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MEGATREND: URBANISATION
RESHAPING GLOBAL INVESTMENT OPPORTUNITIES

THEMES

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Megatrend: Urbanisation

A global trend reshaping investment opportunities

Edison megatrends

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The long-term megatrend of increased urbanisation has been evident in almost every country in the world, particularly since the Industrial Revolution mechanised food production and increased the need for skilled labour in industry. This migration toward urban centres is creating substantial investment opportunities across multiple sectors. Cities, which currently generate over 80% of global GDP while occupying merely 2% of land mass, are set to accommodate an additional 2.5 billion inhabitants by 2050 (source: World Bank). This unprecedented urban expansion drives massive infrastructure requirements, technological advancement and environmental challenges.

The market opportunity

The transformation of urban environments is creating substantial investment opportunities across multiple sectors. Cities currently account for 70% of global greenhouse gas emissions and generate 720 billion tonnes of waste annually (source: World Bank), necessitating significant investment in environmental solutions. An infrastructure investment gap of US$3.8tn annually until 2030 has been identified to meet net zero goals, creating opportunities for private capital deployment. The smart city solutions market is expanding rapidly across 10,000 global cities, driven by the need for more efficient urban management systems.–

Three areas of investment focus

Three key sectors stand out for investment potential. Smart city technologies, incorporating internet of things (IoT), AI and data analytics, are transforming urban management capabilities. Infrastructure development, particularly in transport, energy and water systems, is supported by major government initiatives, including the EU Green Deal (€1.8tn) and the US's INVEST in America Act (US$715bn). Environmental services, spanning waste management, recycling and clean energy, are seeing increased demand as cities tackle sustainability challenges.

Listed companies providing exposure to the theme

Leading companies are emerging across these sectors. In smart city solutions, Smart City Solutions (€450m market capitalisation) and Teleste Corporation (€80m) are delivering innovative urban management systems. Infrastructure leaders include Morgan Sindall Group (£850m), Vinci (€60bn) and International Public Partnerships (£2.4bn). Environmental services are led by companies such as Renewi (£677m) and ADS-TEC Energy (US$715m), while energy storage solutions are provided by specialists, including SDCL Energy Efficiency Income Trust (£0.5bn) and Gresham House Energy Storage Fund (£288m).

Success in urban development investment requires careful evaluation of project execution capabilities and technology risks. Companies need strong balance sheets to manage large-scale project delivery and maintain flexibility in evolving regulatory environments. However, the combination of strong secular growth drivers, supportive government policies and increasing private sector participation suggests sustainable long-term investment opportunities across the urban development landscape.

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Urbanisation and its challenges

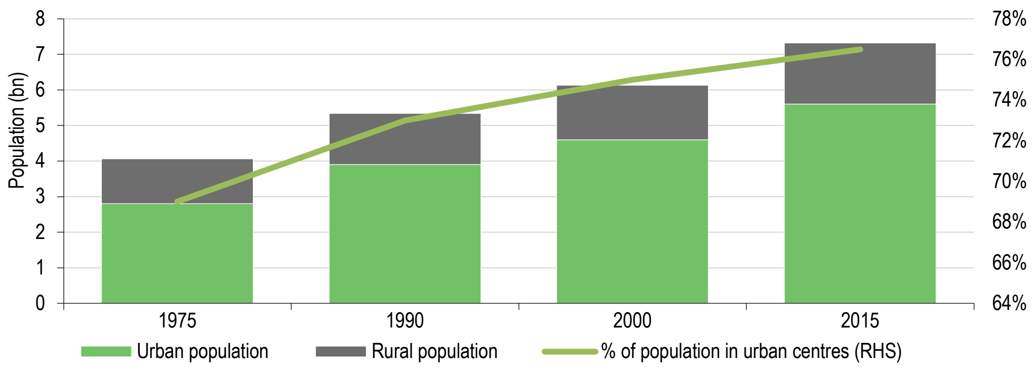
The scale of global urbanisation

Using the EU-agreed definition of 'Degree of Urbanisation', in 1975 approximately 69% of the population, or 2.8 billion people, lived in urban areas. This increased to 73% (3.9 billion people) by 1990 and to 75% (4.6 billion people) in 2000. By 2015, it was estimated that 76.5% of the global population, or 5.6 billion people, lived in urban areas.

The same definition of urbanisation suggests that the number of urban centres has increased from 6,900 in 1975 to more than 13,100 by 2015, with the population of these centres also growing significantly. Historically, while the global population has increased annually, it has increased faster in urban areas than in rural settings. Furthermore, in Europe and North America, the population grew at a slower rate than the land consumed to accommodate them, implying that more land was being consumed to host new citizens than in the past. The reverse is true in other regions, such as Asia and Africa.

In 2015, there were 467 urban centres with at least one million inhabitants and globally there were 29 megacities (settlements with over 10 million inhabitants). The European Commission estimates that, by 2030, there will be 662 cities with over one million people and 43 megacities. Much of this growth is likely to be driven by China, which is expected to host 220 cities with over a million inhabitants and 8 megacities by 2025.

Exhibit 1: Global urban and rural population



Source: European Commission

Challenges facing urbanisation

The urbanisation trend presents both opportunities and significant challenges. While there are many advantages in terms of economies of scale from the higher density of both population and infrastructure in an urbanised environment, these advantages can, and do have, many disadvantages. The key challenges include environmental degradation, housing provision, mobility and provision of services, urban health and ageing, and inequalities and social segregation.

Environmental degradation

The urban environment implies greater energy consumption with cities accounting for approximately 70% of global greenhouse gas emissions. They also generate over 720 billion tonnes of waste annually, with over 70% of this going to landfill or waste dumps (source: World Bank). This can lead to soil and water contamination, the production of further greenhouse gases and a potential threat to public health. Better solutions for waste management and recycling would appear to be an urgent and necessary requirement.

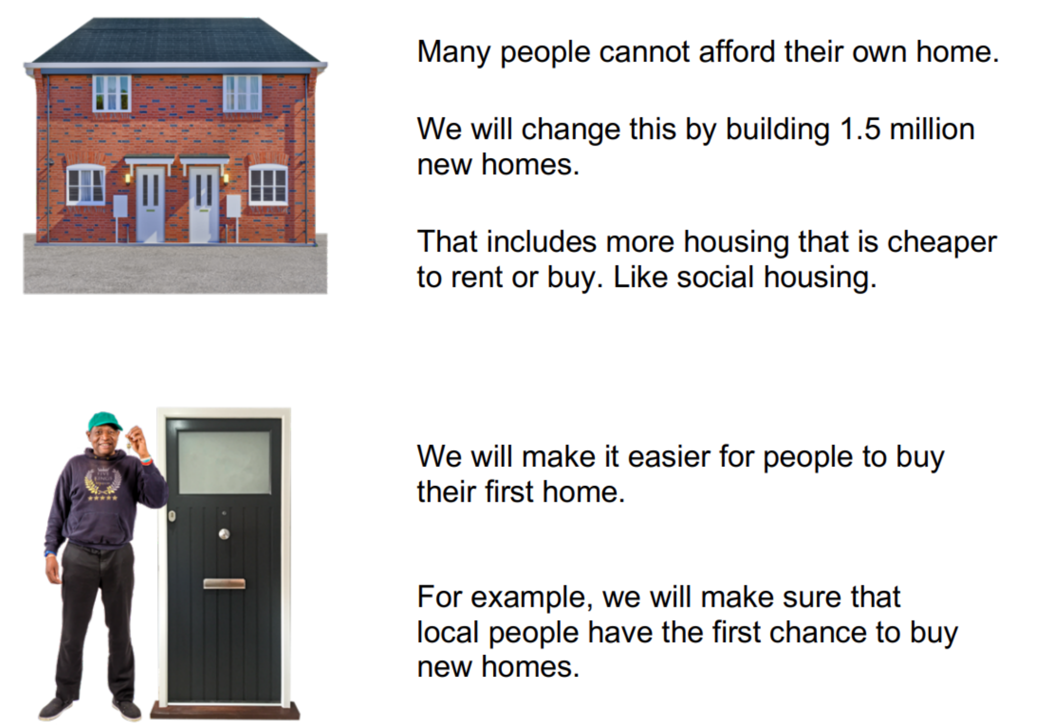
Urban populations require other services that have implications beyond city boundaries, including water and energy supply, and food security. There are also issues relating to air quality, with the United Nations estimating that, in 2016, 91% of the global urban population were breathing air that exceeded World Health Organisation's 5 $\mu g/m^3$ guideline of annual average concentrations of $PM_{2.5}$.

This point is illustrated by the BBC's 27 November 2024 news story reporting that families were fleeing Delhi to escape a deadly smog.

Housing challenges

The provision of housing is becoming a key area of concern in many places as demand rises and the provision of affordable housing becomes more difficult with house prices rising faster than average earnings. Of the 220 million EU households, approximately 82 million spend more than 40% of their disposable income on housing and social housing waiting lists are at record-high levels. Furthermore, in recent years there has been a scale-up in foreign and corporate ownership of urban property, which raises questions about the social fabric of cities and the accountability of citizens' rights to adequate and affordable housing.

Exhibit 2: Social housing built into government policy



Source: Labour Party Manifesto 2024

Mobility and service provision

In urban areas, mobility and the provision of services are interlinked, with services becoming closer to users but congestion increasing the time taken to travel. In Europe, it is estimated that traffic congestion costs the equivalent of 2% of GDP, rising to 2–5% in Asia. However, both mobility and service provision are expected to change dramatically in the future as legislation and technical innovation drive behavioural change. This implies that ownership of private vehicles will decrease and mobility as a service, combining multiple modes of transport, will increase. This trend is more evident in cities such as Copenhagen, Helsinki, Amsterdam and Vienna, where more than 40% of trips are made either on foot or by bike.

Urban health and aging

Urban health outcomes are significantly affected by the surrounding environment. The COVID-19 pandemic demonstrated how social interaction in dense urban environments can lead to dramatic disease spread, while also showing how the centralised provision of services has been the most effective way to provide treatment. Location within cities can lead to a very wide variance in life expectancy. For example, in London, this variance can be up to 20 years, an observation reflected in many other cities, including Turin, Barcelona and Stockholm (source: EU data).

Life expectancy is expected to rise to 88 years on average by 2070 in the EU, which will put additional demands on welfare systems. This situation will put an additional strain on finances as the old-age dependence ratio (number of elderly people as a share of those of working age) is expected to double over this period.

Social inequalities and segregation

Inequalities and social segregation are likely to be amplified in an increasingly urban environment. Generally, impoverished people are the most at risk from climate change, water scarcity, pollution and flooding, and often have limited access to energy. They are, therefore, the most vulnerable and have the least capacity to recover from shocks. In 2017, 112 million EU inhabitants (or 22% of the population) were at risk of poverty or social exclusion, of which 47 million resided in cities – places where higher living standards are possible, but also where inequalities can be extreme.

Investment opportunities in urban development

Looking out across the urbanisation landscape, emerging trends will ultimately re-emerge as long-term winners. Transportation will be a particular focus of investment given the high levels of associated carbon emissions, alongside efficient low-carbon buildings. Other sustainable growth areas are likely to be clean power production and water in various forms, be it collection, distribution, storage or treatment of waste.

Climate-related infrastructure investments are likely to grow rapidly and will soon represent well over half of an infrastructure budget significantly larger than the traditional 3% of world GDP. In many cases, national governments will not have the fiscal space to conduct such an expansion of physical investment. This creates opportunities for private capital, which can bring increased innovation and efficiency that more than offset the higher returns demanded when compared to traditional government-backed funding structures.

Geographically, the most exciting areas of opportunity appear to be Australia, Northern Europe, the US, Canada and Central and Southern Asia. This view is supported by initiatives such as the US$715bn INVEST in America Act, which aims to rebuild America's crumbling surface transportation and water infrastructure. The EU's €1.8tn Green Deal initiative, designed to ensure that the EU becomes the first continent to be carbon emission neutral by 2050, will also drive significant investment opportunities.

In Asia, China's intention to be carbon neutral by 2060 will require green power production to increase seven-fold according to International Energy Agency estimates. This presents substantial opportunities for companies involved in renewable energy infrastructure and related services.

Smart city solutions

Despite the potentially large challenges facing cities as populations urbanise, new and emerging technologies could help cities improve public services, better interaction with citizens, increase productivity and help address environmental and sustainability challenges. The concept of 'smart cities' has led to municipalities partnering with private technology corporations, which can provide customised hardware and software solutions to collect data and offer insights into relevant urban issues.

A smart city uses technology to improve the services it provides to constituents and to increase operational efficiencies. These technologies include software, AI, cloud computing, the IoT, mobile applications and the digitisation of its systems. In the smart cities vertical, there are 10,000 cities across the globe and the development of smart city technologies and movement towards establishing smart cities provides a healthy tailwind for companies exposed to this trend.

While these data-driven outcomes appear helpful, they do raise other issues relating to data privacy and ownership, data sharing and standards, as well as cybersecurity, system redundancy and resilience. These new technologies are increasingly being allied to new perspectives and solutions offered by the citizens of urban areas. Furthermore, other relevant stakeholders are being increasingly included in the debate and the decision-making process, which can lead to a robust evaluation of solutions and enable effective engagement.

Examples of companies exposed to this trend include:

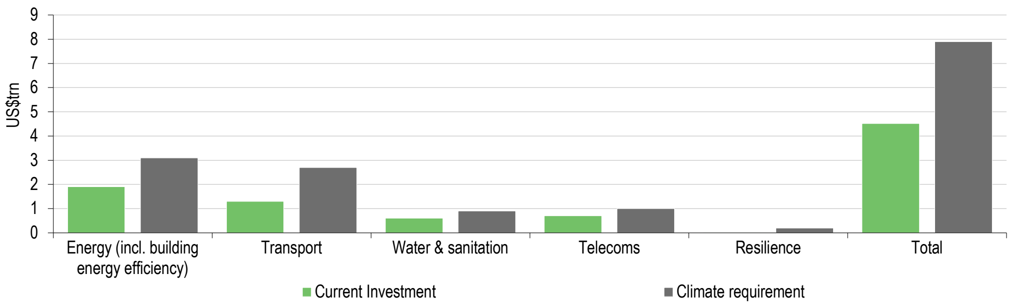
- **Smart City Solutions**, which has established itself as a leading provider of urban management systems in the DACH region. With a market capitalisation of €450m, the company represents a focused play on smart city implementation. The company's Hamburg smart lighting initiative, valued at €45m, demonstrates the practical application and benefits of smart city technology. The project has achieved 50% energy savings through the deployment of 150,000 LED streetlights, with IoT-enabled control systems, providing a clear template for urban efficiency improvements.
- **Teleste Corporation**, though smaller with an €80m market capitalisation, has carved out a valuable niche in urban transport information systems. The company's Stockholm metro information system project, valued at €14m, showcases its ability to enhance urban mobility through technology. The implementation of real-time display systems and platform safety monitoring represents the kind of practical smart city applications that are becoming essential in modern urban environments.
- **SenSen Networks** is a Australian listed company with a AU$37m market capitalisation. Its SenDISA platform uses AI to provide real-time insights across cities, retail and gaming, where its versatility provides opportunities across verticals and geographies. One key use case for SenSen's solutions is for traffic control and mobility in Singapore, a city with almost one million vehicles, high population density and near-constant traffic jams. Management explains that 'a small change in the traffic around a popular location can snowball into gridlock if not dealt with quickly and smoothly.' SenSen's solutions monitor the flow of traffic at 70 traffic hotspots to identify blockages, issue alerts to law or traffic enforcement, recognise dangerous driving behaviours and, in some cases, automatically issue infringement notices to drivers who may be speeding or parking illegally. Moreover, SenSen's solutions also monitor a premium resource in Singapore, parking spots, and work to make certain that as many people as feasible can use those spots.

Infrastructure investment

The global infrastructure market is currently valued at US$4tn per year and has historically accounted for around 3% of world GDP. A long period of ultra-low yields on traditional low-risk investments, such as government and corporate bonds, has brought infrastructure investments out of the shadows as they can offer both a higher rate of return and a degree of inflation protection from indexed-linked revenue streams. This is becoming increasingly valuable at a time of above-target inflation in developed markets across the globe.

The adoption of sustainable development goals by nations furthers the growth of the infrastructure market, with projects targeted at the provision of clean water and sanitation, affordable and clean energy and increased economic growth, among other aims. The IMF has estimated that there is a significant gap between current spending on infrastructure and that required to deliver net zero and climate resilience goals. This gap amounts to as much as US$3.8 trillion annually until 2030 (source: IMF).

Exhibit 3: Significant infrastructure investment required to meet the climate challenge



Source: International Monetary Fund

As noted earlier, climate related investments in infrastructure are likely to increase substantially and are expected to be funded via public-private partnerships. Fortunately, the characteristics of infrastructure investments are highly suitable for long-term investment funds, which are struggling to obtain the defensive and high-quality securities required to meet the funds' long-term pension obligations, which are currently deeply negative given persistently high inflation.

Private sector participation in large-scale infrastructure projects not only provides a return for pension funds and other institutional investors but also provides a pool of capital which facilitates projects that might be delayed due to increasing fiscal constraints, especially in the post-COVID-19 era. Private capital can also be associated with increased innovation and greater efficiency, which more than offsets the higher returns demanded compared to traditional government-backed funding structures.

Examples of companies exposed to this trend include:

- **Morgan Sindall Group**, a compelling pure-play exposure to UK urban regeneration and infrastructure development. With a market capitalisation of £850m, the company has established itself as a key partner for local authorities, undertaking major urban transformation projects. Its flagship Slough Urban Renewal project, valued at £900m, demonstrates the company's ability to execute complex, multi-year urban regeneration programmes. This project encompasses the development of 1,200 new homes, three leisure facilities and multiple school developments, showcasing Morgan Sindall Group's comprehensive approach to community development.
- **Vinci**, €60bn market capitalisation, offers focused exposure to European urban infrastructure development. The company's involvement in the Grand Paris Express project, where it is responsible for €926m of works, highlights Vinci's ability to deliver transformative urban mobility solutions. The project's scope includes 68km of new metro lines and strategic airport connections, positioning Vinci at the forefront of sustainable urban transport development.
- International Public Partnership is an infrastructure investment company listed in London, with a market capitalisation of £2.4bn. It invests in a diversified portfolio of global public infrastructure assets and businesses, with a focus on availability-based or regulated revenues. It aims to provide investors with a consistent and predictable return from assets that meet societal and environmental needs, both now and in the future.
- SDCL Energy Efficiency Income Trust, a £0.5bn market capitalisation investment trust, invests exclusively in assets that fall under the energy efficiency arm of the wider energy

infrastructure sector. Its projects focus on providing energy and energy efficiency as a decentralised service directly to end users, rather than supplying the broader power grid. SDCL Energy Efficiency Income Trust offers investors a unique opportunity to invest in the important, yet sometimes overlooked energy efficiency sector, which is essential to the global push towards net zero carbon emissions.

- **Premier Miton Global Renewables Trust** (PMGR) is an investment trust listed on the London Stock Exchange, which invests in companies operating in the renewable energy and sustainable infrastructure sectors. PMGR has a market capitalisation of around £18m and offers investors a unique opportunity to participate in the rapidly growing renewable energy industry. With its experienced management team, diversified portfolio, high-income generation and dividend growth, outperformance potential, attractive entry point and favourable tailwinds, PMGR represents a compelling investment opportunity for investors seeking exposure to the renewable energy and sustainable infrastructure sectors.

Environmental services and solutions

All components of the energy supply chain, including consumption efficiency, will need to be upgraded and thus require enormous investment on a global basis. Significant progress in clean electricity generation in some nations, such as the UK, has been made but more is required in terms of storage, networks and energy efficiency in buildings and industry.

In transport, electric vehicle charging infrastructure and green hydrogen is nascent or non-existent and will require significant further sums invested before reaching the ubiquity of the current energy infrastructure. Given the inevitability of climate change, even under current carbon reduction plans, investment will also be required to support climate resilience and adaptation, especially in developing nations.

Examples of companies exposed to this trend include:

- **Renewi**, with a market capitalisation of £677m, which stands out in the critical area of urban waste management and circular economy solutions. Its Amsterdam City waste-to-product programme, generating €27m in annual revenue, demonstrates the scale and effectiveness of modern urban waste management. The achievement of a 70% recycling rate and processing of 1Mtpa, while reducing carbon emissions by 200,000tpa, showcases the potential for environmental services companies to deliver both commercial and sustainability benefits. Macquarie tabled an offer to buy Renewi for 870p per share, valuing the business at c £700m.
- **Arcadis,** a €5.6bn market capitalisation business listed in Amsterdam, is a full-service design, engineering and consultancy organisation that provides these services to corporates and the public sector. Arcadis engineers and designs systems and structures for government entities, utilities, real estate operators and developers, miners and contractors. It generates c 50% of net revenue from the private sector and c 50% from the public sector. It is organised into four global business areas: places (urban planning, smart and sustainable building/cities, architecture; 40% of FY23 total revenue), resilience (environmental remediation, coastal protection and water management; 36%), mobility infrastructure (rail, highways, metro and (air) ports; 22%) and intelligence (software-as-a-service/product and HydroNET; 2%).
- **ADS-TEC Energy** is Nasdaq-listed business with a US$715m market capitalisation, which operates in an emerging market serving the changing grid and power management requirements of an electrifying world. Its key market at present is for battery-buffered ultra-fast charging systems for electric vehicles.
- **Gresham House Energy Storage Fund** is listed in London with a £288m market capitalisation and seeks to provide investors with an attractive and sustainable dividend over the long term, by investing in a diversified portfolio of utility-scale battery energy storage systems located in the UK and Ireland. In addition, the company seeks to provide investors with capital growth through the reinvestment of net cash generated more than the target dividend.

Risk considerations for the megatrend

Economic cycle sensitivity

While urbanisation is a long-term structural trend, the implementation of urban development projects remains sensitive to economic cycles. Companies in this space need strong balance sheets to weather periodic downturns in municipal spending and private investment.

Regulatory environment

The regulatory landscape for urban development continues to evolve, particularly around environmental standards and social impact requirements. Companies must maintain flexibility to adapt to changing requirements while maintaining project economics.

Technology disruption

Smart city technologies are evolving rapidly, creating both opportunities and risks. Companies must carefully evaluate technology investments to ensure they deliver sustainable competitive advantages rather than becoming rapidly obsolete.

Project execution

Urban infrastructure projects are inherently complex, often involving multiple stakeholders and extended timeframes. Successful companies demonstrate strong project management capabilities and stakeholder engagement skill.

Conclusion

The urbanisation megatrend presents compelling long-term investment opportunities across multiple sectors and asset classes. European small and mid-cap companies offer focused exposure to this theme, with many well-positioned to benefit from increasing urban infrastructure and service requirements.

Success in this space requires:

- Strong understanding of complex urban dynamics
- Deep local market knowledge
- Technology integration capabilities
- Focus on sustainability
- Robust balance sheets
- Proven project execution abilities

The scale and persistence of urban growth, combined with technological and environmental imperatives, suggest this trend will continue to generate attractive investment opportunities for decades to come. While challenges exist, companies that can effectively address urban development needs and manage key risks should deliver sustainable long-term returns for investors.

For investors seeking exposure to this theme, the featured companies represent a diverse range of entry points, from direct infrastructure development to smart city solutions and environmental services. The companies' strong market positions, proven execution capabilities and alignment with key growth drivers position them well to benefit from the ongoing urbanisation megatrend.

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