# Connecting Building Performance and Value: The State of Play

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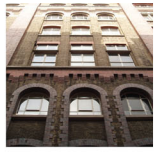
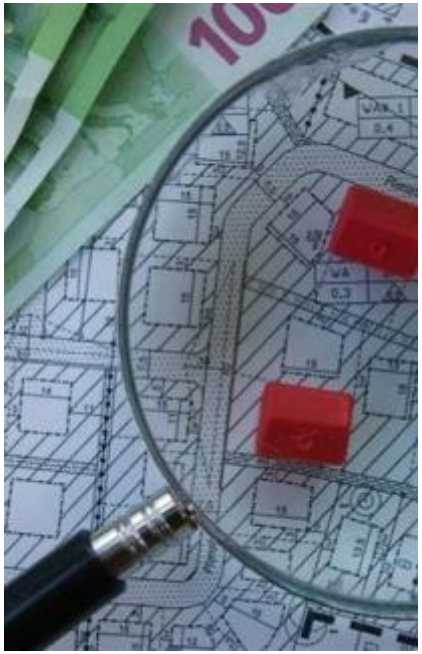



# Outline

- Current Rules of Engagement – RICS Guidance
- So what is the evidence – what does the research picture reveal?
- The Sustainability Taskforce: update on practice
- Taking things forward:
  - Revalue
  - European Green Mortgages Initiative
- Concluding remarks

# The role of property valuation

- Valuations are carried out in almost any phase of the **property life cycle**.
- Valuers are the ***independent axis around which property information flows***.
- Valuers act as ***information managers*** in often highly non-transparent property markets.
- Property valuations are at the basis for commercial **prudence in lending** (Basel 3 and EU CRD/CRR) and **consumer protection** (EU MCD)

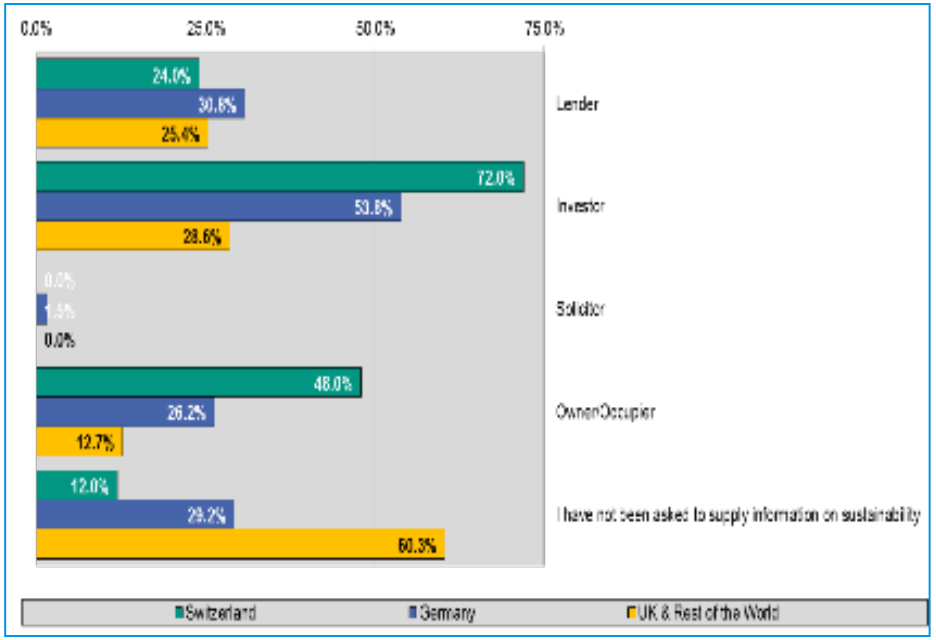


***Valuers do not "make the market" but their advice and the nature and scope of their services may /do influence property market outcomes.***

# RICS Requirements: current position

## Previous (non-mandatory) guidance found not to have led to market transformation

- Valuers can influence markets by:
  - Providing strategic advice
  - Inputting to worth appraisals
  - Commenting on the risks/ opportunities associated with the valuation
  - How they undertake their due diligence




Lorenz, Sayce *et al,* for RICS 2012

In research before current guidance brought in valuers were asked whether their clients requested information about sustainability: **in UK 60% had not been asked**

Recent survey of Reno Value participants show similar findings:

**So how can we bring about change?**

# Current Guidance to Valuers

## Various sustainability related guidance, guidelines and requirements for valuers

# Red Book 2014

**The pace at which sustainability may feed into value will vary depending on:**

- The property type
- the geographic market/submarket in which the asset is situated.


The role of valuers is to assess value in the light of evidence normally obtained through analysis of comparable transactions.

While valuers should reflect markets, not lead them, they should be aware of sustainability features and the implications these could have on property values in the short, medium and longer term.

# Red Book 2014

## Valuers are recommended to:

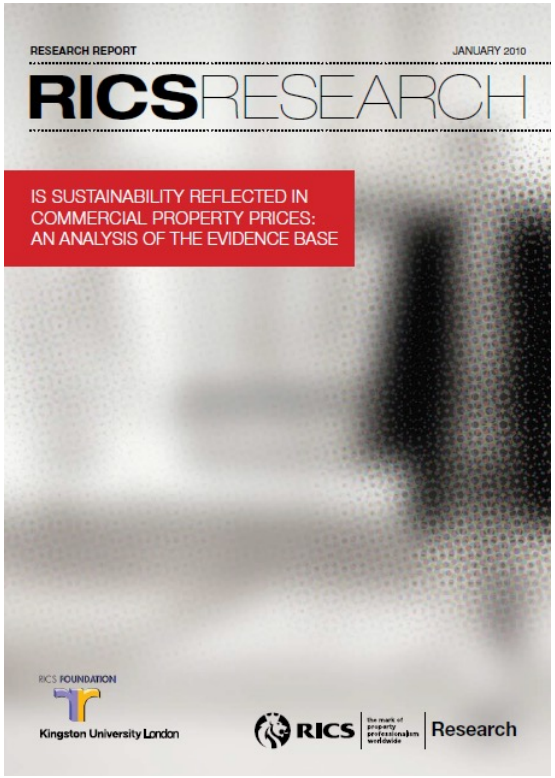
- Assess the extent to which the subject property currently meets sustainability criteria and arrive at an informed view on the likelihood of these impacting on value,
- Provide a clear description of the sustainability-related property characteristics and attributes that have been collected
- Provide a statement of their opinion on the relationship between sustainability factors and the resultant valuation, including a comment on the current benefits/risks that are associated with these sustainability characteristics, or the lack of risks and
- Provide a statement of the valuer's opinion on the potential impact of these benefits and/or risks to relative property values over time.

# An overview of existing guidance and requirements

| Title<br>Description | Valuation Information Paper (VIP) 13 | Information Paper (IP) 22 | Sustainability & the valuation of commercial property | EVS 2016 (EVIP 1 (Sustainability and valuation) | ImmoWertV | NUWEL | RICS Guidance Note | RICS Valuation – Professional Standards |
|---|---|---|---|---|---|---|---|---|
| Publisher | RICS | RICS | RICS Oceania | TEGoVA | BMVBS | CCSR | RICS | RICS |
| Year of Publication | 2009 | 2011 | 2011 | 2016 | 2011 | 2011 | 2013 | 2014 |
| Application: Property type | Commercial Property | Residential Property | Commercial Property | All | All | All | Commercial Property | All |
| Application: country / region | Global | UK | Australia | Europe | Germany | Germany, Austria, Switzerland | Global | Global |
| Coverage of sustainability issues | broad | broad | broad (but focus on energy) | broad (detailed listing of issues) | Energetic quality | broad (detailed listing of issues) | broad (detailed listing of issues) | broad |
| Degree of compulsion / bindingness | informative | informative | informative | informative | **mandatory** | informative | recommended good practice | **mandatory** |
| Character: generic requirements / detailed recommendations | generic | generic | detailed | detailed | - | detailed | detailed | generic |
| Recommendations for valuation reports | - | - | X | - | - | X | X | X |
| Recommendations on the extension of the data collection process | - | X | X | - | - | X | X | X |

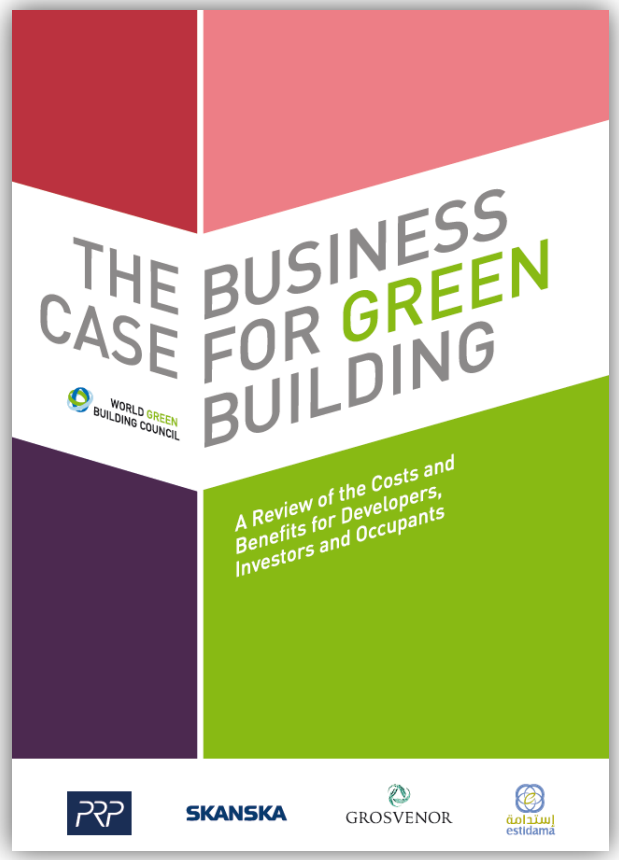
# What is the Evidence?

## Meta-Studies on the economic advantages of energy efficient / sustainable buildings




Source: Sayce, S.,Sundberg, A and Clements, B (2010) Is sustainability reflected in commercial property prices: an analysis of the evidence base


Source: Bio Intelligence Service, Ronan Lyons and IEEP, 2013, Energy performance certificates in buildings and their impact on transaction prices and rents in selected EU countries, Final report prepared for European Commission (DG Energy)




Source: WGBC, 2013, The Business Case for Green Building - A Review of the Costs and Benefits for Developers, Investors and Occupants, World Green Building Council

# Residential Studies: overview, 2008- 2012

| Study/Author | Year | Country | Sustainable features | Impact | Positive(√) or not (x) | Magnitude |
|---|---|---|---|---|---|---|
| Australian Dept. Environment, Water *etc* | 2008 | Australia | Energy Efficiency star rating(o.5 increments 1-10 | Sales price | √ | 1.23% to 1.91% per 0.5 star |
| Salvi *et al* | 2008 | Switzerland | MINERGIE label | Sales price | √ | 7% houses; 3.5% flats |
| Griffin *et al* | 2009 | USA(Portland/Seattle) | Variety: Built Green; Earth Advantage; Energy Star; LEED | Time to sell | √ | Reduced by 18 days |
| Salvi *et al* | 2010 | Switzerland | MINERGIE label | Rental | √ | 6% |
| Wameling | 2010 | Germany | Primary energy demand per $m^2$ | Sales price | √ | €1.4 per reduced kWh/$m^2$ |
| Brouen &Kok | 2010 | Netherlands | EPC (grades A, B ,C | Sales price | √ | 2.90% |
| Yoshida and Suigiura | 2010 | Japan | Tokyo Green Labelling system | Sales price | x | minus 6% - 11% |
| Wuerst und Partner | 2011 | Switzerland | MINERGIE label | Sales price | √ | 4.90% |
| Muri*et al* | 2011 | Switzerland | Noise Exposure | Rental | √ | 0.19% per decibel |
| Amecke | 2012 | Germany | impact of EPC on purchasing decisions | consumer preference | x | does not influence decision-making |
| Feige *et al.* | 2012 | Switzerland | Economic Sustainability Indicator (ESI) | Rental | √ | 15% (resource use); 11% health/comfort; 11% security |
| Deng and Quigley | 2012 | Singapore | Green Mark | Sales Price | √ | 4% to 6% |
| City of Darmstadt | 2012 | Germany | Primary energy value below 250 kWh/$m^2$ or below 175 kWh/m2 | Rental | √ | €0.38 to €0.50 per $m^2$ |

# Residential studies: overview 2013- 2015

| Study/Author | Year | Country | Sustainable features | Impact | Positive(√) or not (x) | Magnitude |
|---|---|---|---|---|---|---|
| Hyland *et al.* | 2013 | Ireland | EPC rating | Rental/Sales | √ | generally positive but more likely to matter when economy poor |
| Cajias & Piazolo | 2013 | Germany | Energy consumption/EPC category | Rental/Sales/Return | √ | 1% decline in energy use leads to ).15% increase in return; 0.08% increase in rents and 0.45% increase in CV |
| Stanley *et al.* | 2015 | Ireland | Energy Performance Indicators | Sales price | √ | increase of 1% per grade - but need to be careful on interpretation re age of building |
| Yang *et al.* | 2015 | Denmark | Energy source and products | N/a | N/A | Different types of consumers adopt differing approaches - depending on their priorities (VFM; green etc) |
| Fuerst *et al.* | 2015 | UK (England) | Energy efficiency | Sales price | √ | positive influence-but more for flats/terraced than detached |

# Residential studies: overview 2016

| Study/Author | Year | Country | Sustainable features | Impact | Positive(√) or not (x) | Magnitude |
|---|---|---|---|---|---|---|
| de Ayala *et al.* | 2016 | Spain | Energy efficiency judged through household surveys | Sales price | √ | 5.4% and 9.8% |
| Bond and Devine | 2016 | USA | LEED | Rental | √ | 8.90% |
| Brouen and Aydin | 2016 | Netherlands | transparent EPC on sales | Sales price | √ | A label quicker to sell and 2% premium against a D; G rated slower and 13% brown discount |
| Fuerst *et al* | 2016 | UK (Wales) | EPC grade | Sales price | x | higher grade sell for more - but not necessarily due to EPC label |
| Wahlström | 2016 | Sweden | Energy efficiency feature /energy consumption | Sales price | mixed | Consumption has no impact; presence of construction features that lead to efficiency are desired |

# Summing up the evidence from the residential sector

- Most studies to date have linked values to energy labels via hedonic regression – requires accurate isolation of factors: do they /can they adequately do this – given 'emotive' factors in residential purchase decisions?
- Strong conclusions hampered by extreme heterogeneity- and regulation in some countries (concentration on studies in cold climate?).
- Behavioural studies show a variation in response depending on demographic type, type of energy  and how the possibilities for refurbishment are presented.
- Value advantage of energy efficiency increasingly recognised – in places such as Germany, Switzerland, Netherlands and Denmark.
- There is a connection with the state of the market conditions.
- The research is focused on sales and rent – but far less on the residential investor issue
- Residential investors far harder to understand – as diverse group.. Apart from social housing landlords

# Commercial Studies: overview 2008 -12

| Study/Author | Year | Country | Type | Sustainable features | Impact | Positive(√) or not (x) | Magnitude |
|---|---|---|---|---|---|---|---|
| Fuerst & McAllister | 2008 | USA | Office | LEED, Energy Star | Sales, Rent | √ | Sales 30+%; Rents 6% |
| Miller *et al.* | 2008 | USA | Office | LEED, Energy Star | investment | ? | seem promising |
| Wiley *et al.* | 2008 | USA | Office | LEED, Energy Star | Rent | √ | 7%- 17% |
| Fuerst & McAllister | 2010 | USA | Office | LEED, Energy Star | Occupancy rate | √ | LEED: 8%; Energy Start 3% |
| Eichhotlz *et al.* | 2010 | USA | Office | LEED, Energy Star | Sales, Rent | √ | Rents 6%; sales 11-13% |
| Pivo & Fisher | 2010 | USA | Office | Energy Star, access to transit | Net income | √ | Negligible to 8% |
| Pivo & Fisher | 2011 | USA | Office,retail and apartments | Walkability, access measured 1-100 | MV, Income and Rents | √ | <1% per unit increase; varies by property type |
| Newell *et al.* | 2011 | Australia | Office | NABERS | Rent | √ and x | both premium and discount |

# Commercial Studies: overview 2012- 17

| Study/Author | Year | Country | Type | Sustainable features | Impact | Positive(√) or not (x) | Magnitude |
|---|---|---|---|---|---|---|---|
| Cheghut *et al.* | 2013 | UK | Commercial | BREEAM | Rent | ? | Affects neighbourhood rents but as more stock certified - not individual building so much |
| Das and Wiley | 2014 | USA | Office | LEED, Energy Star | MV | √ | ES: 16.4% but very variable: LEED 10.6 due to marketing value |
| Newell *et al.* | 2014 | Australia | Office | NABERS | performance | √ | Variable |
| Jasimin *et al.* | 2014 | Japan | Office | GBI-Gold | Rents | X | Soft benefits only |
| Fuerst *et al* | 2015 | UK | Office | BREEAM | Rent | √ | Depends on year of construction |
| Yoshida *et al.* | 2016 | Japan | Office | Various labels | Rent | √ | Premium paid on cost saving for water and electricity |
| Fuerst *et al.* | 2017 | US | Offices | LEED/Energy Star | Sales price | | The price effect may be due simply to this Grade A stock is now the norm – ie overall quality – not the eco-certificate |

# Summing up the evidence from the commercial sector

- A flurry of studies a few years ago mainly focused on US but rate of new evidence slowing down
- As with residential predominance of hedonic analysis studies – linked to labels
- The commercial case has always suffered from the ‘split incentive’: tenants get a cost saving – but are they prepared to pass it on?
- The yield case is based on easier to sell, reduced likelihood of early obsolescence
- Overall, is about *stock* shortage? Branding?
- But: labels may be  tied to compliance or maybe are soft marketing shortcuts to technical understanding
- Most recent evidence coming through is that maybe they are paying more than they should

# A “word of caution” on existing empirical evidence (1)

- Studies reveal a strong “general” argument supporting differential values between energy efficient/sustainable stock and other buildings
- *But*: results vary significantly across and even within national markets and cannot be automatically transferred to other locations/building types.
- Residential owner-occupier markets are subject to a different range of value drivers – some studies acknowledge this
- Market factors and average construction and quality standards vary across countries
- Deep local understanding is needed
- Regulations continue to require upgraded standards – so longitudinal studies can be misleading (EPCs are relatively new..)
- Mix of residential tenure types creates further complexity
- Acknowledgement that climate and energy costs are critical and result in heterogeneous results.

# A “word of caution” on existing empirical evidence (2)

The extent to which energy efficiency and other sustainability features result in price differentiation will always depend on the conditions within a given local (sub-)market.

**Consider this view**

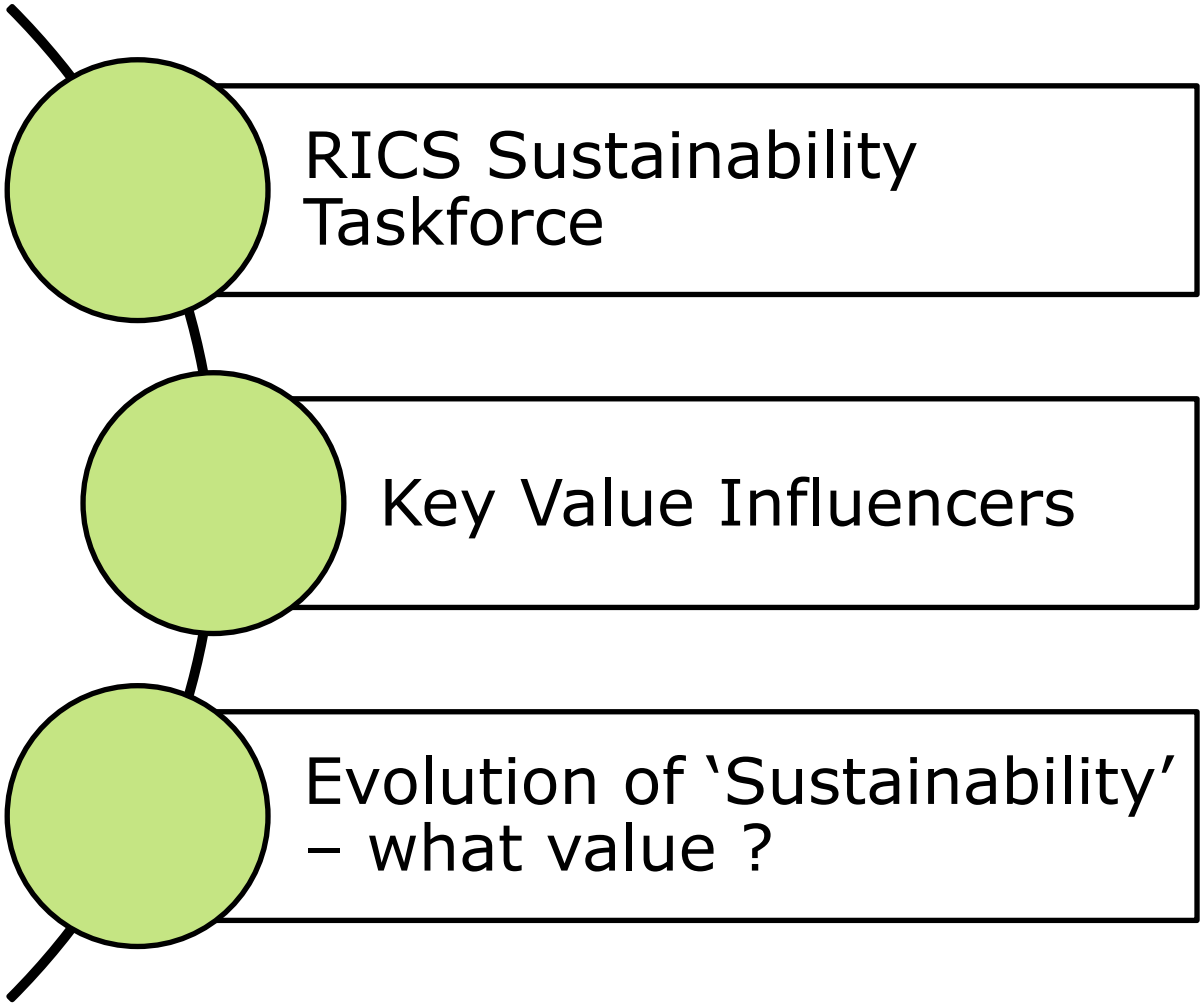
*“Eco-certified space has become part of the mainstream and is not a niche product in the Class A office sector…(a) possible outcome is that the price effects of unobserved quality factors are being misattributed as an eco-certification effect..”*

(Fuerst *et al.*, 2017)

Deloitte.

# EcoBuild – Putting a Value on Building Performance

March 2017




**Philip Parnell**

**Partner,**
**Real Estate Valuation,**
**Deloitte**

**Chair, RICS Valuation Sustainability Taskforce**

# Responsibility – finding the right balance

If Sustainability is such a material global concern, how should valuers engage and what level of responsibility is reasonable to expect of the profession ?

Should Valuers…..

…be Sustainability experts ?

…forecast the impact of Sustainability on value ?

…respond to clients' questions regarding the impact of sustainability on value ?

…take on professional liability for sustainability questions ?

…be abreast of Sustainability regulatory and legislative changes ?

…be developing techniques to reflect Sustainability in their valuation deliberations ?

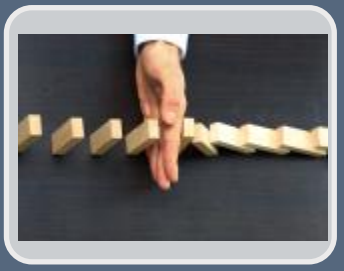
# The RICS Sustainability Taskforce

## Workplan & Engagement

**Stakeholder Engagement**

### Market Trends

- Market / Lender Attitudes to Sustainability Risk
- 'Prime' Property = Sustainability ?
- Sustainability 'Resilience' versus Non-Sustainability 'Obsolescence'



### Specific Issues

- Renewable Energy Technologies
- MEES
- Understanding Retrofit Technologies
- Flooding / Insurance

### Valuer 'Safety Net'

- Engagement on Red Book update
- Suggested valuer 'limitations'
- Guidance on securing relevant data – availability, reliance and interpretation

# RICS Valuation Sustainability Taskforce

## Selected Workstream Updates

### Lenders' Approach to Sustainability

- Reviewed changing influences
- Identified shift in approach regarding perceived opportunities & risks
- Recognised potential longer term impact

### MEES: Guidance to Valuers

- Provided 'high level' explanatory notes to valuers
- Set out suggested 'protective' text valuers may wish to adopt
- Currently being reviewed following publication of Landlords' Guidance Document

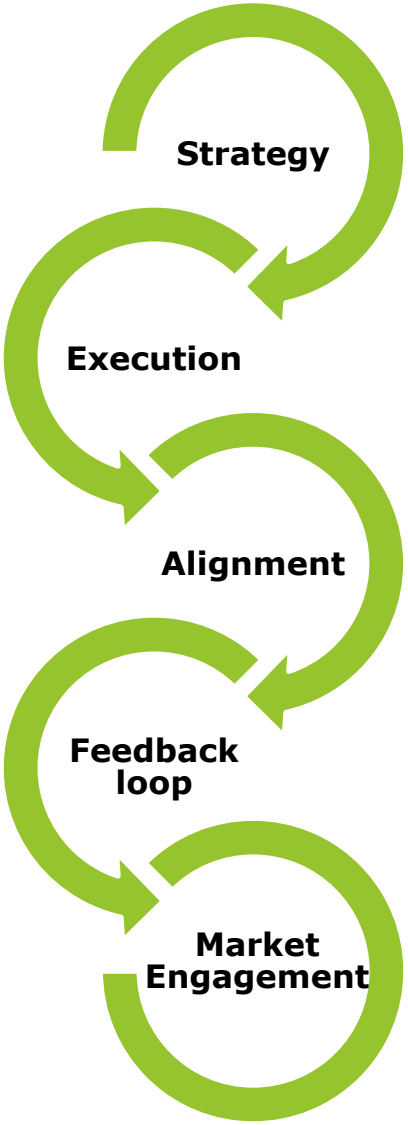
### Valuers' role in advising on flood risk

- Collaborating with Uni. West of England who are researching role of Surveyors in advising in respect of flood risk
- Valuer-focused paper to be issued
- Will complement the RICS guidance already published in respect of residential property

# Implementing the Paris Climate Agreement: An Action Framework

## Integrating ESG and climate change risks into decision making processes

**"Evidence shows that more efficient "greener" properties incur lower operating expenses, support efforts to achieve top market rents, have fewer vacancy and void periods, are at lower risk of mortgage default and meet the increasing needs of occupiers to provide living and working space that helps to improve employee engagement, health and productivity."**




**Focused on materiality and value assessment**

**Identification as to how interventions increase likelihood of value creation and/or how risk management is improved**

**Engagement of advisers requiring proven knowledge of sustainability and continued accountabilty**

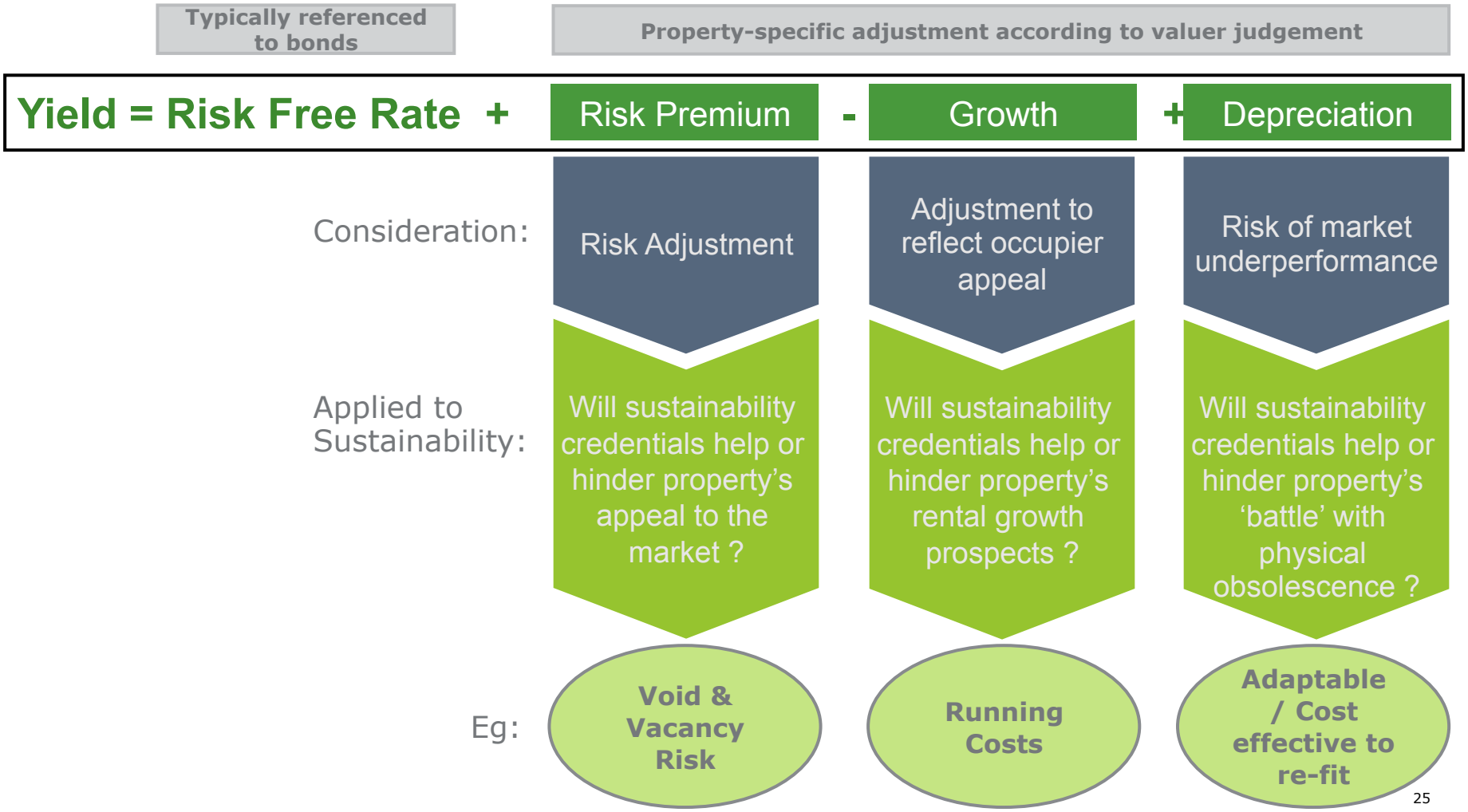
**Monitoring delivery of ESG, focusing on impact to value using Sustainability Management Systems**

**Supporting research to understand risks and engage on public policy to it matches market needs**

Seeking to break the 'Vicious Circle of Blame' through accountability, reputation and engagement

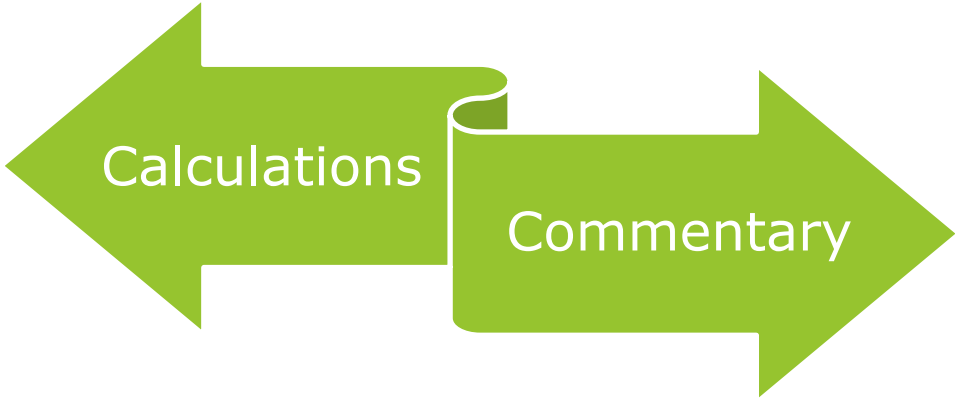
# Applying Sustainability to Existing Valuation & Appraisal Methodology

There are various valuation methods - Sustainability 'influencers' can be applied to all.



# Reflecting the Impact

## Quantitative and/or Qualitative Reporting




- Apply sustainability data to yield analysis
- Reflect on validity of comparables

- Consider impact on key 'cashflow' variables:
  - Rental growth
  - Voids
  - Obsolescence & depreciation
  - Risk premiums
  - Exit yields.

- Description of sustainability-related property characteristics;
- Statement of valuer's opinion on relationship between sustainability factors and the resultant valuation;
- Statement of valuer's opinion on potential impact on value over time.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# The Emergence of 'Intelligent Buildings'

## The focus on Talent and Innovation is driving expectations from our buildings – and shifting expectations of 'prime'

| 'Green' | 'Sustainable' | 'Intelligent' |
|---|---|---|
| Environmental Drivers | Triple Bottom Line (Economic, Social & Environmental) | Economic, Environmental People & Innovation |

**Five years ago office space was all about cost reduction, hot-desking and ensuring resources were fully utilized.**

**Now, it is increasingly about using space creatively for collaboration, teaming, learning and socializing.**

By 2025, Generation Y employees (now in their 20s) will grow to represent

**75%**

of the workforce. For this emerging generation, work-life fit is valued more than compensation growth or skill development.

Source: Deloitte: - Workplaces of the Future: Creating an Elastic Workplace

**75%**

Would like to work in locations that are more productive

Source: Deloitte: - The 2016 Deloitte Millennial Survey

**66%**

Say their employer does not assist them in usefully applying mobility to their jobs.

Source: Deloitte Real Estate: - Deloitte Shared Services GBS and BPO Conference 2015

Deloitte.

# Agents for change (1): The ReValue Project

**Aim:**

- Update/complement **valuation guidance** recognising energy efficiency value

This means finding the trigger to achieve market transformation by:

- Establishing a link between investing in energy efficiency and **long-term investment value** or residential real estate.
- It is anticipated that the investment case will be built on **risk reduction, enhanced long-term value and easier access to capital.**
- **By so doing build a convincing business case..**

# The ReValue Project

REVALUE

**Designing the Next Generation of Valuation Guidance for Sustainability in Residential Property**

**Project is focused on rented stock – and this, to date, has been focused on social housing**


*This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649705*

# The ReValue Project

REVALUE

Bax & Willems
Consulting Venturing

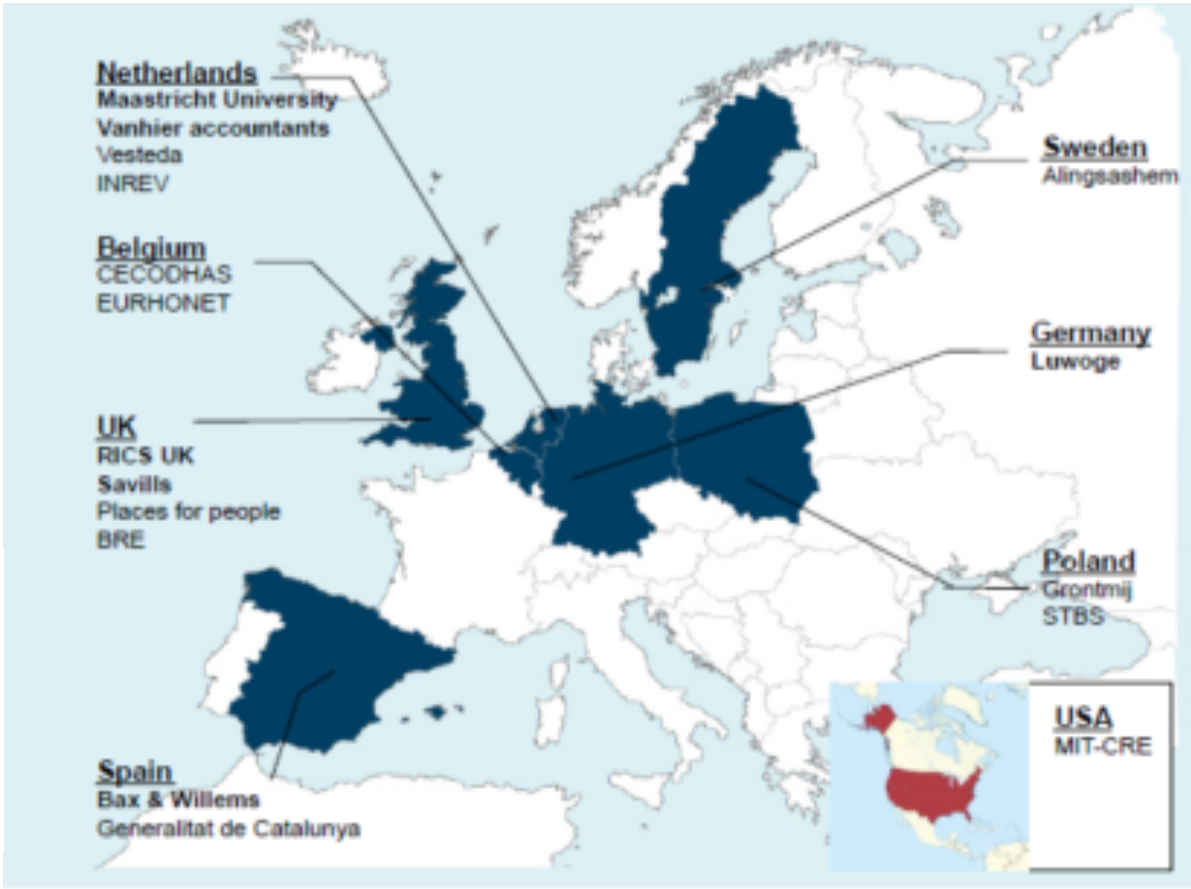
savills

RICS®

Maastricht University

vanhier
MKB accountants | adviseurs

***A Cross-section of European Countries***




Co-funded by the Intelligent Energy Europe Programme of the European Union

# The ReValue Project

## What is ReValue?

- Three-year project to develop/revise **international guidance for property valuers relating to Energy Efficiency (EE)** .
- Aims to **help valuers to reflect the value of EE**, in their valuations of **social and private housing stock**.
- By **increasing awareness** of impact of energy efficiency on value among lenders, investors and valuers, aims to **promote advanced market practices** and support and **encourage market transformation**.
- Focuses on revising and strengthening the requirements of **due diligence** and r**eporting** in relation to the energy efficiency and sustainability characteristics of residential properties.

***From this it is clear that it ties in with revisions to Red Book & supplemental guidance***

# The Known Challenges of ReValue

- Working across European countries with **differing legislative** and **cultural** contexts
- Both Germany and Netherlands have a high **% of rented stock**: in Netherlands 1/3+ of all dwellings are social rented sector – in UK 37% rented split roughly equally between Social and Private Rented
- **House prices inflation / rental values and controls/ energy costs/ costs of retrofit** vary across countries – these are all factors feeding into value and the business case. It also sets the scene for entrenched behaviours
- ***Therefore care needed in terms of creating the business case***
- Most research in residential has concentrated on transformation **in owner-occupied markets** – where **the split incentive issue** does not exist
- The 'gap' on which ReValue concentrates is **the residential rented sector – primarily portfolio owners**: both social sector and the newly emerging (in UK) institutional or specialist property company holdings

# Re-Value: Empirical Work

## 3 main elements

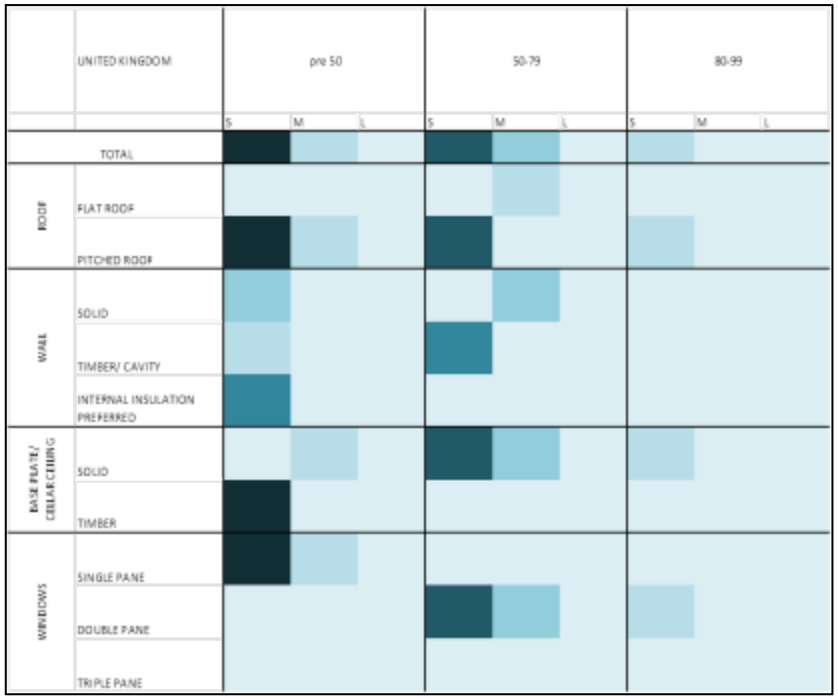
- **Examining the typologies of buildings** in a range of housing investment owner portfolios: developing a deeper understanding of types of retrofit possibilities against differing housing stock and the decision making process
- **Regression analysis of  case study data** to establish whether the differential values found in the academic literature are replicated in social housing stock
- **Qualitative data collection**
  - Interviews with housing providers and funders  to establish their business case and barriers
  - Scenario exercise with valuers about how they actually integrate EE (if at all) in practice

***All of these will feed into the revisions to the Guidance and provide recommendations for portfolio owners and report on the prospects for greater EE adoption for EU***

# Re-Value: Results to date (1)

## Typologies: Case Studies

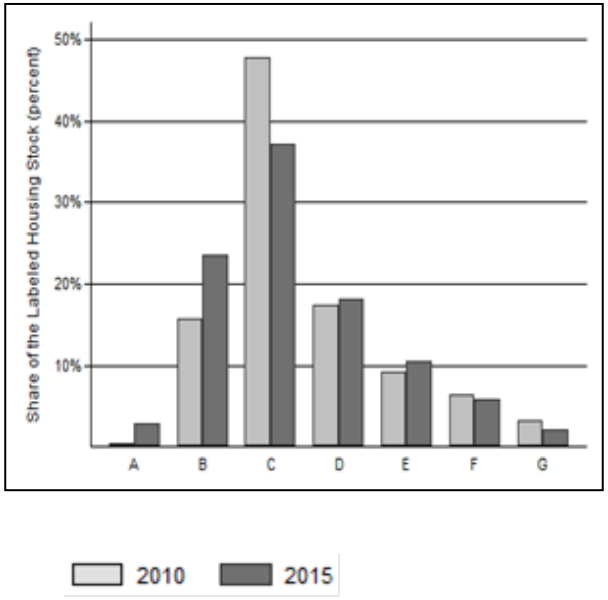
- Case Studies of Housing associations in UK /Netherlands has revealed significant variability in the data collected/held by owners
- This hinders the ability to analyse the impact of individual components on value
- Also due to typologies opportunities to upgrade vary from single measures, to whole house
- Variability impacts on how valuers can undertake their role - as they are working with imperfect data
- Cost estimates will vary enormously – as too will the level of disruption to occupiers – and hence willingness/ ability to undertake



# Re-Value: Results to date (2)

## Regression Analysis

- First analysis taken place (Netherlands) of 53,000 units
- Compared capital value per sq $m^2$ of labelled and non-labelled stock in 2010 and 2015 based on formal reported valuations
- Results are still being interpreted but suggest that:
  - % of stock with label increased from 24% to 44% over 5 years
  - Distribution changed (more widely spread round the C average)
  - Labels were not a value issue in 2010
  - Differentiation around a 'norm' (in value terms) of C by 2015
  - Evidence of labels making positive effect on A/B but discount for F/G in particular



# Re-Value: Results to date (3)

## Interviews (UK/Netherlands) early days but:

- The **business case** is not just energy – it is an ambition to relieve fuel poverty, provide safe and comfortable homes and dis-able 'bad' behaviours and lower defaults
- **EE upgrades** are best done 'in cycle' – presence of incentives not a factor
- **Keep to traditional/conventional techniques:** Moves to district heating can be useful – but experience with Passiv House not always positive (too expensive); some new techniques give management/performance issues ;
- **Valuation reports are a 'black box'**: updated guidance would help translation of EE into pricing
- **Housing rent caps are a barrier** but **innovative Social Funding** may provide **breakthrough** provision – there is a real need to think outside the box
- Willingness /need to **sell off older stock** /move to **build new**
- View that **RICS and Government need** to take more **positive leads**

# ReValue: The way forward

## Pulling strands together

### Data

- Require **standardised data collection** for owners and valuers
- Possibly work to set up better **data exchanges and benchmarks** (building passports?)
- Continue to work on **effectiveness and evaluation of EE measures**

### Funding

- **Connect with funders** to help re-structure portfolio and support business case – which is not just straight payback or Return on Investment (ROI)

### Awareness and Training

- **Encourage** professional body and government **positive actions**
- Break the 'black box' and have **more transparent reporting**

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The sole responsibility for the content lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.

Co-funded by the Intelligent Energy Europe Programme of the European Union

REVALUE

# Taking things forward…

## Energy Efficient Mortgages Initiative

European Mortgage Federation

ECBC
European Covered Bond Council

Università Ca'Foscari Venezia

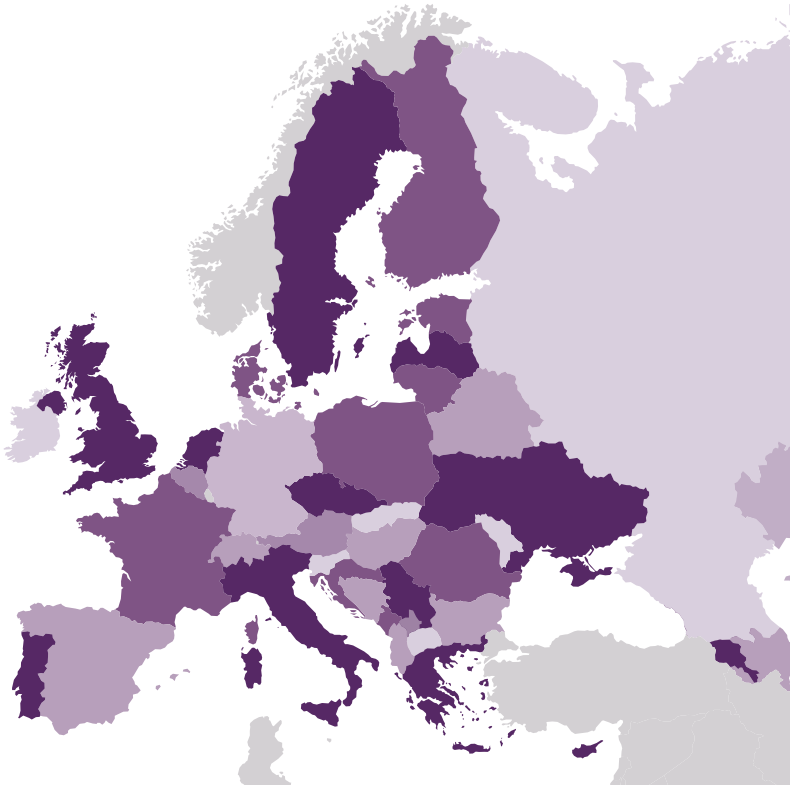
RICS

e·on

House of Finance SAFE

EUROPE REGIONAL NETWORK

World Green Building Council



# Agents for change (2) EMG Project

## The impact of energy efficiency on value and LTV

Origination

After one year

Part of the loan is paid down

$LTV\downarrow 0 = 80/100 = 80\%$

$LTV\downarrow 1 = 77/110 = 70\%$

Value increases due to improvements in the energy efficiency

*LTV=Loan granted for the mortgage/Value of the real estate*

## Can energy efficiency lead to better capital treatment?

Increased loss mitigation capacity + Enhanced LTV + Potential reduction of borrower's probability of default = Reduced capital charges?

Source: EMF

# Incentive chain

**Owners & Tenants**
**(Valuation Users)**
We purchase and rent energy efficient buildings and invest in energy efficiency and renewable energy because this reduces operational costs and increases occupant well-being and comfort and ultimately asset value.

**Professional Bodies**
We spread the knowledge about the economic benefits of energy efficiency and renewable energy installations because this is critical for capacity building and market transformation.

Increase of Nearly Zero Energy Buildings in EU

**Built Environment Professionals***
We design, build and retrofit energy efficient buildings because of market demand and because lenders, investors and insurers provide preferential conditions.

**Lenders, Investors, Insurers**
**(Valuation Users)**
We invest in, finance and insure energy efficiency and renewable energy projects because that is what occupiers want and therefore there are fewer associated financial risks.

**Valuers**
We recognise the economic benefits of energy efficiency and renewable energy in buildings and reflect this in advice given to clients and other built environment professionals.

**Supply**

**Demand**

**Designers, constructors, developers, valuers, etc*

# Incentive chain

**Government:**

- Pan European plan to stimulate energy efficient investment in residential property
- Improvement of existing housing stock
- Compliance with 1997 Kyoto Protocol – COP21
- Access to quantitative & qualitative database on energy efficient mortgages & covered bonds

**Investor:**

- Diversification of investor portfolio
- Allocation of energy efficient investment buckets
- Green added value vs brown discount

**Issuer/Originator:**

- Access to funding cost advantages
- Increased loss mitigation capacity
- Lower capital requirements as a result of lower PD
- Reputational benefits

**Borrower:**

- Lower energy bills
- Energy Efficiency Behaviour
- Lower interest rate on mortgage for energy efficient property
- Free capital for retrofitting

**SME/ Real Economy:**

- SMEs active in the retrofitting of buildings and dwellings to become more energy efficient
- Juncker Plan

**Society:**

- Reduction in energy consumption
- Wealth conservation
- Reduction in greenhouse gas emissions

# The valuation aspect

***Valuation Profession:***

- EE is strong potential value driver & risk factor and integration of EE in valuations & credit risk assessment could transform current lending practices
- Whilst conventional market-based valuation methods are fit to account for EE features in valuations, there is limited quality rental & sales evidence to allow valuers to accurately determine incremental value impact
- Initiative could be help to overcome this by building up evidence base and explicitly instructing banks and valuers to request, collect & make use of additional data

***Better Risk Management:***

- **Lower Credit Risk**: Due to reduced PD and LGD
- **Lower Asset Risk:** Due to “green value” and protection against “brown discount”
- **Lower Performance Risk:** Due to robust assessment of EE improvement ensuring lower energy consumption and ”green value”

# Practical Considerations for Green Lending

## What properties would benefit

- Green loans may be most beneficial for the estimated 35% at most risk of brown discount (i.e. E-G rated)
- The cost effectiveness of energy improvements will depend on typology and locational value - most effective if they are improvements to *structure* not fittings which can be life expired or impacted by technology change
- Important that lending is underpinned by expert value and physical inspection to ensure quality data – AVMs (Automated Valuation Models) may have a place – but lack the fine grain needed for other than low LTV ratio lending on standard products.
- *But* European wide database would enable detailed analysis to aid effective lending which produces social and economic benefits

# Preliminary survey findings and the way forward

## Barriers

- Difficulties in translating energy efficiency into ‘green’ value
- Difficult to disentangle ‘energy efficiency’ only
- Lack of guidance and support on appropriate data capturing and data management
- Lack of market transparency and trust
- Lack of standardised metrics and procedures

## Recommendations

- Template for **standardised data collection** (checklists and valuation instructions)
- Practical toolkit to assist and guide bank valuers in the form of dedicated **training** materials
- Set up a **data warehouse** - intended to systematically capture, track and manage building performance (both technical and financial) related information.

# Schematic: Seeking to de-compose the market

Commercial

Sustainability - High Value impact (+ve or –ve)

Residential

Prime Certificated CBD offices

New Build- lower value- O/O - JAMS

Stranded assets (hard to treat/non MEES compliant)

Housing Association/ Institutional rented stock

Standard secondary office/ retail –as long as D or above –owner-occupied/ investment

Low value tenanted – PRS- at risk of stranding

Low Value – buy what we can – older stock - JAMS

Low energy consumption units: warehousing: investment/owner-occupation

Owner-occupied, high value, mortgage free

Sustainability - Low Value impact

# Points for further discussions

Retrofitting will not *automatically* lead to an enhanced value: ***what additional empirical work would help from the lender perspective to judge what might be prudent lending*?**

***Which are the available information sources? Who holds the data? What are the information gaps?***

***How can building performance be assessed? Will valuers be asked to make the judgement as to the scheme of work intended? And how long will such interventions 'add value'?***

***Is it sufficient to look at aggregated positions (***e.g. average for EPC A-C against average nationally***) to give lender comfort at the individual asset level?***

***What are the potential value and risk drivers?***

***Emotional factors and decision making: residential vs. commercial?***

***To what extent will the value proposition change as regulations, supply levels and GDP alter*** bearing in mind most of the research listed to date has been conducted during a value 'upswing' period?

# Questions