– REAL ESTATE IN THE REAL ECONOMY –

2016

Supporting growth, jobs and sustainability

Real estate, as a general term, describes the built environment, which plays a vital role in every aspect of the European economy, society and environment. Businesses and society can't function without the services of commercial property, including the provision of offices, shops, factories, housing and many other forms of real estate. The commercial property sector delivers and manages the infrastructure needed for entrepreneurship to thrive. It is therefore a fundamental source of employment and economic growth, and a major contributor in addressing two critical challenges of our time: providing liveable and functioning cities for a growing urban population and reducing the environmental footprint of the built environment.

The European Public Real Estate Association (EPRA) and the European Association for Investors in Non-listed Real Estate Vehicles (INREV) represent the full spectrum of the European property investment industry. EPRA and INREV have commissioned this research which evaluates the role and importance of commercial real estate in the European economy. Details of the sources and methodologies used to derive the information are presented at the end of this report.

The efficiency of the process through which the European real estate industry invests, develops, supports and maintains the built environment, and services its clients, is of crucial importance to policy makers. Although there are many factors that influence the well-being of European citizens and the European economy, a performing real estate sector provides the basic platform for all these other factors to deliver their full potential, and for the European economy to thrive and remain competitive.

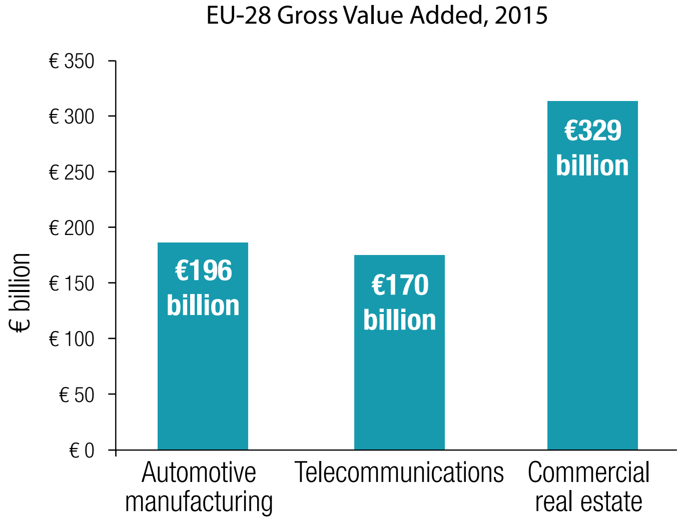
1. Contributing to the economy and supporting jobs

The commercial property industry directly contributed EUR 329 billion to the European economy in 2015, representing about 2.5% of the total economy and comparable to the combined size of the European automotive industry and telecommunications sector. It employs 3.7 million people, which is not only more than the auto manufacturing industry and the telecommunications sectors combined, but also greater than banking.

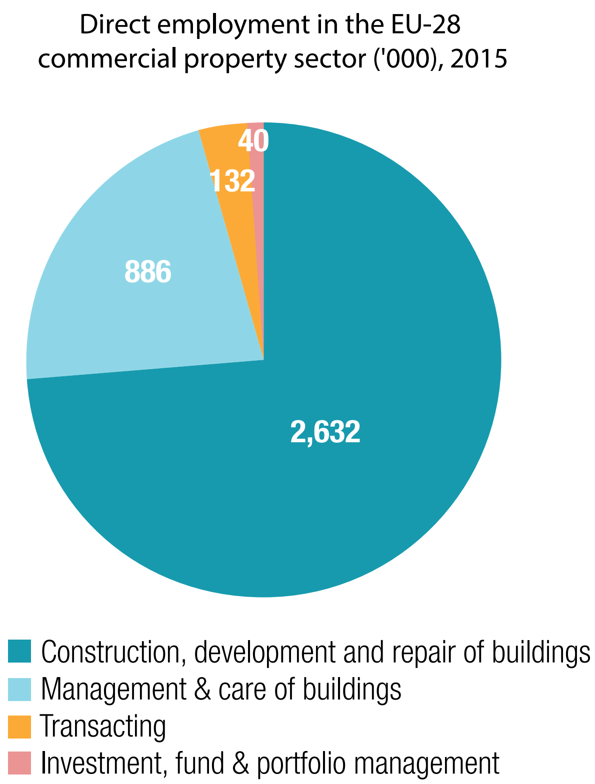
The commercial property industry's economic contribution continued to grow in 2015. Employment, however, edged down slightly because of a decline in construction and development.

Most activity in the commercial property sector is through the development, refurbishment and repair of buildings. The upkeep, management and care of commercial buildings is also a sizeable activity, undertaken either directly by property owners or on their behalf by a growing number of specialist contractors. All of these activities are an essential part of maintaining and improving the quality of the accommodation services provided to businesses.

Investment, fund and portfolio management are small but disproportionately high value-added activities, contributing 6.5 times more per worker than the overall European average value-added per worker.



Source: PMRECON estimates using Eurostat data

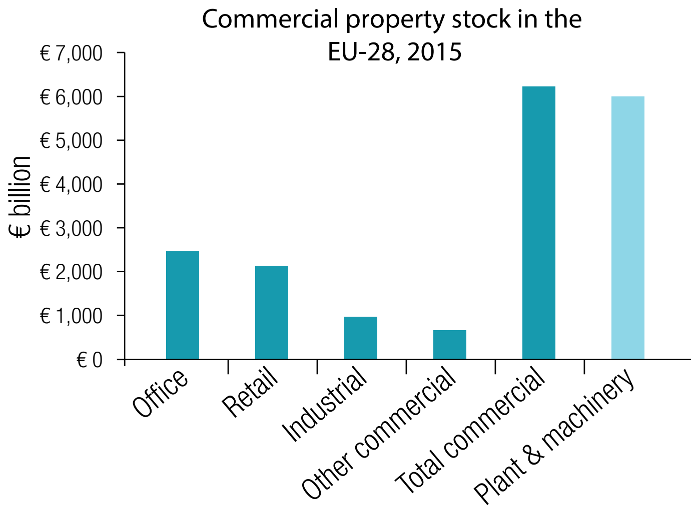


Source: PMRECON estimates using Eurostat data

The ability to lease rather than own premises offers flexibility to businesses, including SMEs. Around 40% of all European commercial property is rented office space, allowing companies to channel more of their capital into growing their businesses.

2. Commercial real estate – a significant role in business, industry and social life

Commercial property, other than residential, encompasses shops and retail outlets, offices, warehousing and light industrial premises, as well as hotels, leisure facilities and some other non-residential buildings. New forms of commercial property are continuously emerging. It plays a vital role in Europe's business, industry and social life. Its market value in 2015 was approximately EUR 6.2 trillion. This is greater than the value of the plant, machinery and equipment used by Europe's businesses and manufacturers. Offices are the largest property type, although retail is also substantial. The total value of residential, at EUR 25.5 trillion, however far exceeds other property sectors.



Source: PMRECON estimates using Eurostat, ECB, OECD and national statistical office National Accounts data

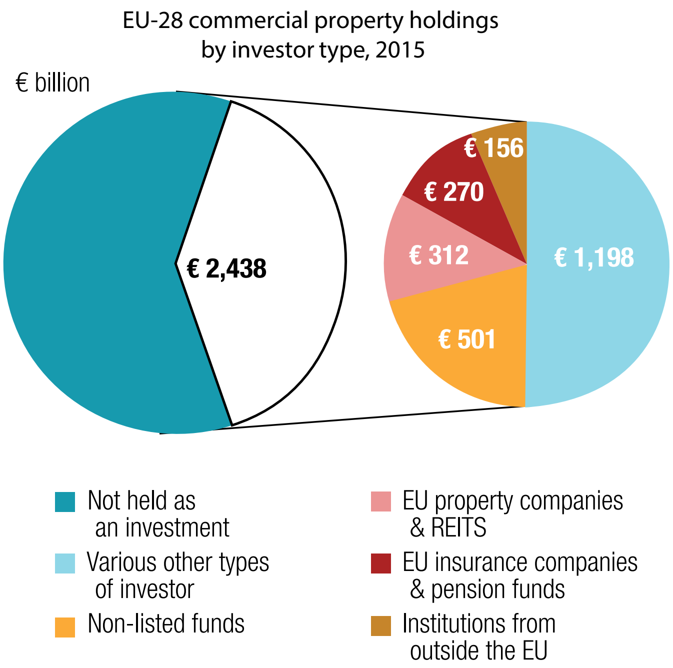
3. Investment and management of the built environment – non-listed funds and listed companies at the forefront

Around 40% of all commercial property – with a total market value of over EUR 2.5 trillion – is held as an investment.

Businesses prefer the flexibility of renting and are reluctant to commit the capital and management time required of owner-occupation. The commercial property industry meets this need by investing in commercial property and providing accommodation services to these businesses.

Non-listed funds, accounting for a fifth of total investment property, are the biggest single owners, while the directly owned share of traditional investors (insurance companies and pension funds) has been declining over time.

Investment, however, is becoming more global. The amount of commercial property held by non-EU institutions, including sovereign wealth funds, is estimated to be EUR 156 billion; this is twice the value in 2011. Global investment is becoming an increasingly important source of capital in the EU commercial property market. Including other types of investor in addition to institutions, those from outside the EU now account for nearly a tenth of invested commercial property.



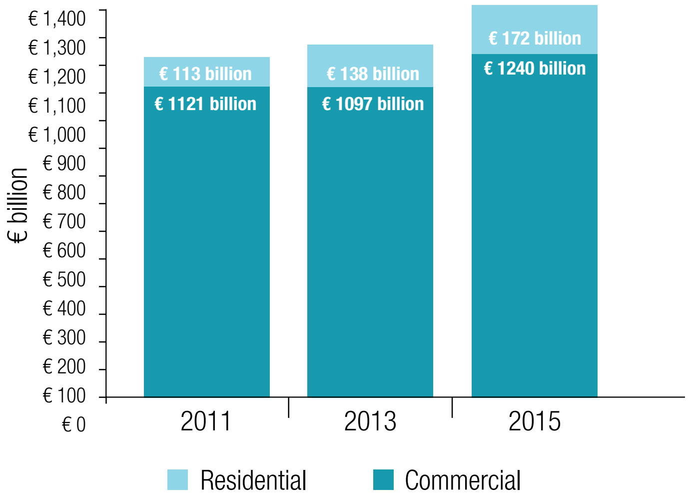
Source: PMRECON estimates using data from Eurostat, ECB, EPRA, INREV, PFR and RCA

4. An industry increasingly providing homes

Residential represents a small but growing proportion of large investors' property holdings. The amount is estimated to have grown to EUR 172 billion in 2015, an increase of over 50% since 2011; houses, apartments and student accommodation now represent 12% of large investors' portfolios, compared to 9% in 2011.

While growing, this is still tiny by comparison to the total value of residential in the EU of approximately EUR 25.5 trillion and to the amount which is privately-rented.

Large EU-27 / EU-28 investors' portfolios



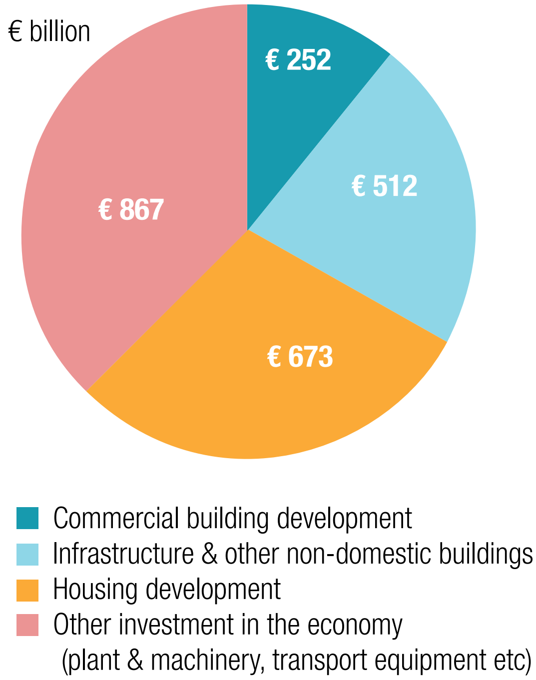
Source: PMRECON estimates using data from Eurostat, ECB, EPRA, INREV, PFR and RCA

5. Investment - improving the built environment

Annual investment in new commercial property buildings and the refurbishment and development of existing buildings has recently been running at around EUR 252 billion. Although recovering moderately over the last 2 years, the volume is still much lower than 10 years ago and correspondingly accounts for a lower share of total spending on investment in the EU. This highlights how sensitive commercial property development – and, as already illustrated, jobs in the commercial real estate industry - are to the strength of the EU economy. Even so, in representing 10% of total investment in the economy, investment in commercial buildings is equivalent to the GDP of Denmark.

Investment in housing, other buildings and infrastructure is also substantial, totaling EUR 1.2 trillion, and when included with commercial property, represents almost two-thirds of capital investment in the European economy.

Investment in the EU-28 economy, 2015
(€ billion gross fixed capital formation)



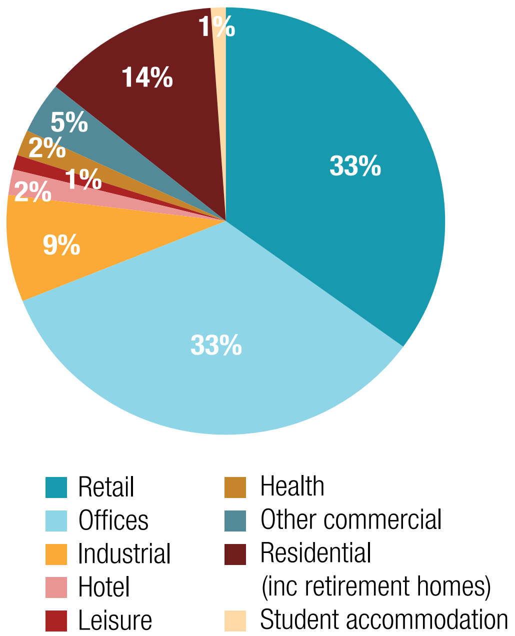
Source: PMRECON estimates using Eurostat data

6. Providing the capital, ownership and management behind a wide spectrum of business and social activities and housing

The traditional retail and office sectors continue to dominate investors' portfolios but their share has been declining over time. In responding to new business, social and public needs, new types of property are increasingly populating investors' portfolios. "Alternative" property sectors (excluding residential and student accommodation) now account for 10% of portfolios, a rise of 2 percentage points since 2013. Notably, healthcare and education facilities are becoming more prominent in portfolios, albeit from a low base.

The long-standing industrial sector has recently seen a revival, driven by the growth in logistics and home delivery. Residential, however, has seen the largest increase this decade.

Portfolio structures (INREV and EPRA portfolios), 2015



Source: PMRECON estimates using EPRA and INREV data

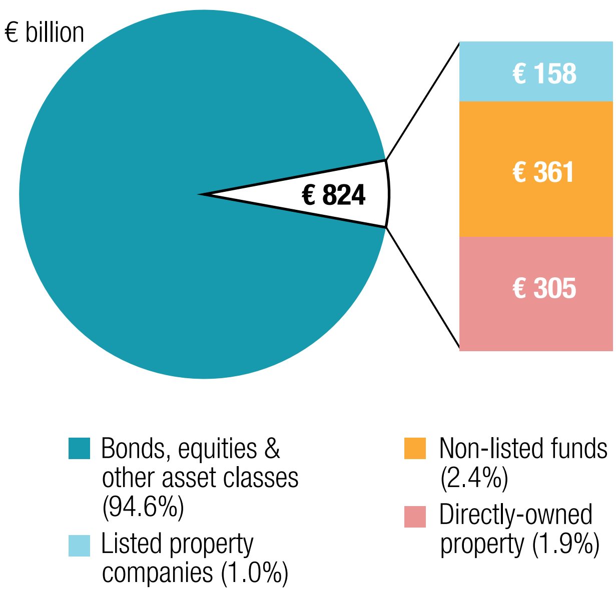
7. An important source of income for European savers and pensioners

The long-term cash flows generated from property investment provide an important source of diversified income in the portfolios of European savers and pensioners. Property in its various forms accounts for EUR 824 billion of European pension funds and insurance companies' investments. This represents an allocation of nearly 5.5%. Having declined during the early 2010s, property's share has stabilised over the last 2 years, helped by a recovery in property prices and, in some countries, by investors increasing their allocations to property.

Non-listed funds now represent the most popular route through which institutional investors get their exposure to property. This shift has been driven by smaller investors new to property (who are unable to afford their own buildings) and by increased cross-border allocations.

Pension funds' and insurance companies' exposures to buildings is effectively higher than portrayed because property companies, REITs and unlisted funds often use debt to boost the amount of property they hold. European pension funds' and insurance companies' "beneficial" interest in commercial and residential property is now over EUR 1 trillion.

EU-28 institutional allocations, 2015



Source: PMRECON estimates using Eurostat, ECB, EPRA, INREV, OECD and other data

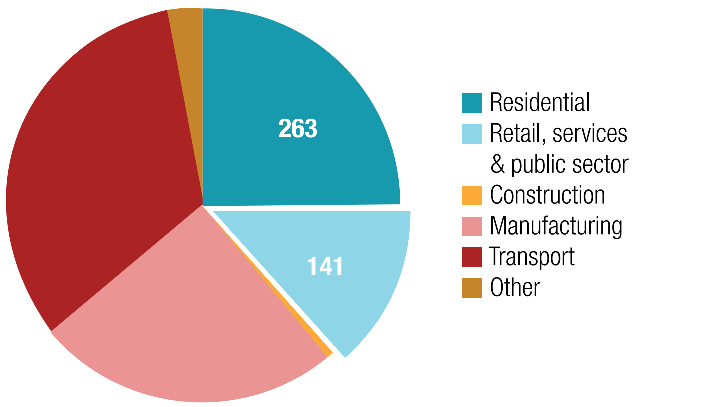
8. Contributing towards a low carbon economy

Buildings contribute significantly to energy use and greenhouse gas emissions. They are, however, declining at a faster rate than other users such as transport and manufacturing. This is partly because of recent milder winters. Directly and indirectly (i.e. taking into the amount involved in generating the energy), buildings (excluding factories) now account for about 38% of the EU's energy consumption compared to about 40% 2 years ago. They directly and indirectly account for about 29% of its emissions compared to 31% before. Residential housing accounts for the vast majority of this with non-residential buildings – including the public sector – accounting for 13% of the EU's energy consumption and greenhouse gas emissions. Residential and, to a lesser extent, commercial and public sector buildings also represent one of the most important untapped potential sources of energy savings.

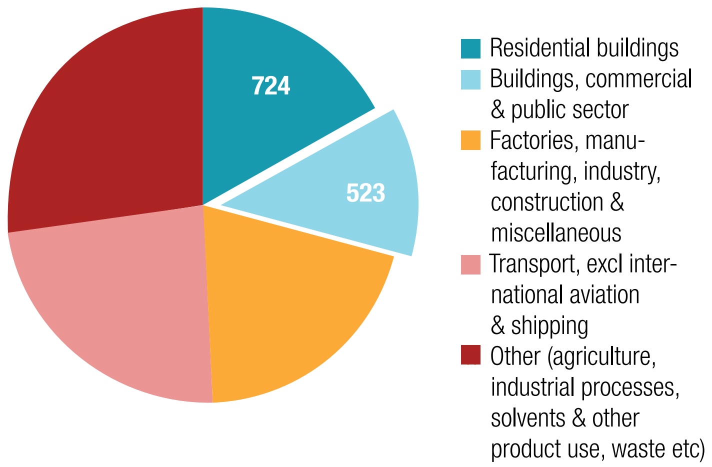
The cost over the decade of meeting this untapped potential for residential and non-residential buildings has been estimated at almost EUR 60 billion per year – a big commitment which emphasizes the importance of Europe's commercial property sector in delivering these important energy efficiency improvements.

Listed property companies and non-listed funds are constantly evaluating and improving their sustainability record through their participation in the Global Real Estate Sustainability Benchmark (GRESB) annual survey.

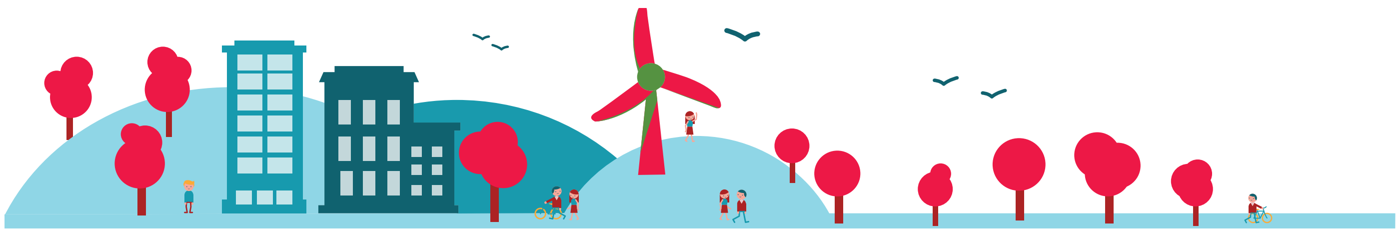
EU-28 final energy consumption, 2014
(million tonnes oil equivalent)



EU-28 direct & indirect emissions of greenhouse gases, 2014
(million tonnes CO2 equivalent)



Source: PMRECON estimates using EEA and Eurostat data



This report was sponsored by EPRA and INREV and prepared by Paul Mitchell Real Estate Consultancy Ltd

About EPRA
The European Public Real Estate Association (EPRA) is the voice of the publicly traded European real estate sector. With more than 220 members, covering the whole spectrum of the listed real estate industry, EPRA represents over EUR 350 billion of real estate assets and 90% of the market capitalisation of the FTSE EPRA/NAREIT Europe Index. Through the provision of better information to investors and stakeholders, active involvement in the public and political debate, improvement of the general operating environment, promotion of best practices and the cohesion and strengthening of the industry, EPRA works to encourage greater investment in listed real estate companies in Europe.

About INREV
INREV is the European Association for Investors in Non-listed Real Estate Vehicles. Since its launch in 2003, it has grown to over 386 members from more than 27 different countries. INREV's aim is to improve the accessibility of non-listed real estate funds for institutional investors by promoting greater transparency, professionalism and standards of best practice. INREV is led by institutional investors and supported by other market participants such as fund managers, investment banks, academics, lawyers and other advisors. As a pan-European body, INREV represents a unique platform for sharing knowledge of the non-listed real estate investment industry.

Sources and Methodologies

All estimates relate to the 28 countries of the European Union and are based on data available up to 20 May 2015.

1. Contributing to the economy and supporting jobs
Paul Mitchell Real Estate Consultancy (PMRECON) estimates. Approach is to take Eurostat estimates of Gross Value Added (GVA) and employment for the Construction, Real Estate Activities (excluding imputed income from owner-occupiers) and other sectors from its National Accounts and Structural Business Statistics series and apportion shares to commercial property based on various criteria (for example, commercial real estate's share of construction output, of the total amount of rented property, and its share of total property transactions etc); value added and employment in "investment, fund & portfolio management" is calculated directly (following principles consistent with national accounts methodology) using information from a sample of fund managers and listed property companies, grossed-up on the basis of gross asset value. Overall, commercial property is estimated to account for 18% of total EU Construction (NACE F) GVA and 29% of Real Estate Activities' (NACE L less NACE L68A) GVA of €711bn and €597bn, respectively, in 2015.

2. Commercial real estate - a significant role in business, industry and social life
Commercial and residential property are PMRECON estimates. The calculations use Eurostat, ECB, OECD and national statistical office national accounts balance sheet data relating to the value of the stock of "fixed assets". For residential in non-Eurozone countries, the official data on dwellings for 2014 or 2013 is updated to 2015 using house price inflation and an estimate of stock growth. For commercial, the official data on "non-residential buildings" includes non-commercial buildings and is apportioned to commercial property by PMRECON; it is estimated that approximately 64% of the value of these "non-residential buildings" are commercial. For non-Eurozone countries, 2014 or 2013 values are updated to 2015 using IPD 2015 capital growth and an estimate of floorspace stock growth.

The comparative Plant and Machinery estimate is derived on a similar basis from Eurostat, ECB, OECD and national statistical office national balance sheet data, updated by estimation, where necessary, to 2015.

3. Investment & management of the built environment - non-listed funds & listed companies at the forefront
Insurance companies and pension funds are estimates from Eurostat, the ECB and OECD (updated by PMRECON to 2015 where only 2014 or 2013 data is available) of these institutions' investments in "land & buildings" or "fixed assets" (almost all of which are buildings). Non-listed funds are PMRECON estimates, based on data gratefully provided by Property Funds Research, of the gross asset value of EU domiciled funds' monies invested in EU28 countries. EU-domiciled listed property companies & REITs is based on estimates of EPRA members' portfolio values (EU28 only and excluding residential) grossed-up on the basis of EPRA's coverage of the total listed property investment companies market (i.e. excluding "Real Estate Services", Construction, and "Building Materials & Fixtures"). Non-EU institutional investment is a PMRECON estimate partly based on data of net investment flows gratefully provided by Real Capital Analytics (RCA).
Any residential exposures are excluded from the estimate of commercial property.

4. An industry increasingly providing homes
PMRECON estimates derived using the same approach for commercial property in Section 3.

5. Investment - improving the built environment
PMRECON estimates derived from 2015 Eurostat data on "gross fixed capital formation" (GFCF, commonly known as investment). Housing and other investment are directly from Eurostat. Commercial property is derived from Eurostat's estimate of "non-residential buildings & other structures"; additional information from other sources has been used by PMRECON to get an indication of how much of this GFCF is buildings and how much of these buildings are commercial; in this respect, approximately 33% of GFCF in "non-residential buildings & other structures" is estimated to be in commercial buildings, the remainder in infrastructure and other non-residential buildings such as public hospitals, universities, museums, and manufacturing etc.
The total GFCF ("Investment in the economy") figure excludes "Cultivated biological resources" and "Intellectual property products".

INREV

EPRA
EUROPEAN PUBLIC
REAL ESTATE ASSOCIATION

6. Providing the capital, ownership & management behind a wide spectrum of business & social activities and housing

Derived by PMRECON from the gross asset values in the INREV vehicle database and from EPRA estimates of the listed sector's property portfolio values (EU28 only).

7. An important source of income for EU savers & pensioners

Insurance company and pension fund investments in directly-owned property are from section 3 and for "equities, bonds & other asset classes" and total investments from the institutional balance sheets data of Eurostat, the ECB and OECD, updated to 2015 where appropriate by PMRECON. Listed property company exposures are PMRECON estimates based on the product of (a) institutions' allocations to equities (including those held indirectly in mutual funds etc) and (b) of listed property's share of equity portfolios (in aggregate, estimated respectively to be 26% and 3%). The exposure to non-listed real estate is a PMRECON net asset value (NAV) estimate using information from INREV Universe studies, investment consultants & other information.

8. Working towards a low carbon economy

Energy consumption from Eurostat, with the published sectors re-categorised and re-aggregated by PMRECON. Based on European Energy Authority (EEA) data. Direct user emissions for 2014 derived from the EEA report Approximated EU GHG inventory: Proxy GHG emission estimates for 2014. Indirect end-user emissions estimated by Paul Mitchell Real Estate Consultancy Ltd by pro-rating the 2014 indirect emissions total (as shown in its report Approximated EU GHG inventory: Proxy GHG emission estimates for 2014); this pro-rating is according to the EEA's most recent 2010 indirect end-user emissions data and is scaled to be consistent with the total emissions from energy generation in 2014.