

WHY URBAN CONNECTIVITY COUNTS FOR INVESTORS



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Connectivity is the smart physical and digital infrastructure that make our cities tick and helps their economies to grow. It keeps the wheels of our transport systems turning smoothly. And it facilitates interactions between residents, visitors, businesses and public and private institutions.

At M&G Real Estate, we believe that well-connected cities benefit property fundamentals by making occupiers more likely to want to locate there, boosting rental growth potential. Our research suggests that a stronger understanding of connectivity can help investors to identify relative-value opportunities and to more effectively future-proof their investments.

Urban connectivity and ‘good’ urban density

The density of the built environment will need to increase in many cities to sustainably accommodate urban population growth. The Urban Land Institute (ULI) previously commissioned two reports exploring the meaning of “density” and how it has been delivered in different cities globally.

Its latest report was launched in June 2018 and explores revised characteristics of the urban form that influence good density. The research was supported by a steering group consisting of global real estate investors including M&G Real Estate. The ULI found that dense development creates opportunities to improve the economic, social and environmental performance of cities, but also creates risks.

‘Good’ urban density drivers

On the positive side, urban density can facilitate the more efficient provision of public services, reduce the need for travel and increase opportunities for making journeys on foot. These characteristics are included in ULI’s definition of ‘good density’. On the negative side, unintended consequences can include

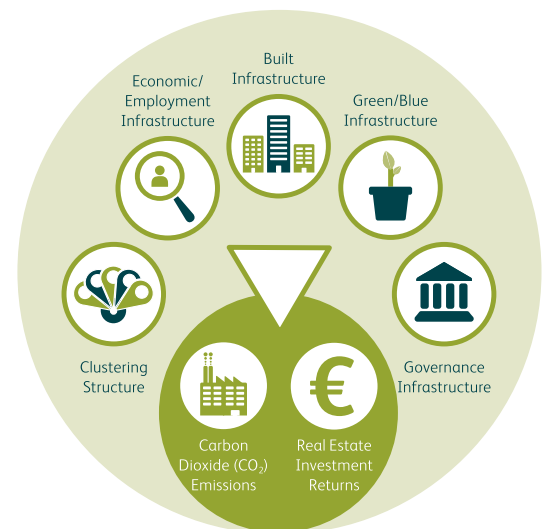
congestion and loss of green space, if the need to efficiently accommodate more people is not matched by careful planning and management. Conversely, the latter characteristics are associated with ULI’s definition of ‘bad density’.

High density cities with mature connectivity infrastructure are a proxy for highly liquid real estate markets, such as London, Paris and Madrid, but are also often associated with high transportation costs, pollution and congestion. This study aims to identify cities beyond these traditional gateway markets that offer relatively better value alongside strong ‘good’ connectivity characteristics, supporting real estate returns potential.

Ranking physical and digital urban infrastructure across Europe’s key cities

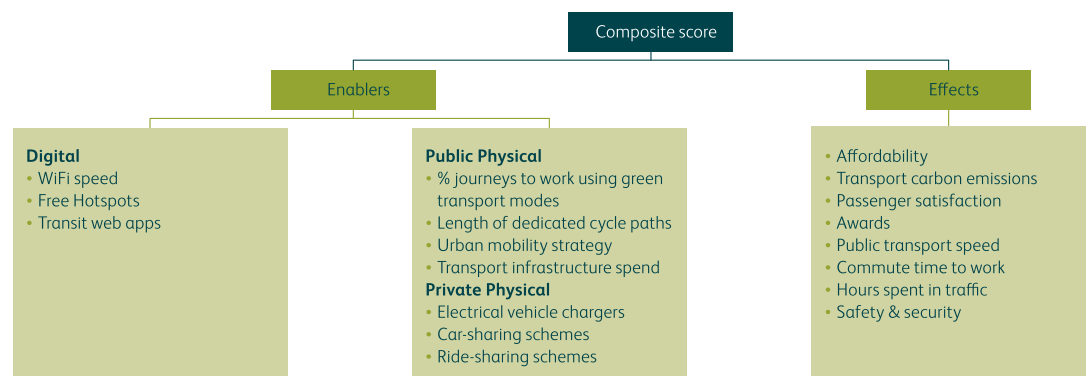
At M&G Real Estate, we have rated the physical and digital urban transport infrastructure of 64 European cities across 18 indicators. The second edition of the M&G Urban Connectivity Ranking

GOOD URBAN DENSITY DRIVERS



Source: ULI 2018.

M&G EUROPEAN URBAN CONNECTIVITY RANKING COMPONENTS



Source: M&G Real Estate, April 2018.

(M&G UCR) has been refined and features the most comprehensive city comparison.

The M&G UCR reveals continued improvements in both physical and digital infrastructure, with a 6% increase in total weighted connectivity scores since the first edition. We then further split those scores into enablers (inputs) and effects (outputs). Enabler indicators measure connectivity maturity while effect indicators measure connectivity performance. The overall performance was driven by effect (+13% since 2016) followed by enabler (+1% since 2016) scores.

This highlights the continued efforts on behalf of city leaders to improve urban transport networks through smart densification, social inclusion and technology in order to attract and retain innovative businesses.

Paris and Berlin retain pole position

The top ten saw the fewest rank position movements since our first report. Paris and Berlin held their top positions, highlighting their already more advanced urban transport infrastructure provision relative to other cities. The group is also characterised by the prevalence of German cities (four out of ten), driven by RTPI app coverage (enabler score) and given these are some of the most affordable (effect score) cities in Europe.

Stockholm moved up the ranking by two places to reach third place, thanks to modest improvements across both enabler and effect scores, including Wi-Fi speed (+12% to 33Mbps), RTPI app coverage (City Mapper added since 2016) and urban transport speed (19 to 29km/hour).

Helsinki and Hamburg enter the top 10

Meanwhile, new entrants in the top 10 ranking include Helsinki and Hamburg. Hamburg's move two places up the ranking was driven by a mix of enabler and effect indicators. For example, Wi-Fi speed improved by 24% to 25Mbps and hours wasted commuting in traffic improved by 2% to 44 hours per annum.

Besides Helsinki, the top 10 cities moved by no more than three rank positions. Helsinki's climb by 11 positions was driven by an improvement in a number of enabler indicators: Wi-Fi speed (+33% to 27Mbps), RTPI app coverage (Whim added since 2016) and an increased share of trips completed using green transport modes (from 62% to 68%). The first two enabler indicators together account for a quarter of the rank weighting.

Leipzig and Espoo graduate to the middle tier, while Bremen drops

Cities ranking between 11 to 30 moved by a relatively larger number of positions compared to the top tier, ranging between -16 and +23. Notably, Cologne and Düsseldorf both climbed by 23 places, representing the best overall rank improvers since 2016. Cologne's ranking was boosted by a number of effect indicators, including affordability (the cost of a combined monthly ticket equal to €87) and commute time to work (average 50 minutes). Meanwhile, Düsseldorf's performance was driven by a number of enabler indicators: Wi-Fi speed (+45% to 29Mbps), RTPI app coverage (City Mapper added since 2016) and an improved offering of car-sharing schemes (Car2go added since 2016). New entrants dropping into this middle tier from the top group include Bremen, while climbers from the bottom group are Leipzig and Espoo.

Double-digit improvements from Birmingham and Edinburgh

Meanwhile, in positions 31 to 64, select cities in this group improved by double-digit rank positions albeit remaining in the same group, including Birmingham (+18) and Edinburgh (+17). However, many of them also moved down the rank by up to -23 positions, giving way to the biggest improvers in this group as highlighted above.

Enabling smooth urban transport

At 83%, Paris continues to offer the highest share of trips completed using green transport modes, which is one of the enabler metrics used in the study. With the €26 billion Grand Paris project due to deliver six new metro lines by 2030, we could see the share rise further in future years. Based on this indicator, Leeds and Helsinki are the biggest improvers with increases in share of green trips from 28% to 33% and from 61% to 68% respectively.

Since our last report, Leeds has supported bus passengers through improved quality bus corridors, developed City Connect – new high-quality cycling

CITY IN FOCUS: HELSINKI

Helsinki comes tenth in our ranking. Since the last edition of our report, the city government has rewritten legislation to bring the laws covering different modes of transport into harmony. This enabled the launch of the RTPI Whim app, which Helsinki residents use to travel across the city.

Whim mixes and matches a variety of participating public and private transport services. For example, Whim could suggest a bicycle from the city's bike-share scheme, followed by a train and then a taxi; or an on-demand bus ("hail" it on the app and it will collect you); or a one-way car-share to a tram and a rented electric bike. Once a route has been chosen, it can make all the bookings needed, as well as ensure that hire vehicles are available and public transport options are running on time. Costs are displayed for every option, identifying the trade-offs between speed, comfort and price.

CITY IN FOCUS: DÜSSELDORF

Düsseldorf is the capital of North Rhine Westphalia, the largest German federal state by inhabitants and economic power, and has advanced transport connectivity. For the enabler scores, measuring connectivity maturity, there were improvements in WiFi speed (up from 20 to 30 mbps), RTPI app coverage (up from 50% to 60% with City Mapper added since 2016) and higher infrastructure investment (100m more than in 2016). This coupled with affordable public transport makes for strong urban mobility, attracting people to the city. Greener transport has been improved with more electric car charging points and a new car-sharing scheme, Car2go joining Drive Now. The carbon emissions attributable to transport has, therefore, improved slightly. Urban transport speed has increased from 10km/hour to 19km/hour, while the hours wasted in traffic per annum has fallen from 50 to 33. The speed and breadth of transport infrastructure supports city economic productivity. This boosts demand for office space and rental growth prospects, underpinned by the presence of international businesses.

infrastructure – and invested in significant junction improvements. This highlights the importance of digital advancements in boosting the use of green transport modes.

Real-time transport (RTPI) apps are another key enabler of connectivity. Vienna, Montpellier, Seville, Edinburgh and Glasgow are now available on the Moovit app, while Copenhagen, Cologne, Düsseldorf and Stockholm are now available on City Mapper. The Whim app is now available in Helsinki and Espoo, as well as Birmingham and Antwerp, albeit on a pilot basis. Whim was highlighted in the first edition of our report for its unique feature of combining both private and public modes of transport on the same app, showing the fastest and cheapest route. Today, City Mapper also provides the same feature, suggesting Uber as a potential transport mode for the requested journey.

Connectivity can drive investment decisions – and returns

M&G Real Estate's research suggests that when determining where to invest, real estate investors should not only consider prospective returns driven by projected supply and demand fundamentals in their appraisals, but also factors related to whether a city exhibits good density characteristics, partly driven by connectivity.

We believe that demand for real estate space is higher in cities where efficient transport networks play a major role in enhancing economic growth. Paris and Berlin top the overall 2018 ranking, but second-tier cities such as Helsinki, Gothenburg and Malmo also achieve a healthy combination of enabler and effect scores, as well as offering investors relatively higher prime office yields above 4%. Among medium density cities with top quartile connectivity percentile scores (above 75), Amsterdam, Vienna and Düsseldorf offer the highest yields at 3.8%. Finally, among low density cities, Bremen and Helsinki achieve a top quartile connectivity score, with the former offering the most attractive yield at 4.7%.

Over the long term, good connectivity benefits property fundamentals by driving occupier demand, boosting rental growth potential, which in turn justifies a lower yield. M&G Real Estate has developed the necessary tools to identify such cities that offer the highest potential risk-adjusted returns, from a connectivity perspective, for the most attractive value.

