





# Winning in the Long Run: an update: Making progress together in sustainable investment

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### **PROJECT**

Danube University Krems (Austria) in cooperation with Kingston University London

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### **GRANTS**

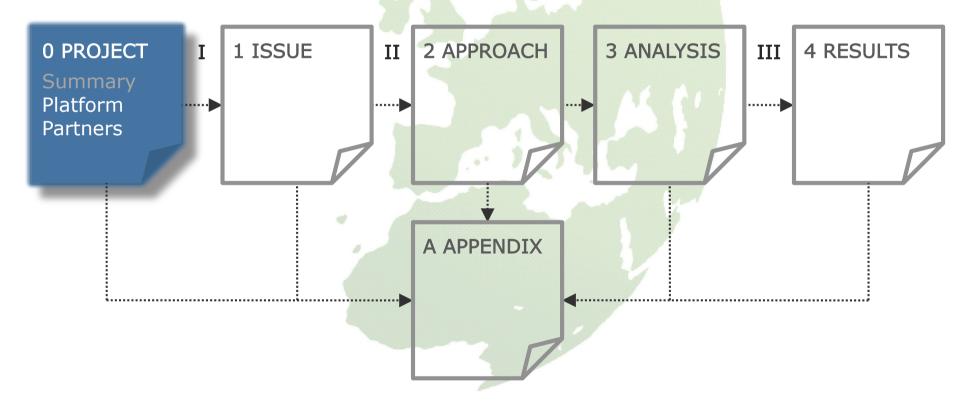
Royal Institution of Chartered Surveyors, RICS Education Trust Austrian Chamber of Commerce, Federation of Real Estate Professionals EURO Institute of Real Estate Management







# The Content of this Working Paper







### The Need for an Independent Research Platform

Sustainable Investment in Real Estate

### STRENGTH

- . Leadership
- . Expertise
- . Innovation

### **WEAKNESS**

- . Intransparency
- . Irrationality
- . Uncertainty

### **OPPORTUNITY**

- . Reallocation
- . Responsibility
- . Redevelopment

### DESIGN

**MANAGEMENT TOOLS** 

VERIFY
MARKET EVIDENCE

### **THREAT**

- . Legislation
- . Reputation
- . Obsolescence

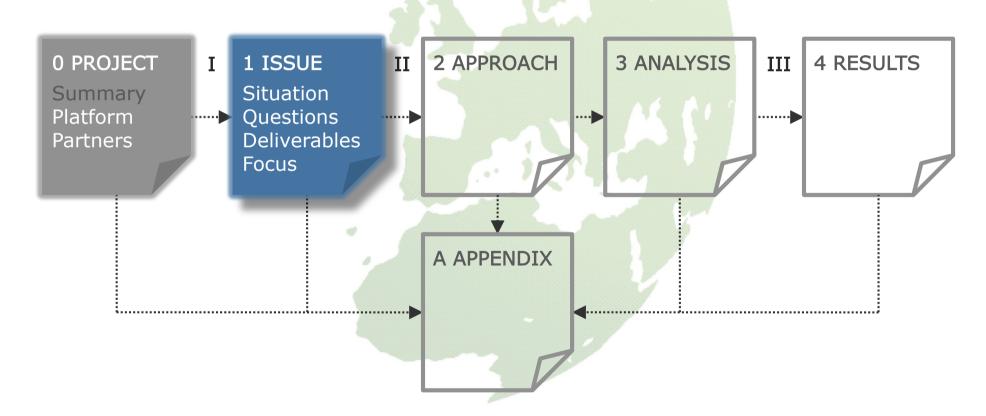
PROVIDE EXPERT NETWORKING

support Industry Initiatives





### ... Content ...







# The Empirical Search for the Green Alpha

..... (work in progress)

Wiley et al. (USA): Rent 7..17%, Occupancy 10..18%

Fuerst & McAllister (USA): Occupancy 3..8%

Leopoldsberger et al. (DE): Rent 0..6%

Salvi et al. (CH): Rent 5..6%

Fuerst & McAllister (USA): Rent 5..6%, Price 31..35%

Pivo & Fisher (USA): Net Income 6%, Value 13%

Eichholtz et al. (USA): Rent 3..6%, Price 16%

Cudworth & Graham (UK): Return -3%

Miller et al. (USA): Rent 0..3%, Price 15%, Value 10%

Fuerst & McAllister (USA): Rent 4..5%, Price 25..26%

Eichholtz et al. (USA): Rent 2..6%

Salvi et al. (CH): Price 3..7% the story continues

2008

2009

2010

2011





# The Difference in Our Approach: cash flow analysis and understanding

- Collection of data from investors against criteria not labels
- Place in economic context
- Examine relationships and cash flow impacts





### The Business Case for a Sustainable Investment

Income Growth

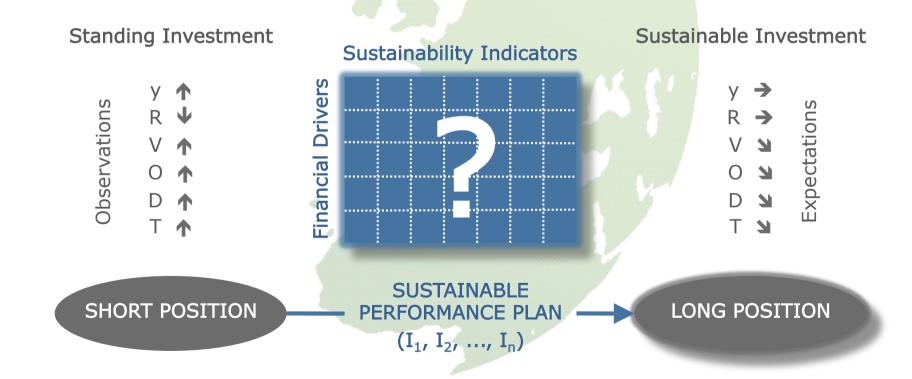
Income Growth

Income Yield





### Which Indicators Drive Sustainable Performance





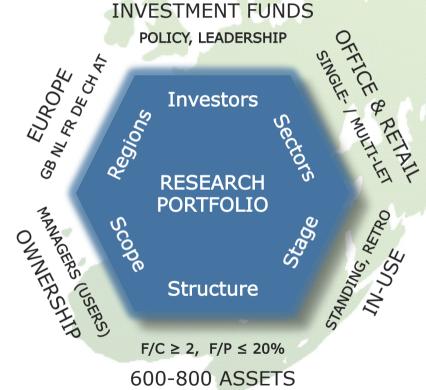
## Deliverables to the Project Stakeholders

	Public	Partners	Trustees	Board	Team
	ed 7	200000000000000000000000000000000000000			
Research project plan					
Project presentation charts					
Academic conference papers			AL TI		
Financial sustainability scorecard					
Research programme website					
Aggregated data set		E.			
Integrated analytical model					
Professional magazine articles					
Project partner workshops					
Investor panel discussions					
Performance indicator list					
Research project report					
Management summary brochure					
Reviewed journal paper					





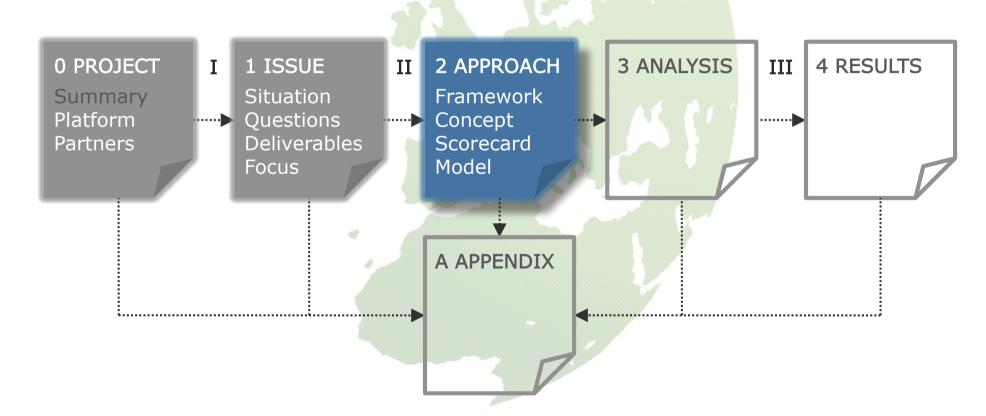
The Focus of a First Empirical Study in Europe







### ... Content ...







### Towards a Framework of Sustainability Metrics

### **INVESTORS**

GPF (PCI), BPF-GPA (GPA), IIGCC (GPA), IPF (ISPI;GPA), GRA (GR), GRESB (GRESB), ISA (BREEAM)

### **REGULATORS**

EC (EPD; EPBD; GBP; EPC; DEC; ETS), ISO (14000; 15392), CEN (EN15643)

### **AUDITORS**

GRI (G3;CRESS), VERITAS, KPMG, CBRE

### RATING BODIES

BRE (BREEAM), GBCI (LEED), DGNB (DGNB), BMVBS (BNB), AHQE (HQE), MINERGIE (M-P-ECO)

### COUNCILS

WRI/WBCSD (GHG), BBP (SBT), SBA (CMF), UNEP-FI/SBCI (FSMR;MPM;CCM)

### **ASSOCIATIONS**

RICS (VIP13;CP), ICSC(BREEAM), EPRA (G3;CRESS), INREV, ULI

### **ANALYSTS**

IPD (ECO;ISPI), DTZ, FERI,
JLL (OSCAR;3D;PCI)

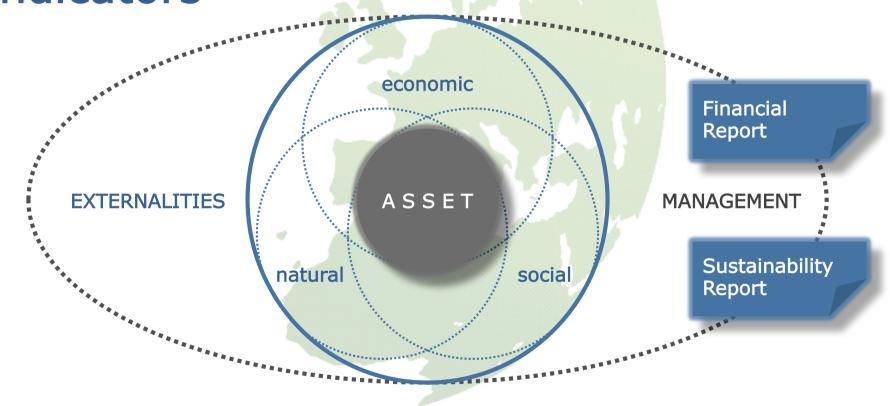
### **UNIVERSITIES**

KU (SPAP), HBS, CCSR (ESI), ECCE (EREI), EURO/DUK (SIRE)





### The Concept of Driving Sustainability Indicators







Asset		Externalities	\		Manageme	ent
PHYSICAL	ECONOMIC	NATURAL	SOCIAL	LEGAI	L F	INANCIAL
Record I	Property Perio	od Numerator 🕨	Amount	Source	Date	Notes
	ID TOPIC	ITEM		METRIC	DEF	
					DEL	
	P1 Age P2	Building completion  Last refurbishment		year year		
	P3 Size	Total area		m2		
	P4	Rental area		m2		
	P5	Main floors		number		
	P6	Ceiling height		m		
	P7 Type	Building shape		type		
	P8 P9	Building flexibility Building managemen	+	type		
	P9	Dunuing managemen		type		





Asset				Externalities	1	ĮP	lanageme	ent ————
PHYSIC	AL <sup>†</sup>	V E	CONOMIC	NATURAL	SOCIAL	LEGAL	F	INANCIA
Record	Pro	pert	y Period	Numerator <b></b>	Amount	Source	Date	Notes
	1	ID	TOPIC	ITEM		METRIC	DEF	
		E1	Monetary	Local currency rate		LCU/Euro		
		<i>E2</i>		Money market yiel		% pa		
		E3 E4		Government bond Core inflation rate		% pa % pa		
		E5	Corporate	Gross domestic pr		% pa		
		E6		Sectoral diversity		factor		
		<i>E7</i>	Private	Direct income		000 LCU		
		E8		Private wealth		mLCU		
		E9		Consumer spendin	g	index		





Asset	\ /		Externalities			1anageme	ent
PHYSIC	AL V E	CONOMIC	NATURAL	SOCIAL	LEGAL	_	INANCIA
Record	Propert	y Perio	d Numerator	Amount	Source	Date	Notes
	ID	TOPIC	ITEM		METRIC	DEF	
	N1	Climate	Weather conditions		DD ,		
	<i>N2</i> N3	Energy	Flood risk registered Total energy used		<i>yes/no</i> kWh		
	N4	3,	Renewable energy us		kWh	–	
	N5 N6	Emission Water	Greenhouse gases en Total water used	mitted	t CO2e m3		
	N7	water	Water recycled/harve	ested	m3		
	N8	Waste	Total waste disposed		t		
	N9		Waste recycled/comp	posted	t		





Asset	$\setminus$ /		Externalities			Manageme	ent
PHYSICA	AL V E	CONOMIC	NATURAL	SOCIAL	LEGA	_ F	INANCIAI
Record	Propert	y Period	Numerator 🕨	Amount	Source	Date	Notes
İ	ID	TOPIC	ITEM		METRIC	DEF	
	<i>S1</i>	Community		rsity	ratio		
	<i>S2</i> 		Job creation Mobility services		% score		
	<i>S4</i>		Health status		index		1
 		Tenant	Tenant mix	ont	factor level		
İ	S6 S7	Employee	Tenant engageme Employees	ent	FTE		
	S8	Visitor	Visits		number		
	S9		Visitor engageme	ent	level		!





Asset			Externalities			Manageme	
PHYSICA	AL W EC	CONOMIC	NATURAL	SOCIAL	LEGAI	_ <b> F</b> I	INANCIAL
Record	Property	Period	Numerator <b>•</b>	Amount	Source	Date	Notes
	ID	TOPIC	ITEM		METRIC	DEF	
		Legislation	Energy efficiency		type		
	<i>L2</i> 		Carbon taxation Carbon taxation		year year		
	L4	Policy	Green building ce	ertification	type		
	L5 L6		Owner sustainabi Occupier sustaina	•	year %		
		Agreement	Remaining lease	length .	years		
<u> </u>	L8 L9		Building operatio Green lease impl		hrs level		





Asset		Externalities	/ N	/lanageme	ent
PHYSICA	L ECONOMIC	NATURAL SOCIAL	LEGAL	_	INANCIAL
Record	Property Period	d Numerator 🕨 Amount	Source	Date	Notes
	ID TOPIC	ITEM	METRIC	DEF	
	F1 Inflow	Rental income	000 LCU		
	F2	Other income	000 LCU		
	F3 Outflow	Vacancy cost	000 LCU		
	F4	Non-recoverable operating cost	000 LCU		1
	F5	Maintenance cost	000 LCU		
	F6	Capital expenditure	000 LCU		
	F7	Property and environmental tax	000 LCU	—	
	F8 Other	Recoverable operating cost	000 LCU		
	F9	Initial capital value	mLCU		





# The Analytical Model of an Integrated Approach

SUSTAINABILITY INDICATORS

**ASSET** 

**EXTERNALITIES** 

- economic
  - natural
    - social

**MANAGEMENT** 

**Independent Variables** 

ANALYTICAL MODEL

CFA Cash-Flow Analysis

MFR Multi-Factor Regression

ROA
Real Option Analysis

Mathematical Functions

PERFORMANCE DRIVERS

### **INFLOW**

- Income Yield
- Income Growth

### **OUTFLOW**

- Vacancy Cost
- Operating Cost
- Capital Expenditure
- Environmental Tax

**Dependent Variables** 







### The Score Card developed:

		Group	Company	Asset	Region	
	Strategy	Statement, Description				
a a	Organization	Structure, Countries,	Entity	Location, Age, Size, Type		
Profile	Reporting	Period, Process, Assurance,	Assurance			
	Governance	Membership, Commitments, Engagement,	Commitment		Policy, Legislation	
ent	economic	Approach				
Management	environmental	Approach				
Man	social	Approach				
	Economy	Direct value, Indirect impact		Direct value	Indirect impact, <i>Market</i>	
9	Environment	Energy, Water, Emissions, Land		Energy, Water, Emissions, Land	Climate, Transport	
Performance	Labor Practices	Education	Education		Employment, Education	
Perfo	Human Rights	Investment, Corruption	Investment, Corruption		Security	
	Society	Community		Community	Health	
	Product Responsibility	Labeling		Labeling, Operation		
			s-i-r-e Sustaina	bility Scorecard		

Table: The s-i-r-e Sustainability Scorecard concentrates on a short-list of disclosure aspects for a minimal sustainability report on application level B of the GRI sector supplement CRESS (complimentary s-i-r-e aspects printed in italic).





### Since our Round Table

- Work has concentrated on selection of criteria for the Scorecard
- All partners to the project invited to contribute
- Project partners increased to 40+
- All agreed to contribute data...
- So
- The Scorecard ...





### To date

- Partners were invited to submit what data they routinely collect by the end of May
- Analysis is in progress
- But
- Already clear that
  - The quality/quantity of data is extremely variable and limited in most cases
  - This presents a challenge for analysis
  - Sustainability data will be correlated with economic and social data to reveal which sustainability factors appear to be connected to financial performance
  - Recognise that some indicators may not impact financial performance but have importance for other reasons

Watch this Space ...



