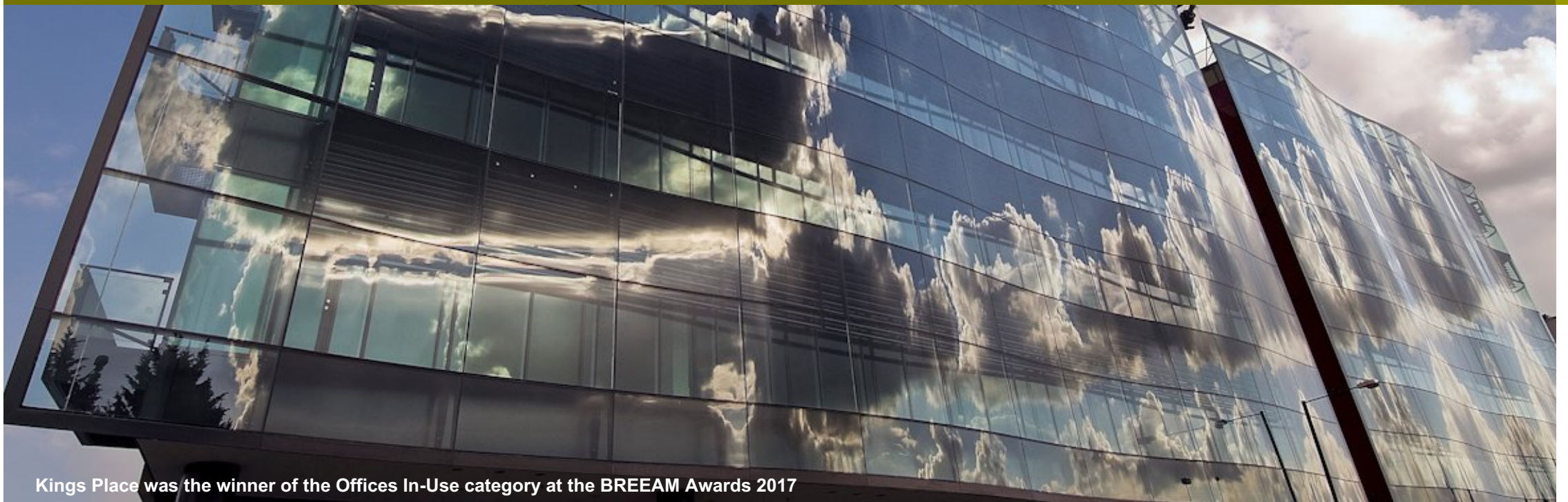


Redefining Value

Alan Somerville

Building a better world together



Kings Place was the winner of the Offices In-Use category at the BREEAM Awards 2017

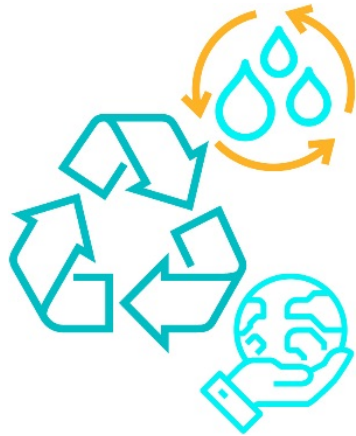


We are the **world's leading building science** centre with a mission to improve buildings and infrastructure through research and knowledge generation, and their application.

Five global shifts changing the way we live and do business (PWC)



Rapid
urbanisation



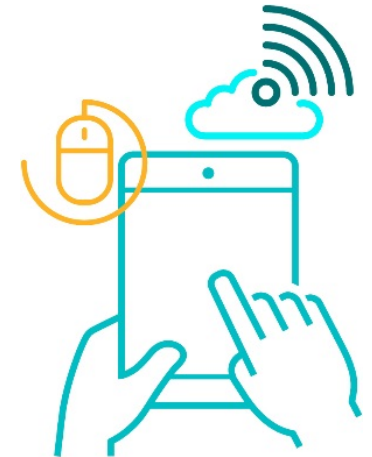
Climate
change and
resource
scarcity



Shift in global
economic
power



Demographic
and social
change



Technological
breakthrough

Cities consume **75%** of the world's natural resources and account for **80%** of global greenhouse gas emissions

Source: United Nations 2015



Who is at risk of climate change?

Those **living in poverty** as well as **women, children and the elderly**

Those living in
**megacities, small
island development
states** and other
**coastal, mountainous
and polar regions**



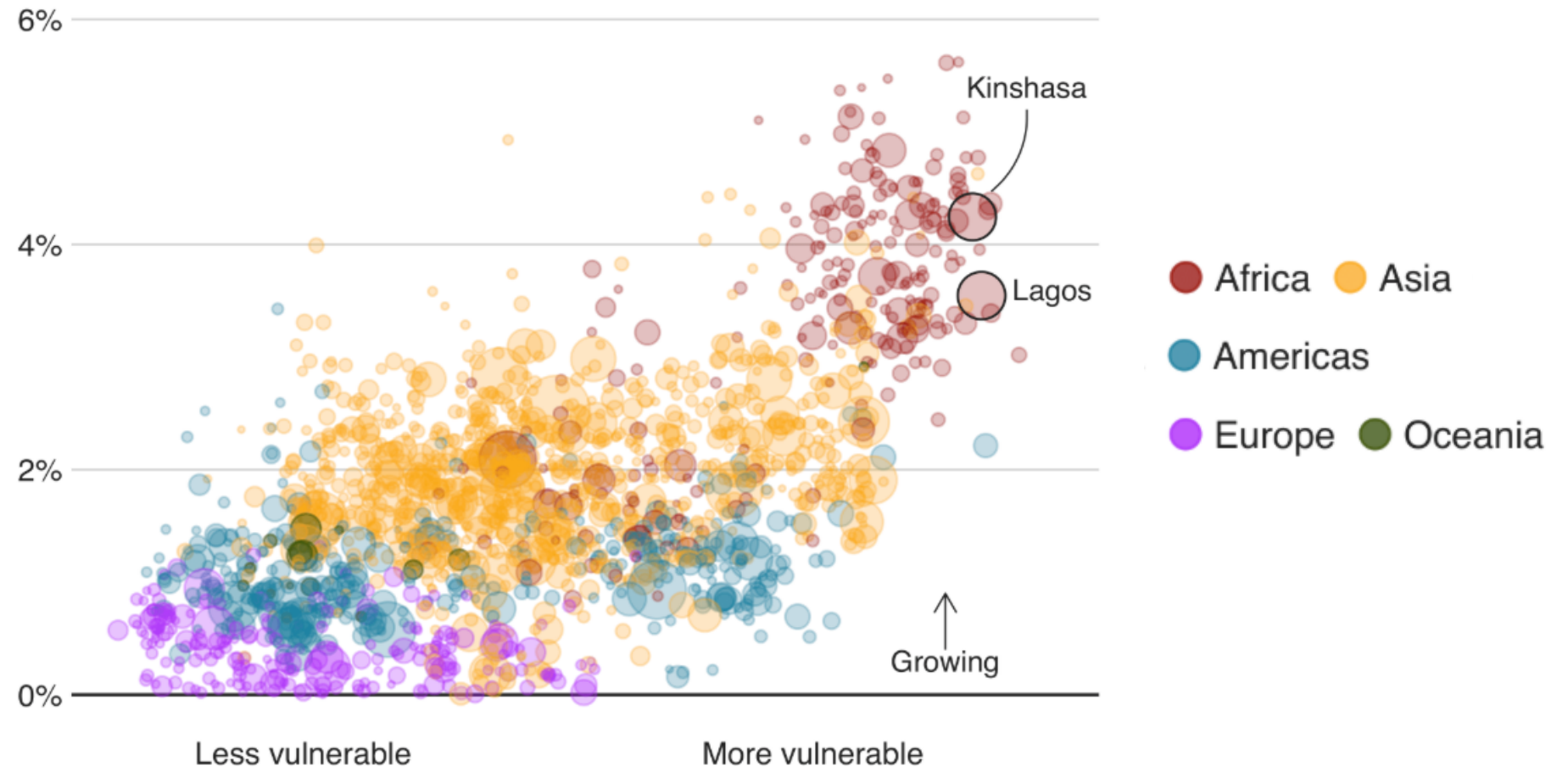
**Outdoor workers
and people living
with chronic
medical conditions**

Countries with weak **health systems** will be least able to prepare and respond

Children are the most vulnerable due to long exposure to environmental risks

Fast-growing cities face worst climate risks

Population growth 2018-2035 over climate change vulnerability



Source: Verisk Maplecroft, Circle size represents current population

UN – Sustainable Development Goals





Environmental Social Governance (ESG)

- Responsible investment
- Capital requirements
- Legal requirements
- Occupier and workplace expectations
- Better building performance
- Technology and data



- Indispensable part of real estate management
- Exponential growth in the last 5 years
- Partly global targets & partly investor requirements
- Non financial metrics
- Many investors view stewardship as a top priority
- Usually a clear and detailed policy that is backed up by international rating standards – usually 4 or 5 stars from the Global Real Estate Sustainability Benchmark (GRESB – 1000 funds, \$18trn of capital)
- **PREDICTION** - In five years' time, the big listed property companies will have no non-environmentally labelled real estate at all






Asset Typology Changing

- Alternative real estate and residential – in all its forms – dominate the market view of likely future asset performance, marking a remarkable shift in industry sentiment over the past few years
- These alternatives have more operating risks requiring management. Necessitates more insight
- Responds to the megatrends that are driving human behaviour – ageing population, growing population, urbanisation, structural shortage in housing, structural oversupply in retail property, a younger generation that is completely digitally enabled
- The future will be much more about mixed-use communities

Table 2-1 Sector prospects in 2019

Overall Rank	Investment	Rank	Development	Rank
1 Co-living*	4.40	1	4.25	1
2 Logistics facilities	4.34	3	4.24	2
3 Retirement/assisted living	4.34	4	4.22	3
4 Flexible/serviced offices	4.29	5	4.12	4
5 Data centres*	4.36	2	4.11	5
6 Student housing	4.21	6	4.08	6
7 Private rented residential	4.19	8	4.07	7
8 Serviced apartments	4.21	7	4.05	8
9 Housebuilding for sale	4.00	13	3.96	9
10 Social housing	4.04	10	3.95	10
11 Healthcare	4.14	9	3.93	11
12 Affordable housing	4.03	11	3.92	12
13 Hotels	4.02	12	3.85	13
14 Science parks*	3.93	14	3.78	14
15 Industrial/warehouse	3.90	15	3.76	15
16 Self-storage facilities*	3.57	18	3.74	16
17 Central city offices	3.83	16	3.61	17
18 Parking	3.64	17	3.46	18
19 Business parks	3.47	19	3.22	19
20 High street shops	3.34	20	3.08	20
21 Suburban offices	3.23	21	3.04	21
22 City centre shopping centres	3.16	22	2.78	22
23 Retail parks	3.16	23	2.78	23
24 Out-of-town shopping centres	2.75	24	2.45	24

 Generally good = above 3.5
  Fair = 2.5-3.5
  Generally poor = under 2.5

Note: Respondents scored sectors' prospects on a scale of 1=very poor to 5=excellent, and the scores for each sector are averages; the overall rank is based on the average of the sector's investment and development score.

*A significantly lower number of respondents scored this sector

Source: *Emerging Trends Europe* survey 2019

Most important emerging ESG issues in RE sector

Feedback collected via Google forms from the Advisory Board and regional Benchmark Committees

Response: **28** members of the AB and regional BCs

Topics	# times mentioned		
Climate resilience (TCFD)	19	Affordable housing	2
Net Zero Carbon	14	Biodiversity	2
Carbon footprint data	11	Building certifications	2
Data availability	8	Governance of sustainability	2
Responsible investment strategy	6	Green bonds	2
Social impact	6	Waste management	2
Energy consumption data	4	Water scarcity	2
Health & wellbeing	4	Connectivity	1
Circular economy	3	ESG in valuation	1
Data quality	3	Flexibility	1
Digital transformation and big data	3	Healthy materials	1
Impact investing	3	Materiality	1
Modern Slavery	3	Tax disclosure / tax havens	1
Monitoring performance	3	Transition risk	1

Top 3 most concerning ESG issues are consistent with the results from the Investor Survey

1. Climate change/ resilience & adaptation/ TCFD implementation
2. Achieving net zero targets/ measuring carbon footprint
3. Access to energy / carbon / water /waste data

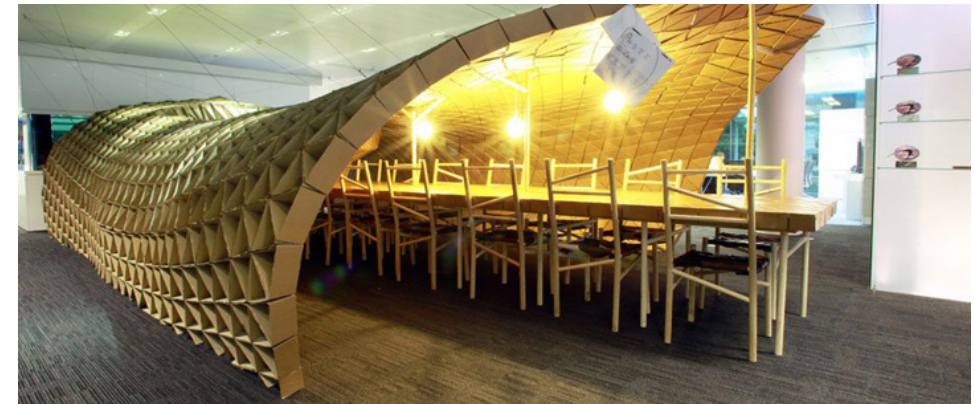
Top 3 most concerning ESG issues currently not covered by GRESB

1. Responsible investment strategy/ incorporating ESG into asset acquisition/ ESG integration into commercial strategy/ Impact investing
2. Digital transformation and big data (see next slide)
3. Modern slavery

- Happy tenants..... steady on!
- Not so long ago, the idea of promoting health and wellbeing would have been dismissed as irrelevant to the real estate industry, yet now it will have significant impact on real estate strategies over the coming five years.
- Wellbeing now arguably on a par with such long-established influences on the industry as sustainability and energy efficiency. But importantly, the driver here is not regulatory force but occupier demand
- Example of the growing approach of 'property as a service
- Brand & brand values increasingly important to occupiers – WeWork announced in 2018 that it will no longer hold any staff events that serve meat, nor will it allow staff to claim expenses for any meals that include poultry, pork or red meat



- Investors, such as pension funds, are now taking a much more holistic view when it comes to deciding where to put their money
- The built environment is responsible for almost 40% of energy consumption in the EU - real estate investors around the world are increasingly committing to more sustainable practices
- Banks have increasingly recognised the importance of sustainability in protecting against obsolescence and value loss, thereby reducing risk for both borrowers and lenders alike
- European lenders taking an active interest in sustainability through green lending initiatives, by providing a margin discount of up to 20bps to borrowers provided they commit to reducing energy usage within their buildings
- Many investors are now signatories to UNPRI which defines responsible investment as an approach that aims to incorporate ESG factors into investment decisions. 1,750 signatories in 50 countries representing \$70 trillion of assets



- Technology is playing a major role in ensuring that societal, environmental and financial factors are no longer examined in isolation
- Huge amounts of data now sourced from individuals via smart phones, wearables, as well as in infrastructure via smart buildings and Building Information Modelling (BIM)
- Real estate as a business is becoming more complex
- Asset owners now have the ability to track and interpret multiple impacts using big data
- Artificial intelligence & blockchain



Watson Internet of Things Industries ▾ Business solutions ▾ Spotlight ▾ Learn ▾ Part

IoT zones > Buildings >

WIRED BRAND LAB

Cognitive transforms physical structures into thinking entities. Discover **what you can do** with your buildings.

Asset Benchmarking

- Responds to the risk of obsolescence as real estate struggles to keep up with technology and rapidly changing consumer behaviour
- Clear evidence that a portfolio of certified buildings experience relatively higher operating expenses, but can also generate higher rental income and higher cash flows for distribution to investors
- Green buildings can exhibit lower systematic risk reflected in more stable occupancy rates and lower variation in operating expenses
- Certification provides robust evidence to allow portfolio & building comparison on a global basis
- **PREDICTION** – The global green bond / finance market will continue to grow rapidly and the primary global certification schemes evidence performance

City	Type	% Certified buildings (area)	
		2007+	2016
Vancouver	BOMA / BEST / LEED	29%	52%
Toronto	BOMA / BEST / LEED	15%	51%
Sydney	NABERS / Green Star	1%	47%
Melbourne	NABERS / Green Star	1%	29%
Warsaw	BREEAM / LEED	1%	21%
Manhattan	LEED	0%	20%
Frankfurt	DGNB / LEED	0%	18%
Stockholm	BREEAM / LEED	1%	13%
Amsterdam	BREEAM / LEED	0%	11%
Paris	HQE / BREEAM / LEED	0%	9%
London	BREEAM / LEED	0%	9%

Source: CBRE, International Green Building Adoption Index 2018.



Building a more sustainable built environment



81 countries



**560,000+
Certificates**



**4,000+
Accredited Professionals
and Assessors**



**2,000,000+
Registered Buildings**

BREEAM projects internationally



London Olympic Games,
UK



Saw Swee Hock
Student Centre, LSE,
UK



PwC London,
UK



Coca-Cola,
France



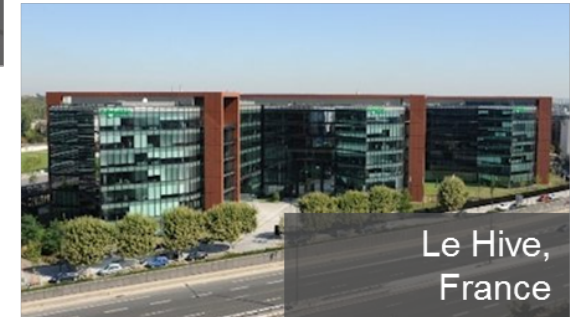
Bloomberg London,
UK



10 Downing Street,
UK



The Edge,
Amsterdam



Le Hive,
France



University of California,
Davis, USA



Hubhult IKEA,
Sweden

China's goal for green buildings by 2020

- Energy efficiency of newly constructed buildings improved **by 20%**
- Newly constructed green buildings increased **to 50%**
- Newly constructed green buildings space expected to reach **2 billion square meters**
- Retrofitting of existing public buildings for energy efficiency purpose to cover **100 million square meters**
- Retrofitting of existing residential buildings for energy efficiency purpose to cover **500 million square meters**



Source: Ministry of Housing and Urban-Rural Development of China (MOHURD), February 2017

- The next five years will be a pivotal period for the industry, the challenges going much deeper than the conventional supply/demand dynamics of real estate, or even a market downturn
- We have to make sure our buildings are flexible enough to cope with whatever is coming in 10 years' time
- Benchmarks are giving investors the information to make better decisions
- Advances in technology and building materials mean that external auditors will keep raising sustainability standards
- All of the above will keep real estate managers on their toes
- The days of buying real estate, holding it for 20 years and doing nothing, are long gone

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