

Integrating sustainability considerations into valuation practice

Valuing Landscape Conference, 6 September 2018

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An opinion of the value of an asset or liability on a stated basis, at a specified date.

Unless limitations are agreed in the terms of engagement this will be provided after an inspection, and any further investigations and enquiries that are appropriate, having regard to the nature of the asset and the purpose of the valuation.

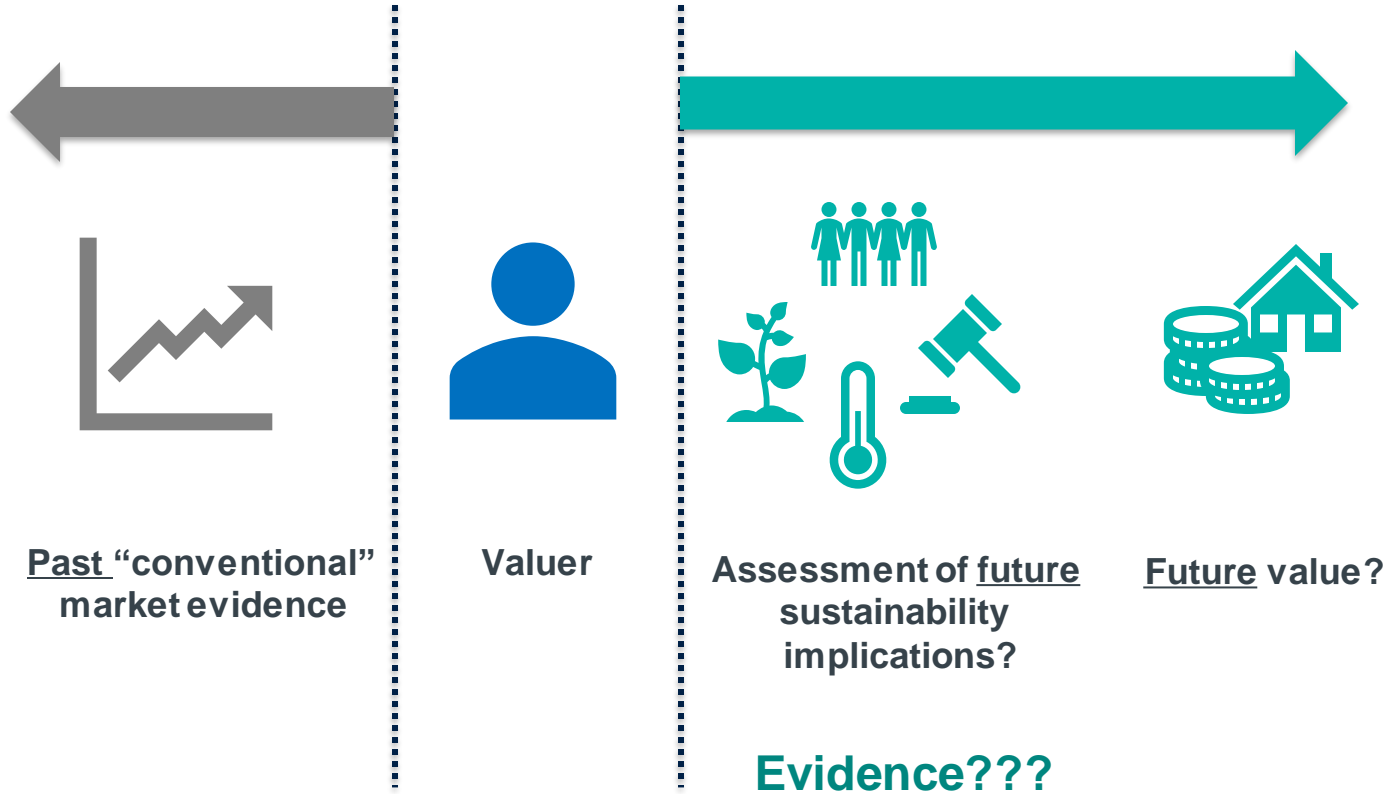
Valuers do not ‘make or lead the market’ but their advice and the nature and scope of their services influence property market outcomes.

As commercial markets become more sensitised to sustainability matters, so they may begin to complement traditional value drivers, both in terms of occupier preferences and in terms of purchaser behaviour.

Valuers “should be aware of *sustainability* features and the implications these could have on property values in the short, medium and longer term.”

RICS Red Book (2017), p. 138

The challenge for the valuer



The evidence is clearly there ...

| Study/Authors | Country | Property Type | Sustainable Credentials | Observed impact on | +/- | Magnitude |
|--|---------------------|---------------------------------|--|--------------------|-----|---|
| Australian Department of the Environment, Water, Heritage and the Arts, 2008 | Australia | Residential Homes | Energy Efficiency Rating, EER, (0 to 10 stars in 0.5 star increment) | Selling Price | + | 1.23% – 1.91% for each 0.5 EER star |
| Brounen and Kok, 2010 | The Netherlands | Residential Homes | Energy Performance Certificate (Class A, B, C) | Selling Price | + | 2.8% |
| Cajias and Piazzolo, 2013 | Germany | Residential Buildings | Energy consumption / EPC category | Total return | + | 0.015% per 1% decline in energy consumption |
| | | | | Rental Price | + | 0.08 per 1% decline in energy consumption |
| | | | | Market Value | + | 0.45 per 1% decline in energy consumption |
| City of Darmstadt, Rental Index, 2010 | Germany (Darmstadt) | Residential multi-family houses | Primary energy value below 250 kWh/m ² a Primary energy value below 175 kWh/m ² a | Rental Price | + | 0.38 €/m ² 0.52 €/m ² |
| Das and Wiley, 2014 | USA | Office Buildings | LEED Energy Star | Selling Price | + | 16.4% 10.6% |
| Deng and Quigley, 2012 | Singapore | Residential Flats | Green Mark | Selling Price | + | 4% - 6% |
| | | | | Selling Price | + | 11.1% |
| Eichholtz, Kok and Quigley, 2010 | USA | Office Buildings | LEED Energy Star | Rental Price | + | 5.9% 13% |
| | | | | Rental Price | + | 6.6% |
| Feige et al., 2012 | Switzerland | Residential Flats | Economic Sustainability Indicator (ESI) | Rental Price | + | 15% for resources use / 11% for health and comfort / 11% for security |
| Fuerst and McAllister, 2010 | USA | Office Buildings | LEED Energy Star | Occupancy Rates | + | 8% 3% |
| | | | | Selling Price | + | 31% - 35% |
| Fuerst and McAllister, 2008 | USA | Office Buildings | LEED, Energy Star | Rental Price | + | 6% |

| Study/Authors | Country | Property Type | Sustainable Credentials | Observed impact on | +/- | Magnitude |
|---|--------------------------|-------------------|---|----------------------------|-----|-------------------|
| Fuerst, van de Wetering and Wyatt, 2013 | UK | Office Buildings | Energy Performance Certificate (Class A, B, C) | Rental Price | + | 11% |
| Griffin et al, 2009 | USA (Portland / Seattle) | Residential Homes | Built Green, Earth Advantage, Energy Star, or LEED | Selling Price | + | 3% - 9.6% |
| | | | | Selling / Marketing Time | - | 18 days |
| Kok, Newell and MacFarlane, 2011 | Australia | Office Buildings | NABERS 5 stars Green star | Selling Price | + | 9% |
| | | | | Rental Price | + | 3% |
| | | | | Selling Price | + | 12% |
| McGrath, 2013 | USA | Office Buildings | LEED and Energy Star | Cap Rates | - | 0.364% |
| Müri, Rappi and Bröhl, 2011 | Switzerland | Residential Flats | Noise exposure | Rental price | - | 0.19% per decibel |
| Pivo and Fischer, 2010 | USA | Office Buildings | Energy Star, close distance to transit, location in redevelopment areas | Net Operating Income (NOI) | + | 2.7% - 8.2% |
| | | | | Rental Price | + | 4.8% - 5.2% |
| | | | | Occupancy Rates | + | 0.2% - 1.3% |
| | | | | Market Value | + | 6.7% - 10.6% |
| | | | | Income Returns / Cap Rates | - | 0.4% - 1.5% |



| Study/Authors | Country | Property Type | Sustainable Credentials | Observed impact on | +/- | Magnitude |
|------------------------------------|--------------------|---|--|---------------------------------------|-----------------------------|--|
| Pivo and Fischer, 2011 | USA | Office, retail, industrial and apartment properties | Walkability (distance to educational, retail, food, recreational and entertainment destinations), measured as a Walk Score from 0 to 100 | Market Value (office, retail) | + | 0.9% for each unit increase in Walk Score |
| | | | | Market Value (apartment) | + | 0.1% for each unit increase in Walk Score |
| | | | | Net Operating Income (office, retail) | + | 0.7% for each unit increase in Walk Score |
| | | | | Income Returns / Cap Rates | - | 0.007% for each unit increase in Walk Score |
| Salvi et al, 2008 | Switzerland | Residential Homes | MINERGIE Label | Selling Price | + | 7% |
| | | Residential Flats | | Selling Price | + | 3.5% |
| Salvi et al, 2010 | Switzerland | Residential Flats | MINERGIE Label | Rental Price | + | 6% |
| Wameling, 2010 | Germany (Nienburg) | Residential Homes | Primary energy demand per m ² and year (kWh/m ² a) | Selling Price | + | Ca. 1.40 €/m ² per reduced kWh/m ² a |
| Wiley, Benefield and Johnson, 2008 | USA | Office Buildings | LEED, Energy Star | Rental Price | + | 7% - 17% |
| Wüest und Partner, 2011 | Switzerland | Residential Homes | MINERGIE Label | Occupancy Rates | + | 10% - 18% |
| | | Japan (Tokyo) | | Large resi-dential condominiums | Tokyo Green Labeling System | Selling Price |



As is the guidance ...



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Renovalue: Integrating Sustainability into Valuation Practice

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1.5 Hours Formal CPD
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Free training material for practising valuation professionals on how to factor energy efficiency and renewable energy issues into valuation practices and how to advise clients accordingly.

Learning outcomes
✓ Recognise the impact of sustainability on the wider real estate market and the valuation professionals' critical role with

Course information
This development is part of our commitment to where we promised to develop Renovalue, our programme, for a worldwide audience. The use of property valuation is an essential

**WAARDEREN
VAN DUURZAAMHEID**

**VALUING
SUSTAINABILITY**

**Η ΑΠΟΤΙΜΗΣΗ
ΤΗΣ ΑΕΙΦΟΡΙΑΣ**

**ATT VÄRDERA
HÅLLBARHET**

**VALUTARE
LA SOSTENIBILITÀ**

**ZRÓWNOWAŻONA
WYCENA NIERUCHOMOŚCI**

**ESTIMER
LA DURABILITÉ D'UN BIEN**

**NACHHALTIGKEIT
IN DER IMMOBILIENWERTERMITTLUNG**



Renovalue

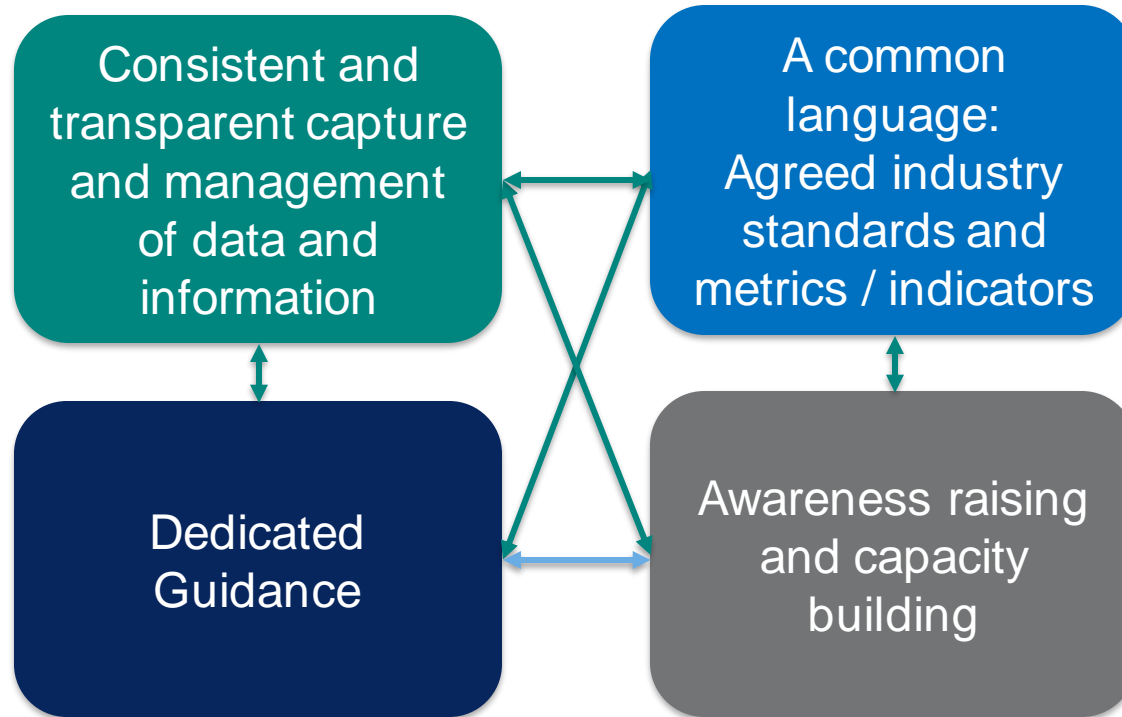
Integrating sustainability into the valuation practice is not rocket science!



It is about applying quantitative evidence and qualitative judgement to new value-influencing features and improving market efficiency by providing accurate information to the market place.



A holistic approach



Sustainability is a moveable feast...

The canon of material sustainability issues within the built environment is constantly evolving ...



... ???

How to value these...?

In property valuation, sustainability features must be considered in order to ...

Meet professional general duties and requirements

Reflect changing market conditions

Avoid mispricing of assets (i.e. valuing conventional buildings too high and sustainable ones too low)

Comply with professional organisations' (e.g. RICS) and jurisdiction's (e.g. Germany) mandatory valuation requirements

Thank you

| CONVERSIONS APPROXIMATE | USD | 400,000,000 |
|----------------------------|-----|----------------|
| LOT 9B | EUR | 338,280,000 |
| | GBP | 303,960,000 |
| | CHF | 394,240,000 |
| | JPY | 45,161,080,000 |
| | HKD | 3,108,200,000 |
| | RUB | 23,895,440,000 |
| | CNY | 2,627,360,000 |

CHRISTIE'S

... and it is possible to put a price even on the most priceless of assets...