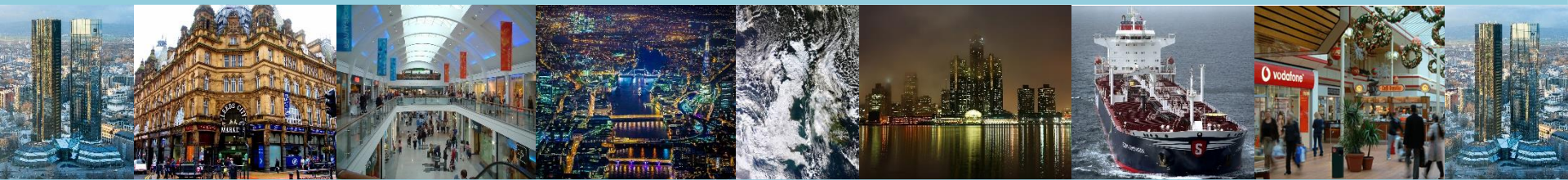


# Standardisation, Data and Risk for Energy Efficiency Investments

Dr. Steven Fawkes

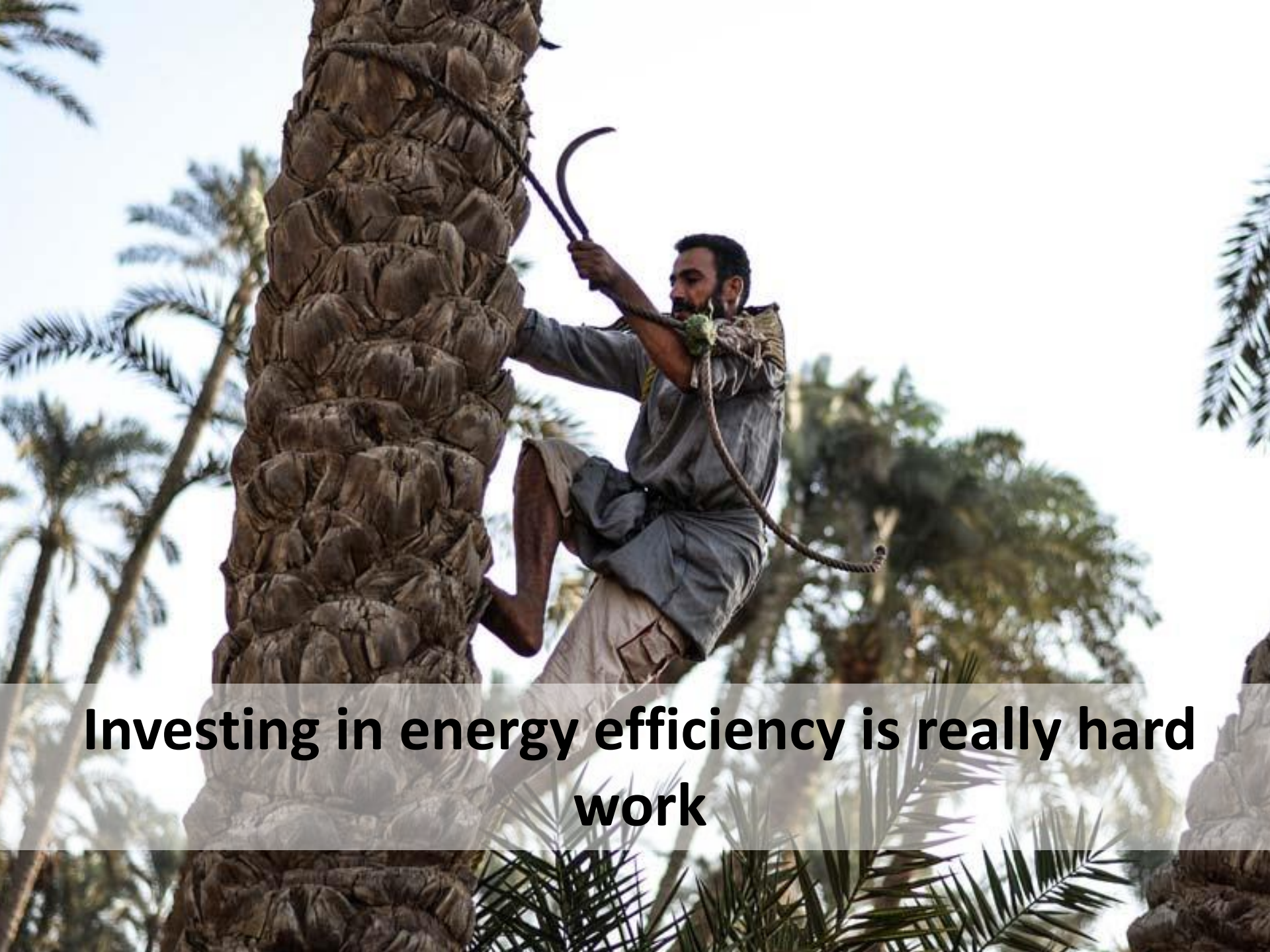
19 January 2017





“energy efficiency is low hanging fruit”

**WRONG**



**Investing in energy efficiency is really hard work**



**It needs to be standardised and automated before it can be scaled up and mainstream**



# Lack of standardisation

Lack of standardization (in project development and documentation) is one of the major barriers to increased investment into energy efficiency.

Energy efficiency standards do not yet meet the requirements of financial markets. No two energy efficiency contracts are alike.

*Global head of Sustainable Finance*

**"Standards are like DNA. They are the basic building blocks for all technology and economic systems" D.E. Purcell 2004**



Energy Efficiency  
Financial Institutions Group



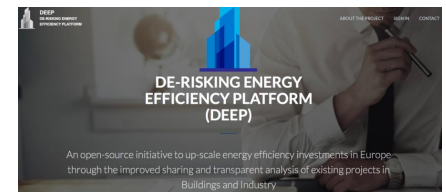
# Standardisation of what?

- Project development and documentation
- Understanding of risks and value
- Contracts
- Performance data and reporting



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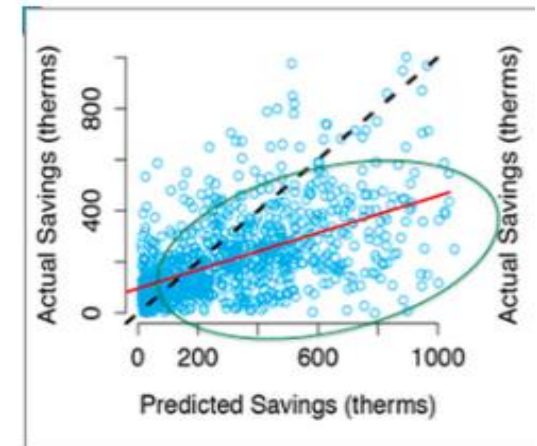
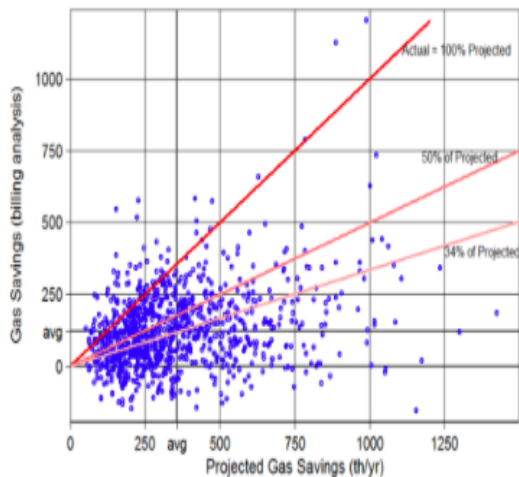
**Various EU standard  
contracts available**



# Understanding of risks & value

*“The returns are tremendous, and there’s virtually no risk”*

**WRONG**



○ Individual Job      - - - - - RRate of 100%

# We need to acknowledge the risks

## “Value and risk appraisal framework for energy efficiency finance and investments”



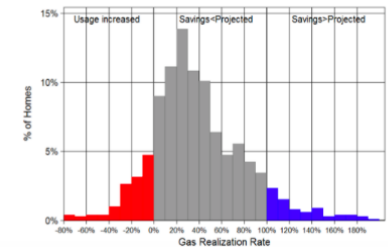
Guide to assessing value and risks to assist:

- Project developers
- Financiers better understand and price risks

Due to published in June 2017

Will also be a web based tool

Efficiency savings are very consistent at a portfolio level:





# We need data to understand risks

Car loan data exists from 1919

Mortgage data for longer



Very little data on energy efficiency performance

- Metering and measurement is difficult
- Measurement and Verification relatively new and still not widely used
- Contract forms like EPC mask performance risk
- Performance data considered proprietary

# Data sources are emerging



Building Button is a data dictionary that simplifies how we share efficiency retrofit data across project developers, QA providers, building owners, and investors.



**Still very little actual performance data – mainly projections**

- **New concept**
- **Needs a common language (Building Button)**
- **Time series data needs time!**

# Standardisation, data, risk and money

- Different financing structures *and* different sources of finance take different risks
  - e.g. PACE in USA very low risk, tied to property tax, senior to mortgage
  - EPC takes performance risk – perhaps expensively?
- Need to slice up risks and allocate to those willing to take them
- Role of insurance important – insurance needs data
- Emerging models addressing performance risk in different ways e.g. ESA, metered efficiency
- Ultimate source of low-cost capital i.e. Debt Capital Markets (DCM), requires standardisation and data



■ Standardisation

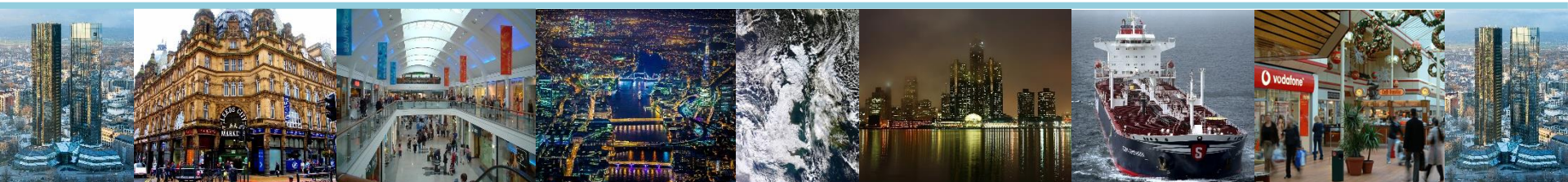
■ Acknowledgement and understanding of risks

■ Data



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