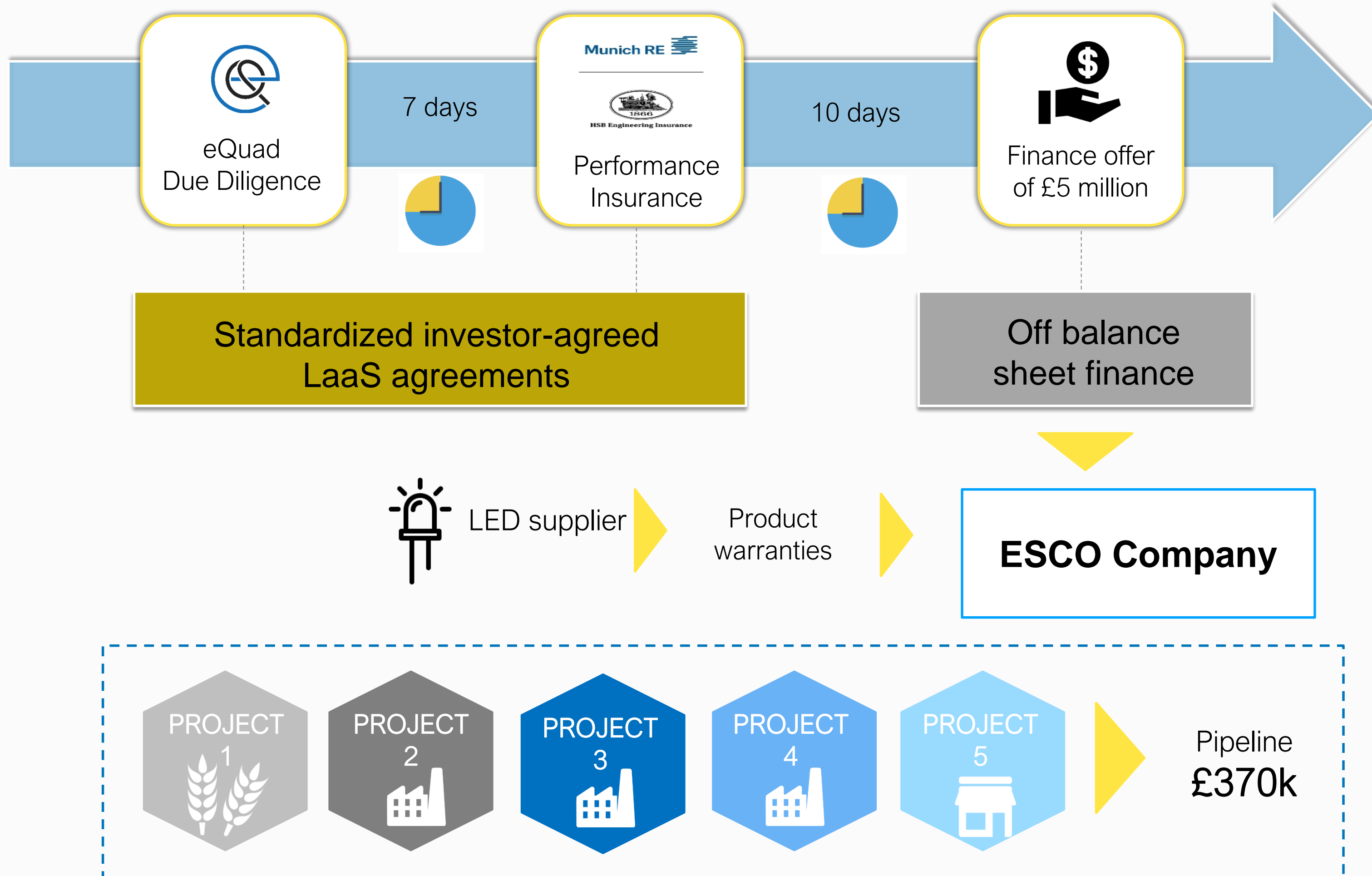
The time and energy required securing investment should not be underestimated

- This is still a new industry and funds are not familiar with such solutions
- The investments/projects are not yet standardized and make risk assessment difficult

Project can access finance but time has a cost and a risk
The housing association may not wait (the families have no choice)



Case Study: Lighting-as-a-service finance



Case Study: Lighting-as-a-service finance

Process

- ✓ **Financing Process:** lighting-as-a-service well understood and safe. Fund was interested and the negotiations were simple.
- ✓ **Criteria:** we have £5 million to spend in 1 year – “you spend it for us on lights”. Contractor had clients to make this realistic.
- ✓ **Contracting Phase for finance:** fund is large and new to energy efficiency, **took over 5 months** to complete 3 agreements with ESCO
- ✓ **RESULT 1:** ESCO lost most of their clients – has had to start again.
- ✓ **Contracting w/clients:** Fund has spent 10-15k in legal fees on the first £40k
- ✓ **RESULT 2:** the client is confused and the fund will now lose money on these lighting deals.

Main Learnings

- **Contract standardization matters!** ESCO-client, ESCO-fund, Fund-Client
- **The Fund’s experience level matters**
- **The ESCO:** will use this as a launching pad for their business. Gain clients and attract an equity investor in their company



Conclusions: The way forward



CONCLUSIONS

Markets are different, taxes are different, tariffs are different
Issues with finance are unified

Many of these problems are beyond what eQuad was designed to do

- A lack of contract standardisation
- A lack of risk assessment standardisation
- A lack of access to growth capital for ESCOs
- A lack of SEA Developers' robust project pipelines



Joule's Vision Remains

to remove finance as a barrier to the growth of the green economy

Next development: support the market in a manner that creates the basis for tradable securities

- ✓ **Continue to improve technical usability of the eQuad platform**
- ✓ **Active support with due diligence process itself**
- ✓ **Funds risk assessment standardisation**
- ✓ **Cooperation with securities traders**
- ✓ **Closer cooperation with best of class funds**

- ✓ **Standard ESCO presentation templates for private equity investors**
- ✓ **Growth of projects through improving ESCOs value propositions**
- ✓ **Funds Contract standardisation**





Thank you!

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and Marketing*

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