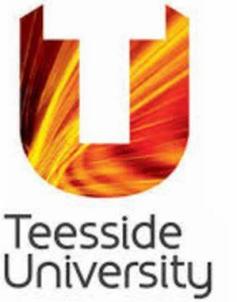




*A holistic framework
for **Empowering SME's**
capacity to increase
their energy **efficiency***



Assessing the impacts of pre-feasibility energy audits: An empirical investigation of SMEs in the UK

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About the Project



- The objective of the project is to “Empower” SMEs across Europe to undergo energy audits and implement their proposals.
- CPD course that educates SMEs on conducting feasibility studies of different energy efficiency measures



Why Energy Efficiency for SMEs?

- SMEs form 99% of businesses in the UK (number wise)
- SMEs are challenging for energy policy makers to regulate due to their heterogeneity
- SMEs face similar barriers, but require different solutions
- It is challenging to understand how to tackle challenges within SMEs due to lack of resources
- SMEs can make small differences in the energy sector. However, combined, their effects is magnified.

Potential solutions

- Enhance the skills of 720 energy experts of SMEs across Europe
- Implement Education and Training programmes (CPD courses) under the European Qualification Framework
- Develop an online energy management platform for SMEs
- Develop tools for energy Monitoring and Targeting, and energy Measurement and Verification
- Conduct at least 160 case studies with SMEs across Europe

Methodology adopted



Literature review to understand the status quo and available targeted policy measures



Survey questionnaire to understand the energy profile of each SME & the factors that influence the implementation of energy efficiency measures



Development of **SME Energy Efficiency Maturity model** to evaluate the performance of processes, policies, and technologies based on their current energy efficiency levels



Short training courses delivered to 100+ participants from SMEs and academia. **Case study** implementation at pilot sites including pre-feasibility energy audits.

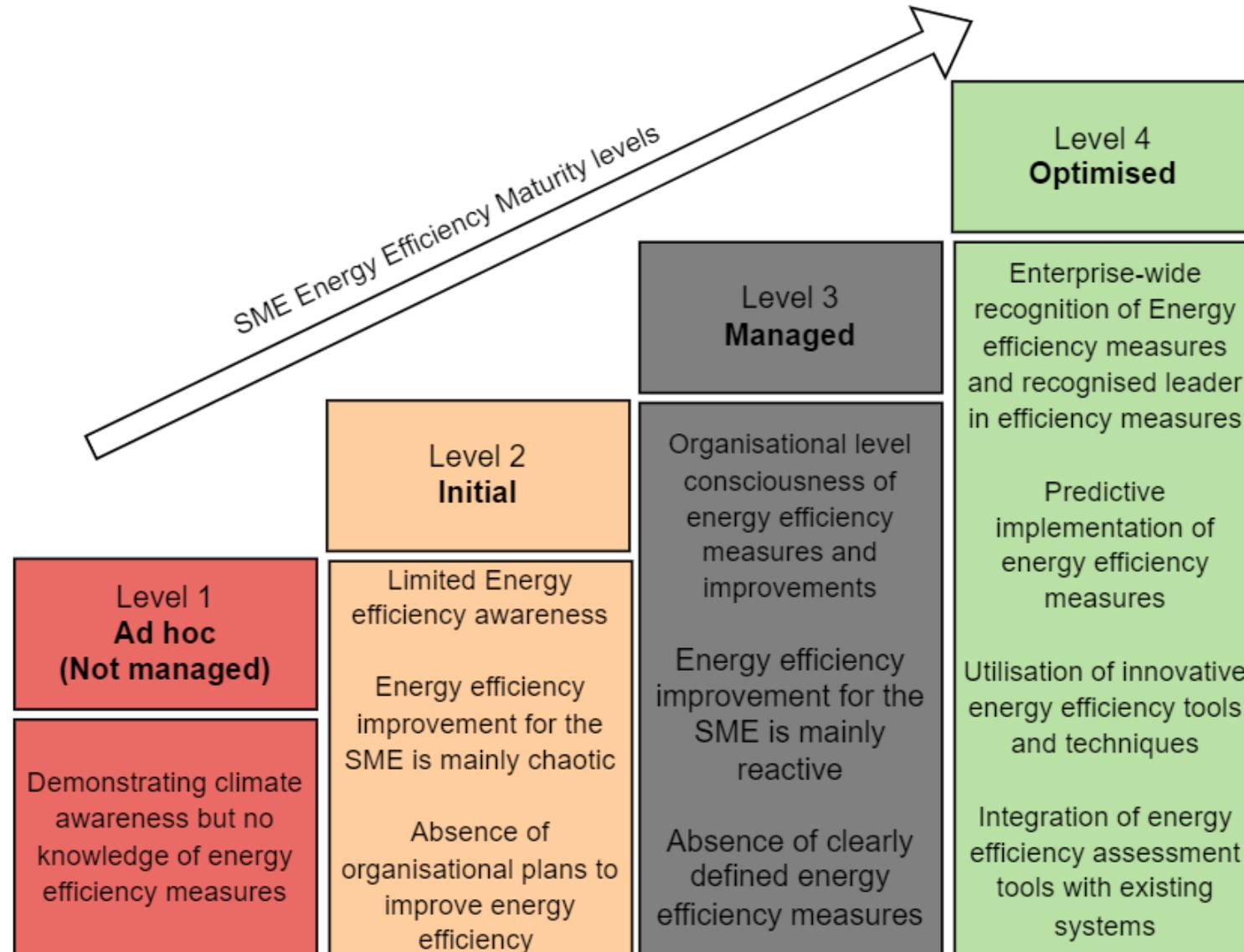


Data analysis of the data collected from SMEs.



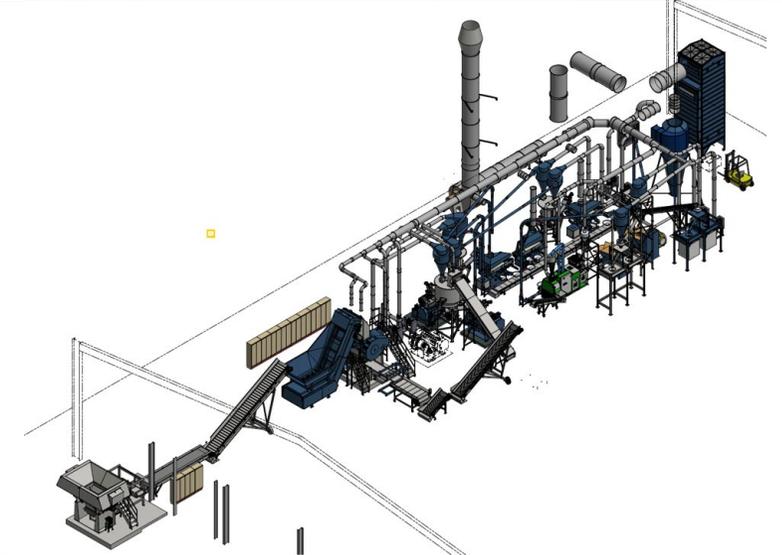
Development of **energy efficiency reports** for each SME to support target setting and transition to higher stages of the SME energy efficiency maturity model

Maturity model to support use of pre-feasibility energy audit



Case Study (company A)

- SMEs is involved in **electrical wires recycling** business
- Due to poor infrastructure connecting them to the mains; reliance was on **diesel** generators
- Over **500 MWh/year** was generated from diesel
- The course and pre-feasibility energy audits assisted the SME in evaluating and consequently implementing PVs that would save over **30%** of the diesel used

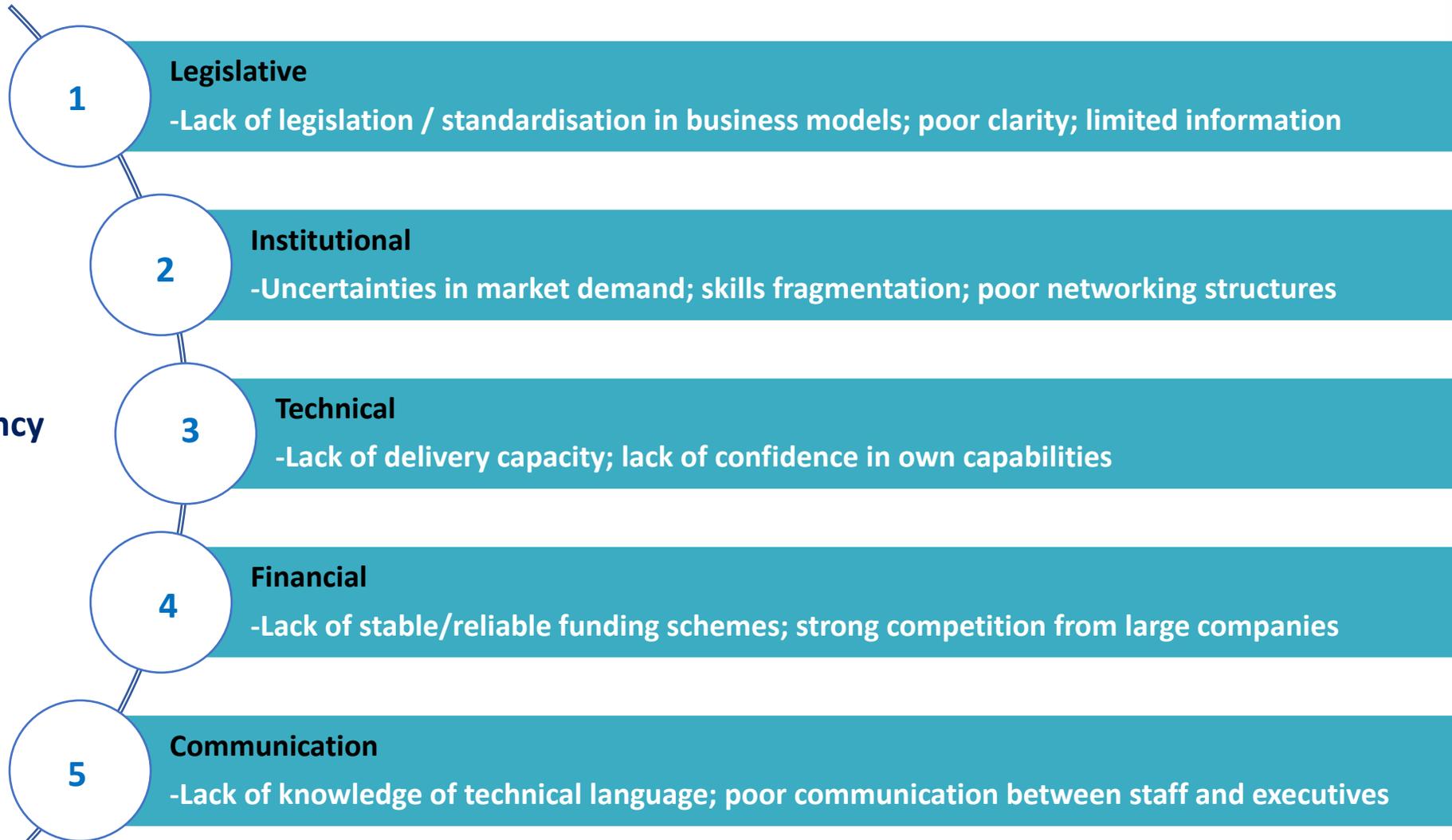


Case Study (company B)

- SME manufactures **housing uPVC and timber frames**
- The company consumes about **380 MWh/year** from the grid
- The programme helped them install a combination of **PVs, Air Source Heat Pumps (ASHP), and LED lighting system**, as the optimal solution
- The course helped them to evaluate and consequently implement these measures that would save over **10%** of grid electricity usage

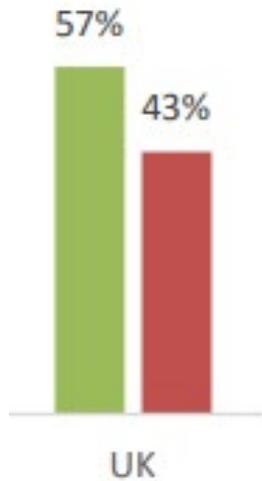


Barriers hindering the promotion of energy efficiency in UK SMEs

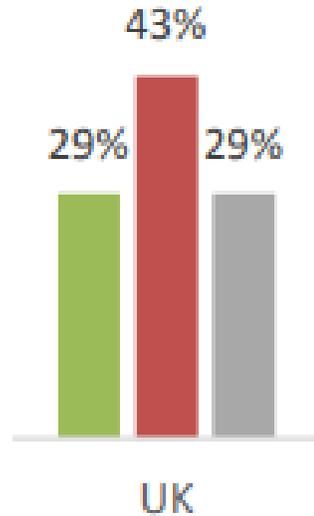


Results and Analysis

Has your company carried out an energy audit?

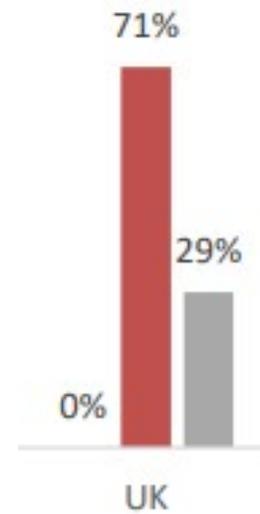


Is there an energy efficiency strategy within the company for the next 3 years?



■ Yes ■ No ■ I don't know

Is there a budget approved for investments in reducing energy consumption in the company for the next 3 years?

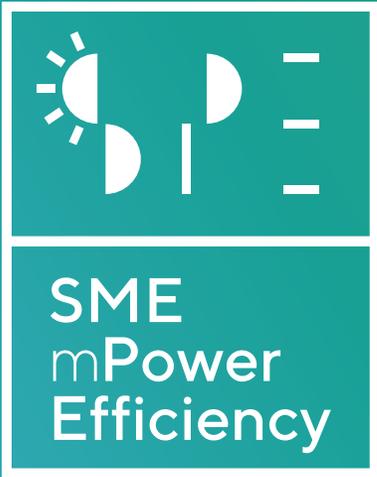


Which are the funding sources for Energy Efficiency investments in UK SMEs?



Conclusions and Recommendations

- SMEs do not realise their potential for reducing energy consumption due to lack of awareness and resources. Short trainings should be promoted to enhance SME capabilities.
- Most SMEs do not understand their current energy efficiency maturity level and have no defined metrics to measure against. The developed maturity model will be effective in addressing this problem
- SMEs need education on the benefits of employing energy managers
- SMEs are not usually aware of the support available (e.g., grants) to help them implement energy efficiency measures. Dissemination channels should be increased by government and stakeholder organisations.



Thank you!

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