



Investment appraisals – allowing for density metrics

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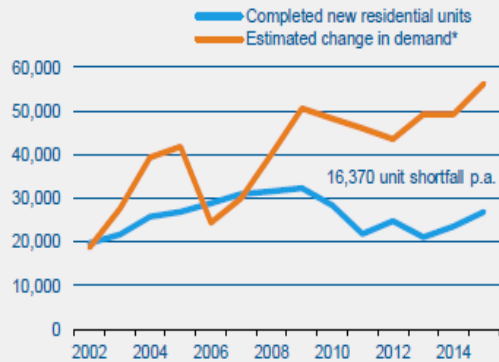
26th October 2016

Mega trends: Urbanisation

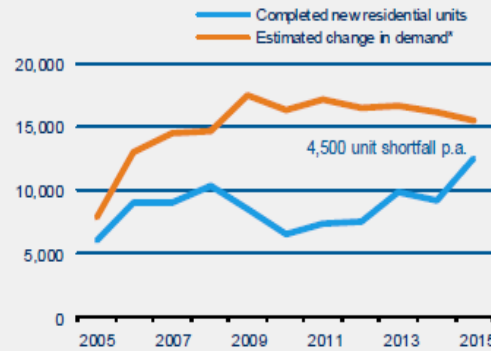
Supply of new housing is not keeping up with population growth

2

London



Stockholm



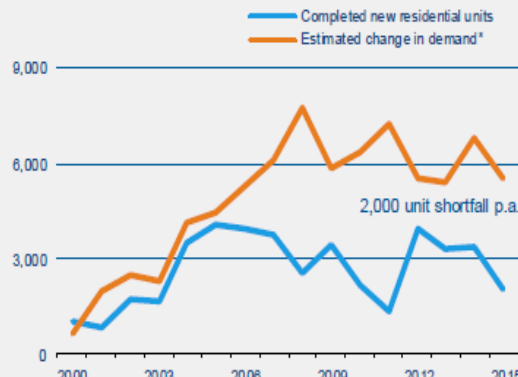
Frankfurt



Copenhagen



Oslo



Berlin

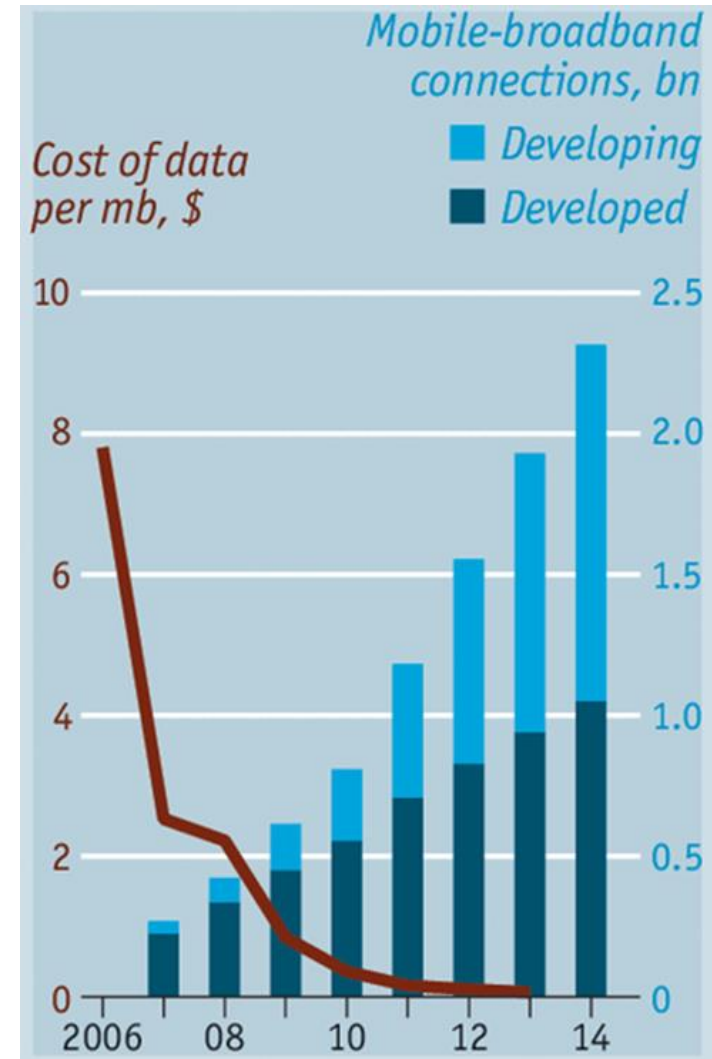


Consistent trend throughout European cities

Mega trends: Globalisation

3

The cost of delivering one megabyte wirelessly has dropped from \$8 to a few cents



Densification: what does this mean for real estate investors?

4



Which cities advocate 'good density' practices?

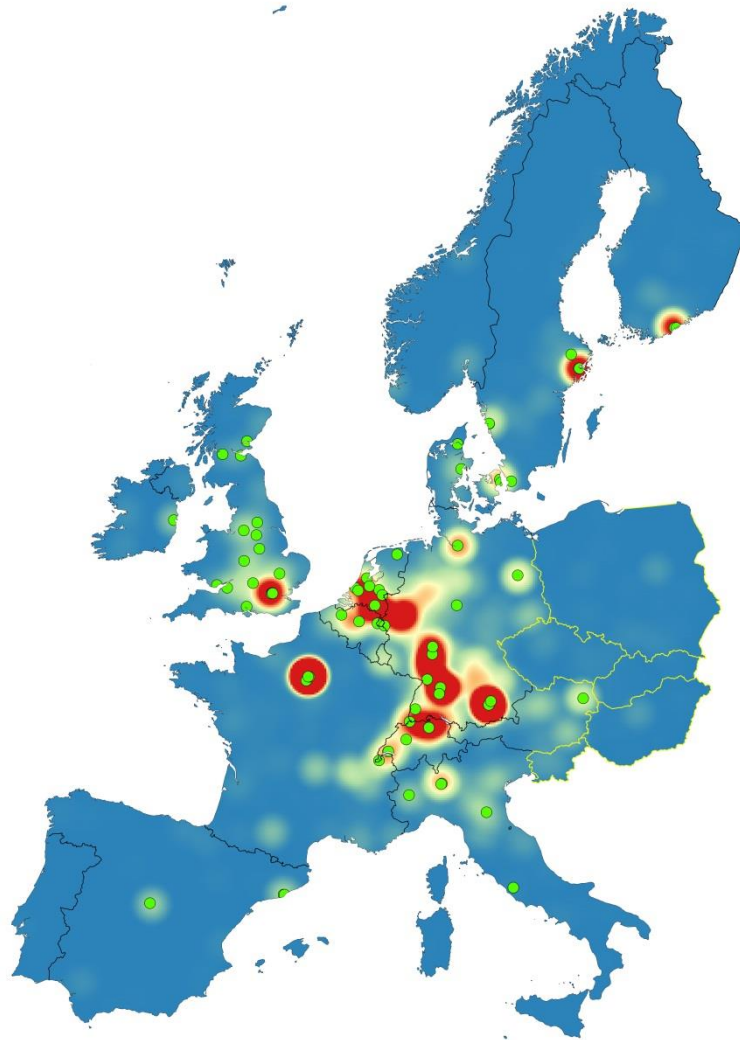
Good Density: Innovation



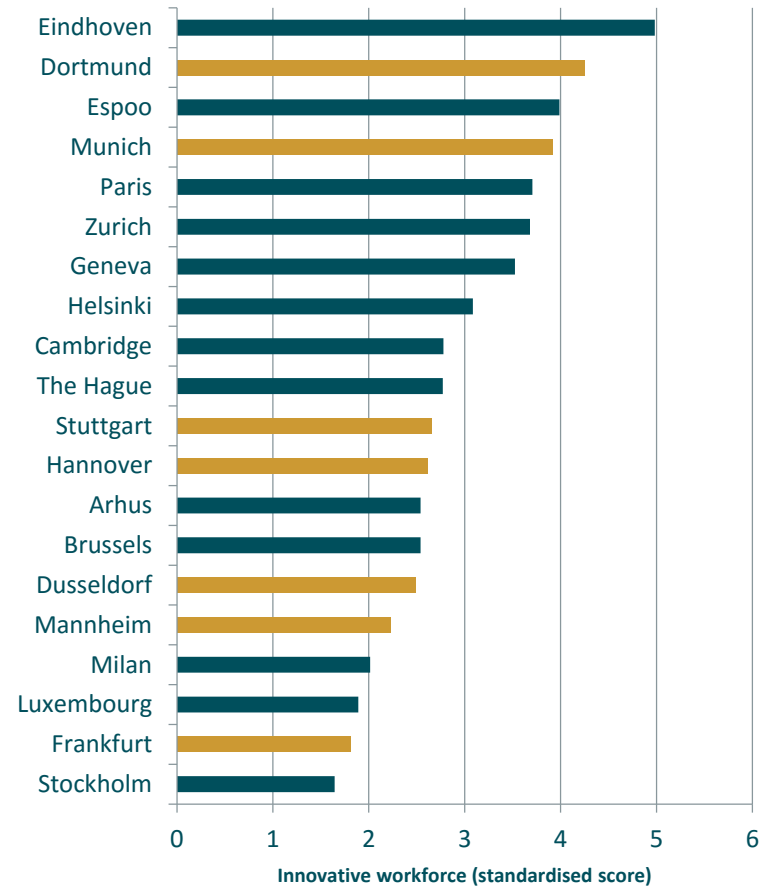
Good density: Innovation

Cities that capture growth from innovation

6

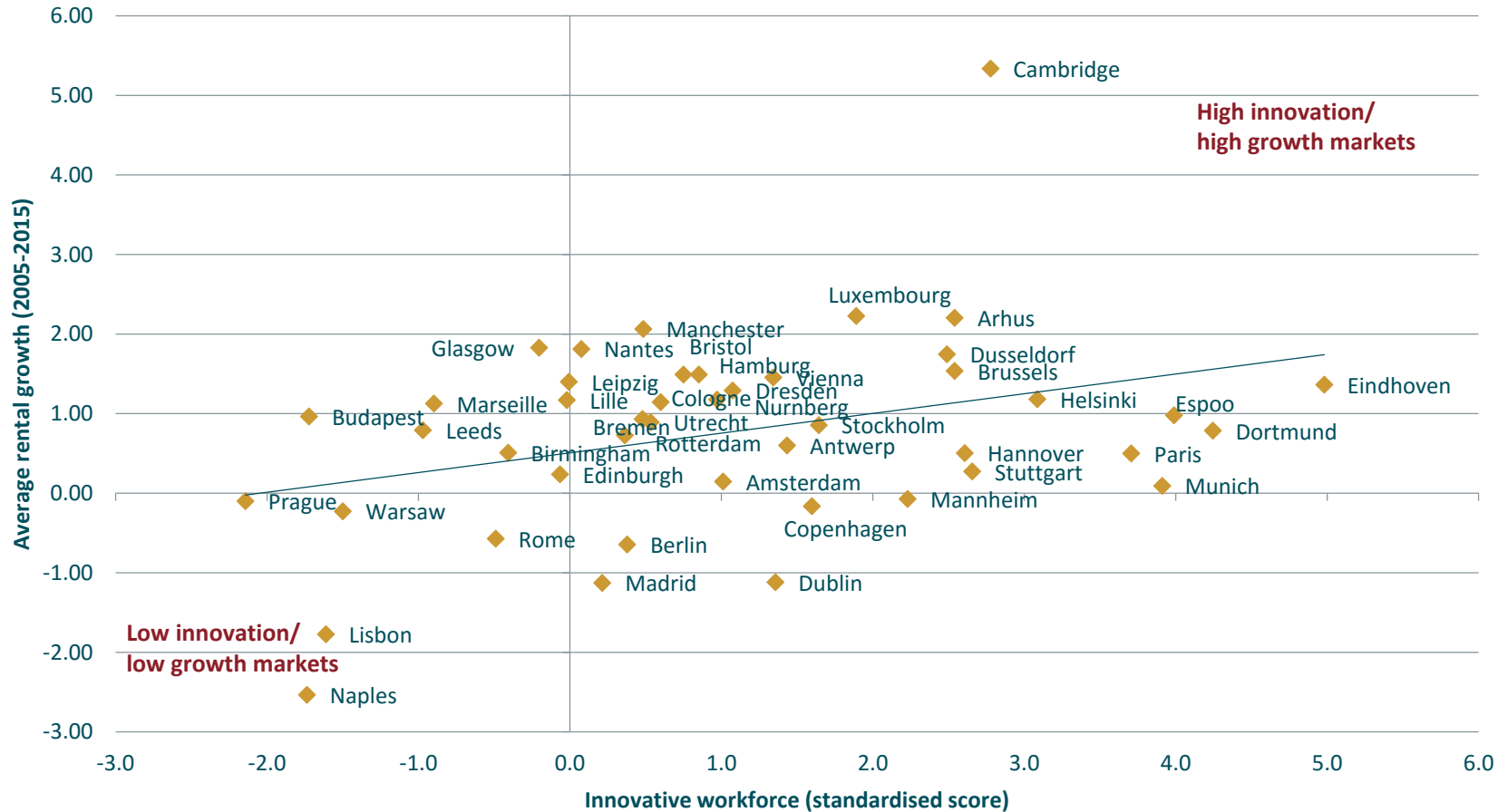


INNOVATIVE CITIES RANKING – TOP 20



Rental growth vs innovative workforce

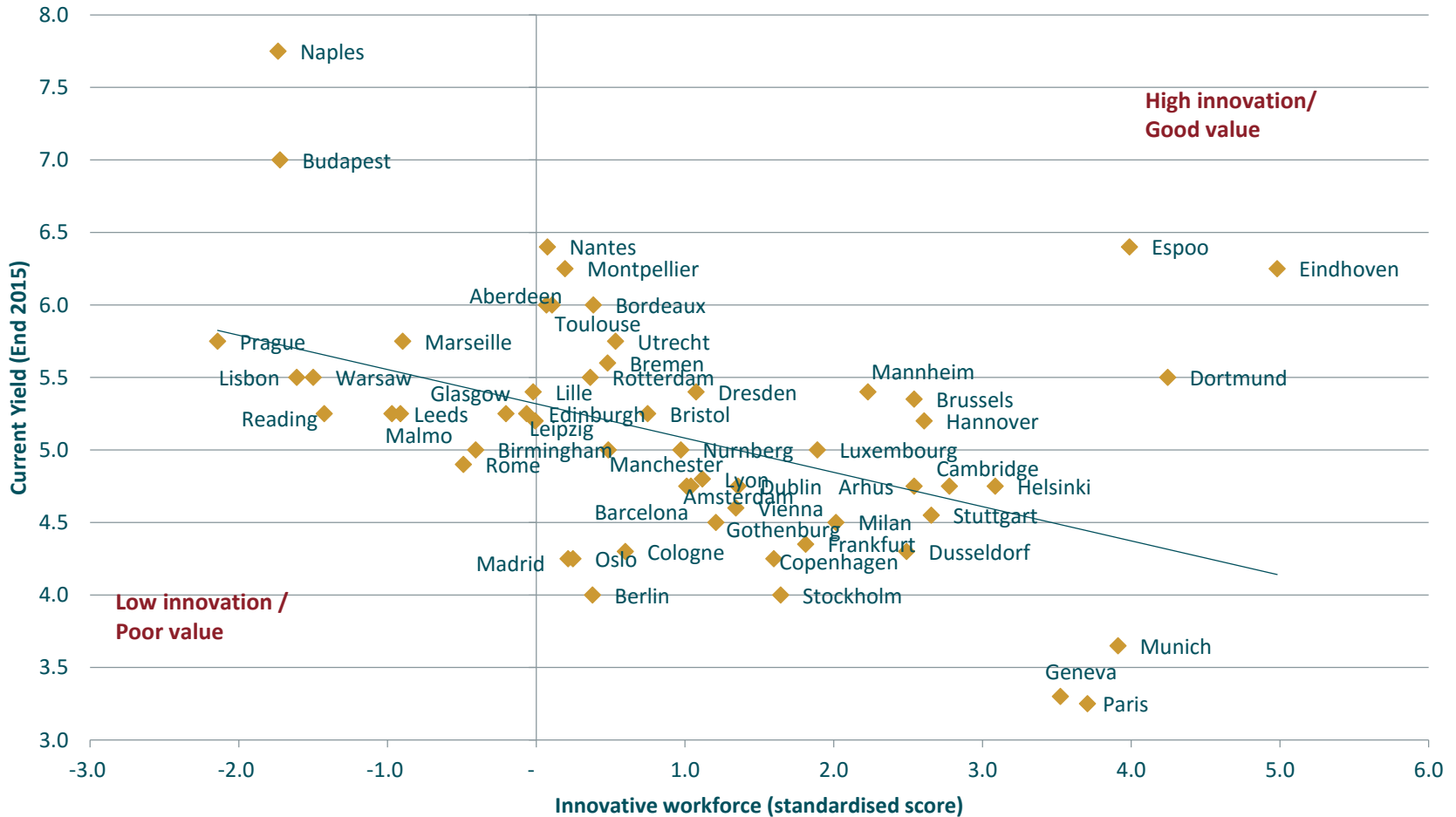
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Yield vs innovative workforce

Investors are pricing in rental growth expectations

8





Good Density: Connectivity



Good density: Connectivity

Cities that capture growth from urban mobility

10

CONNECTIVITY SCORE MAP: 64 CITIES STUDIED



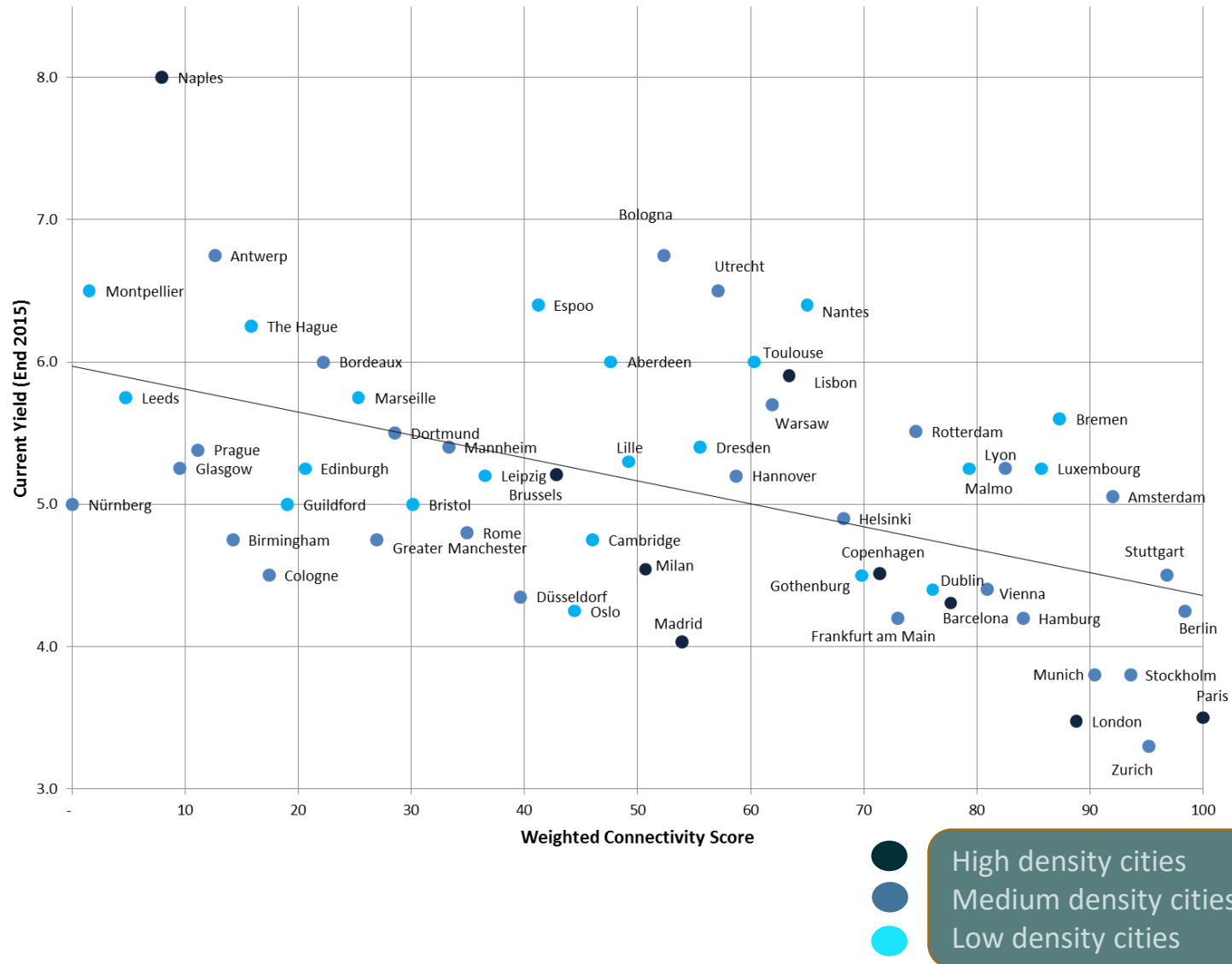
The darker the colour the higher the connectivity score

CONNECTIVITY RANKING – TOP 20

CITY	RANK
Paris	1
Berlin	2
Stuttgart	3
Zurich	4
Stockholm	5
Amsterdam	6
Munich	7
London	8
Bremen	9
Luxembourg	10
Hamburg	11
Lyon	12
Vienna	13
Malmo	14
Barcelona	15
Dublin	16
Rotterdam	17
Frankfurt am Main	18
Copenhagen	19
Gothenburg	20

Identifying value beyond traditional gateway markets

11



Connectivity ranking metrics

12

Cities with enabler & effect scores > 50 more likely to provide sustainable property fundamentals

Enablers

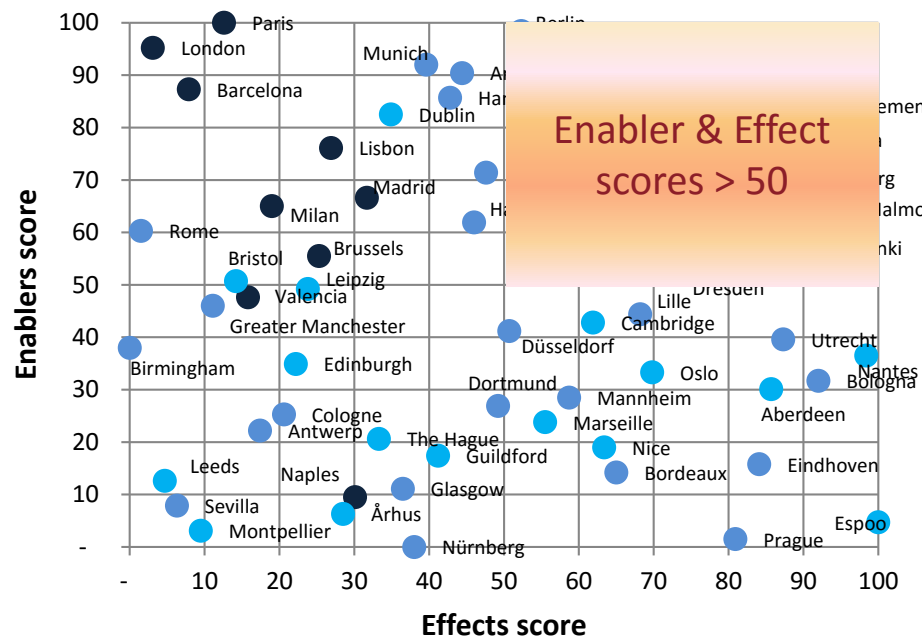
- Wi-fi speed
- Free hotspots
- % of journeys to work using green modes
- Length of dedicated cycle paths
- Transit web apps
- Urban mobility strategy
- Infrastructure spend
- Electric vehicle chargers
- Car sharing schemes

Effects

- Affordability
- Transport emissions
- Passenger satisfaction
- Awards
- Public transport speed
- Commute time to work
- Hours spent in traffic
- Safety & security

- High density cities score relatively higher on Enablers
- Low density cities score relatively higher on Effects

ENABLERS VS EFFECTS SCORES



- High density cities
- Medium density cities
- Low density cities

Investment appraisals

Allowing for density metrics



Allowing for density metrics

INVESTMENT COMMITTEE PAPERS

Deal XYZ

Q2'16 Fund Specific Model Portfolio: Alternative Scenario

[illegible]

PRT Forecasts vs. FM Appraisal Assumptions

Nominal Rental Growth (%)		YR1	YR2	YR3	YR4	YR5	LR
City XYZ	PRT Q2	XX	XX	XX	XX	XX	XX
	FM	XX	XX	XX	XX	XX	XX
Prime Yields (%)					Exit	SR	LR
City XYZ	PRT/JLL Q2	XX				XX	XX
	FM	XX				XX	XX

Relative Fund Weightings

Q2 2016 Strategy	Before Acquisition %	After Acquisition %	PRT Target %
Offices	XX	XX	
Offices Country	XX	XX	XX
Country	XX	XX	

Density metrics: percentile rankings

City XYZ	
Innovation	XX
Connectivity	XX

Source: M&G Real Estate Q216, Note: In Other includes Poland and Czech Republic



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