



## **Real Estate Predictions 2025**

Exploring trends shaping the future of  
the real estate industry



## Foreword

In an era defined by rapid technological advancements and pressing environmental challenges, the real estate and construction sectors are undergoing transformative change. From the integration of humanoid robots, to the lessons learned from mega events such as the Paris Olympics, there is a crucial need for adaptability and foresight in navigating the complexities of modern real estate. As the industry embraces digital transformation and prioritises sustainability, stakeholders are presented with unprecedented opportunities to enhance operational efficiency, meet evolving regulatory expectations, and create resilient urban environments.

We invite you to explore this collection of articles in our Real Estate Prediction series. As a comprehensive assessment of how innovative technologies, sustainable practices, and strategic collaborations are reshaping urban landscapes and driving economic growth, they offer not only insights into current trends, but also strategic guidance for future developments.

Moreover, this anthology is also a call to action for industry leaders, stakeholders, and visionaries. Engaging with these narratives will help you to seize the opportunities within the ever evolving real estate landscape. And by uniting in harnessing the potential for innovation, sustainability, and growth in these crucial sectors of our economy, we can actively shape the future together.

To continue the conversation on any of the issues raised in this year's Real Estate Predictions, please contact your local Deloitte real estate industry leaders.

## Prediction summaries

### Prediction 01

#### ***Data management will enable the future of real estate***

This article emphasises the challenges faced by real estate organisations in handling disparate data sources. It advocates for advanced data management solutions that can streamline processes, ensure data accuracy, and support compliance with regulatory standards. By adopting a unified data strategy, companies can enhance decision-making, operational efficiency and market competitiveness.

### Prediction 02

#### ***Retrofitting actions and collective energy infrastructures: towards sustainable urban growth and 2050 net-zero carbon target***

This article discusses the role of retrofitting and collective energy solutions in achieving net-zero emissions by 2050. It underscores the importance of public-private partnerships in implementing energy-efficient measures and integrating renewable energy sources, thereby enhancing urban resilience and aligning with regulatory frameworks.

### Prediction 03

#### ***Agentic video AI and its impact on the real estate industry***

This article highlights the transformative power of agentic video AI in analysing visual data for real estate applications. By automating processes and extracting actionable insights from video streams, this technology can significantly enhance operational efficiency and decision-making. The piece outlines various use cases, such as property inspections and maintenance monitoring, demonstrating the potential for AI to revolutionise the sector.

### Prediction 04

#### ***The rise of physical AI and GenAI powered humanoid robots in construction and real estate management***

This article discusses the convergence of digital AI and humanoid robotics to revolutionise the construction and real estate sectors. It explores the capabilities of humanoid robots to perform complex tasks autonomously, thereby addressing skilled-labour shortages and enhancing onsite safety. The piece highlights the potential for these technologies to collect data in real time, improve operational efficiencies, and ultimately transform traditional construction and management practices.

### Prediction 05

#### ***Maximizing business potential in real estate with AI and GenAI***

This article examines how AI – especially generative AI – is transforming the real estate industry by automating processes and enhancing data analytics. It explores applications across commercial and residential sectors, from optimising the use of space, to improving customer experiences. The piece advocates for the adoption of AI technologies as a means to foster innovation and drive growth.

**Prediction 06*****Digital spatial models enhance urban estate planning and development***

Addressing the complexities of modern urban planning, this article introduces the concept of Integrated Digital Environments (IDE) powered by generative AI. It emphasises the importance of data integration and stakeholder collaboration in creating comprehensive digital twins of urban areas. By harnessing these models, planners can make informed decisions that balance economic growth with sustainability.

**Prediction 07*****Life sciences partnerships and collaborations: how life sciences clusters drive economic value in the United Kingdom***

This article explores the significance of life sciences clusters in driving economic growth. It examines the interplay between academia, industry and healthcare, and how these collaborations foster innovation and job creation. The piece underscores the growing demand for specialised real estate to support the life sciences sector, positioning it as a vital opportunity for developers.

**Bonus Prediction*****Innovations and legacy of the Olympic and Paralympic Games Paris 2024 for sustainable, resilient and inclusive urban developments***

This article discusses innovative urban development solutions implemented during the Olympics. It highlights strategies such as infrastructure reuse, circular economy practices, and low-carbon approaches that can inform future urban planning. The article advocates for sustainable and inclusive design principles to create resilient cities that benefit both communities and the environment.

**Bonus Prediction*****Next-generation leaders may accelerate real estate investment in alternative properties***

This article forecasts a shift in commercial real estate investment towards alternative property sectors, driven by changing market dynamics and the impending retirement of many industry leaders. It outlines how niche properties such as data centres and life sciences facilities are gaining traction, potentially accounting for 70% of industry portfolio values by 2034. The piece encourages investors to adapt their strategies to align with these emerging opportunities.



<b>Prediction 01:</b> Data management will enable the future of real estate	06
<b>Prediction 02:</b> Retrofitting actions and collective energy infrastructures: towards sustainable urban growth and 2050 net-zero carbon target	11
<b>Prediction 03:</b> Agentic video AI and its impact on the real estate industry	16
<b>Prediction 04:</b> The rise of physical AI and GenAI-powered humanoid robots in construction and real estate management	22
<b>Prediction 05:</b> Maximizing business potential in real estate with AI and generative AI	29
<b>Prediction 06:</b> Digital spatial models enhance urban estate planning and development	34
<b>Prediction 07:</b> Life sciences partnerships and collaborations: How life sciences clusters drive economic value in the United Kingdom	39
<b>Bonus Prediction:</b> Innovations and legacy of the Olympic and Paralympic Games Paris 2024 for sustainable, resilient and inclusive urban developments	47
<b>Bonus Prediction:</b> Next-generation leaders may accelerate real estate investment in alternative properties	54
<b>Authors</b>	61
<b>Meet the team</b>	62

## Prediction 01

**Data management will  
enable the future of real  
estate**





As real estate businesses respond to heightened customer expectations and changing regulations, they will face new challenges, from data. Organizations must collect and interact with information from many service providers, manage, control and curate large volumes of disparate data, and often deal with complex data transformation and dissemination processes.

Those activities are often performed manually, which can impact responsiveness, efficiency and scalability. Business leaders know that technology offers the solution, but not where to start that journey. Taking ownership of your data and its security will not only help you satisfy customer and reporting requirements, but also enhance future productivity, efficiency and quality.



## Overcome data management challenges and take ownership of your data

As the real estate landscape shifts rapidly, information will become the key to staying competitive and securing future growth. Your company's responsiveness, operational efficiency, strategic planning and overall success will increasingly depend on how effectively you

own and harness your data. This article explores the future of data in real estate, and highlights where and how data management solutions can help you secure a leading and resilient market position.



## Today's challenges for the real estate industry

Everyday real estate data comes from many sources, such as property managers, valuers, managing agents, fund administrators, corporate accountants, lawyers, banks, and brokerage firms. Traditional information handling, across different business functions, often results in an inconsistent and unreliable collection of data. This approach often leaves businesses struggling to create a single, unified and accurate version of the truth, leaving them unable to make well-informed business-wide decisions. Furthermore, inconsistent usage, calculation or even interpretation of data across different functions can further diminish companies' trust in their data.

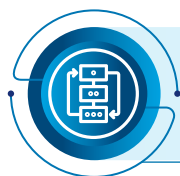
With so many disparate sources, operational real estate data is often collected in non-standard formats, needing more effort to ensure that the consolidated information is complete and accurate. However, incomplete or poor-quality data can lead to discrepancies and misinterpretations across business functions. If organizations fail to adopt a unified approach – with standardized data collection and validation – they risk basing the business on flawed information, which can undermine critical

decision-making processes, operational efficiency and strategic planning.

Even where real estate organizations have been getting by with their established data handling, they now face the further complexity of changing regulatory and client reporting requirements. Existing datasets must now incorporate new types of data, such as additional compliance metrics, sustainability indicators or detailed client insights. By persisting with outdated and inflexible approaches to data, organizations risk falling short of both regulatory standards and stakeholder expectations, which can undermine external confidence and credibility, delay critical decision-making, and potentially expose firms to regulatory penalties.

Without a cohesive and firm-wide data strategy, businesses might find themselves stuck, and unable to scale up effectively.





## The role of advanced data management solutions

Emerging data management solutions will help the real estate industry address these challenges.

First, advanced data management tools can consolidate data from many different sources, by adopting industry-standard enterprise data models. The consolidation process creates a dataset that is unified, accurate and trustworthy, as a solid foundation for making well-informed decisions.

Advanced solutions streamline and unify data collection processes, using methods such as APIs, sFTP, and web portals to increase efficiency and scalability. Automated processes can collect and consolidate new data rapidly and reliably, instead of inefficient and error-prone manual input and integration. This approach also ensures that the data aligns with internal standards and evolving regulatory requirements, to both support and de-risk business growth.

Automated data quality controls and monitoring are essential for reducing errors and omissions, to ensure accuracy and integrity, and build trust in the data. Even with such controls, true data accuracy becomes possible only when all relevant information is consistently shared and integrated across systems, enabling strategic decisions to be based on reliable and timely organisation-wide data.

Advanced information systems also integrate robust audit trails and real-time monitoring, which support regulatory compliance and detailed client reporting. These features are especially critical for businesses that face changing compliance metrics, environmental standards, and investor demands, to which they must continually adapt. Integrated data management

systems can help firms navigate such regulatory challenges and fulfil their reporting obligations seamlessly, while continuing to operate at peak efficiency.

Importantly for the real estate industry, advanced data management solutions can deliver a comprehensive portfolio overview, with full and comparable information across all your properties, including ownership details, valuations, and performance metrics. By putting data at your fingertips, this holistic view enables you to manage the portfolio and optimize your assets more effectively and confidently, knowing your decisions are based on good-quality, relevant data.



## 4

## Strategic importance for real estate companies

More than just a tool to improve efficiency, advanced data management can be used strategically to create a decisive competitive edge. Data-driven strategies are becoming essential for maintaining market leadership and, although technology plays a crucial role, it is most effective when paired with a well-defined data strategy and robust governance framework. This dual approach will translate technology investments not only into greater efficiency, but also into sustainable operational excellence and strategic agility.

Those businesses that take full ownership and control of their data, with support as required, will have more confidence when navigating the future complexities of the real estate industry. Efficient data management is vital for meeting regulatory requirements and providing a framework that complies with regulations and protects sensitive information, to further enhance credibility and avoid legal pitfalls.

Furthermore, an advanced approach to data management can reveal and unlock new business opportunities by leveraging crucial insights. Market trends, client preferences and investment opportunities can be identified and exploited more effectively if data is comprehensive and accurate. Those organizations that have moved beyond the traditional data-handling obstacles and adopted advanced tools will stay agile and responsive to market changes. And more agile organisations can adapt more quickly to new challenges, seize emerging opportunities and ensure sustained success in an ever-changing market.

A strategic approach to advanced data management will equip organizations to handle future challenges, stay aligned with their strategic objectives and remain at the forefront of the industry, ultimately driving growth and profitability.

### Conclusion

Even if data isn't already a major obstacle to your success in real estate, it soon will be, and advanced tools will unlock the efficiency, scalability and strategic insights that give you a competitive advantage. Transforming your business around a solid data foundation and data-driven strategy will also equip it to be more agile and resilient, to handle future challenges, seize new opportunities and secure your future as a leader in real estate.





## Prediction 02

**Retrofitting actions and collective energy infrastructures: towards sustainable urban growth and 2050 net-zero carbon target**



## **The built environment's carbon challenge**

The real estate sector is responsible for nearly 40% of global CO2 emissions, so it has a leading role to play in solving the climate crisis. Meanwhile, expanding urban populations, demographic shifts, and concepts such as 15-minute cities will reinforce the importance of cities for national economies. These changes will increase energy demand and exacerbate the carbon footprint of cities, so achieving net-zero emissions by 2050 will require big changes in how buildings are managed, retrofitted and integrated into broader energy systems. Real estate businesses must navigate those challenges while also meeting market expectations for sustainable, high-performing assets.





## Urbanization and energy demand pressures

Cities are growing rapidly, with larger metropolitan areas seeing the most significant demographic shifts. This expansion places immense pressure on urban energy networks, which are already struggling to meet current demand reliably. Furthermore, growing energy demand in cities risks creating higher carbon emissions and increasing costs, unless strategic investments are made in efficiency and infrastructure.

As a real estate leader, you must consider how the effects of increasing urbanization will impact asset performance and security of energy supply. Retrofitting strategies and forward-thinking investments in smart energy systems can mitigate those risks while also enhancing your asset value.



## Public funding limitations and private sector responsibility

Public budgets are tightening, so governments might need to make some trade-offs in their investment decisions and might deviate from financing large-scale energy infrastructure projects at national level, and cities in particular. This is an opportunity for the private sector to become more proactive in shaping urban sustainability. While retrofitting initiatives at building level are essential, you can also enhance the broader urban ecosystem by forming public-private partnerships.

Such partnerships can invest in collective energy solutions, such as district heating, microgrids or onsite renewable energy solutions, to ensure long-term urban resilience and align with evolving regulatory frameworks. In the meantime, site-specific solutions will continue to be down to individual business. The role of private investment in collective energy systems is no longer optional – it's essential.



## Retrofitting: more than just energy efficiency

Retrofitting has often been limited to improving the energy efficiency of buildings, but its potential extends beyond individual assets. When combined with city-wide energy infrastructure, retrofitting can reduce peak energy loads, lower operational costs, and enhance energy resilience.

Retrofits are more than simply insulation and HVAC upgrades, and you should start considering options such as integrated renewable energy

generation, battery storage or smart grids. Such retrofits can future-proof buildings, but also the city as a whole. Furthermore, by aligning retrofitting projects with urban sustainability plans, your business can unlock financial incentives and become more attractive to institutional investors seeking ESG-compliant assets.



## The economic and social payoff of smart investments

Investing in sustainable retrofitting and energy infrastructure isn't just about compliance – it's also a strategy for creating long-term business and social value. Assets with high energy efficiency ratings are in demand, and command higher rental premiums while experiencing lower vacancy rates. As well as their financial benefits, these investments also support social equity (improved access to clean and more affordable energy, healthier living conditions and community resilience) and create healthier urban environments.



## The road to 2050: what should you do now?

Getting to net-zero emissions by 2050 requires immediate action. Start by assessing the carbon footprint of your portfolio and identifying which retrofitting opportunities will make the greatest impact. Engage with public authorities and energy providers to develop collaborative solutions for district energy and microgrid integration.

Seek innovative financing models, such as green bonds or ESG-linked loans, to support large-scale retrofitting initiatives such as district heating systems, smart grids or microgrids to allow for a better management of energy distribution and consumption. By taking action today, you will ensure that your assets remain competitive and resilient in the cities of tomorrow.



## Conclusion

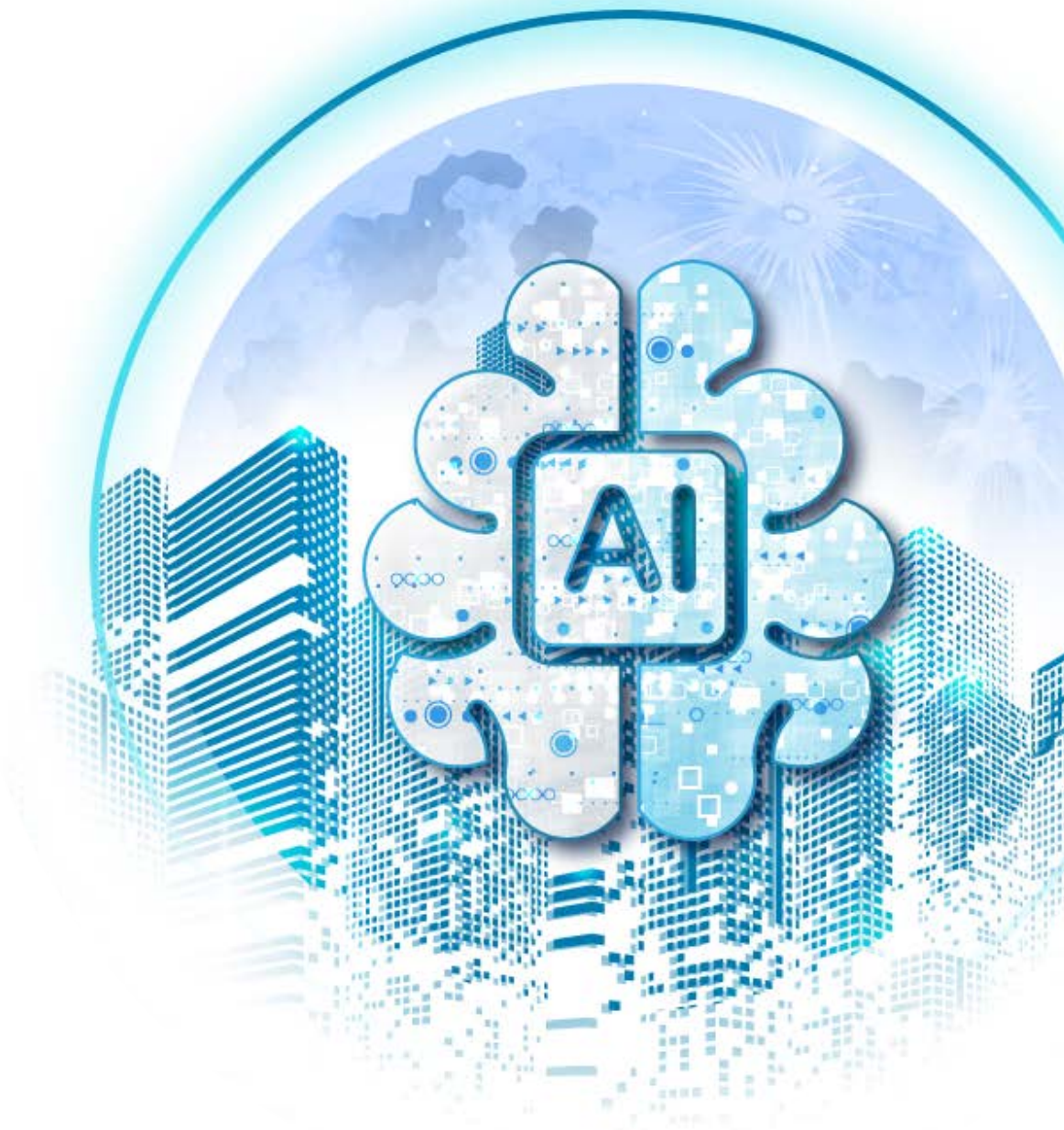
Retrofitting and collective energy infrastructure are critical for achieving both sustainable urban growth and net-zero emissions. With limited public funding, the private sector must take a leadership role in shaping resilient and low-carbon cities. By investing in intelligent retrofitting and energy solutions, your business will future-proof its own assets, while also contributing to the long-term stability of urban environments. The transition to net-zero is both a social challenge and a business opportunity – will you seize it?





## Prediction 03

# Agentic video AI and its impact on the real estate industry



Digitalization in the real estate industry, like many others, is experiencing significant influence from the evolution of generative AI. As we look beyond 2025, agentic AI is set to revolutionize the future of work. Agentic video AI, in particular, will empower real estate companies to analyze and respond to visual data, by ingesting live or recorded videos, extracting insights, and delivering them as summaries, documents or interactive dialogs. By replacing manual processes and revealing previously hidden insights in visual data, agentic video AI can bring huge benefits for the real estate sector. Realizing those benefits demands a novel approach and, in this article, we examine the role and application of the technology, and share insights from a few promising use-cases for real estate.



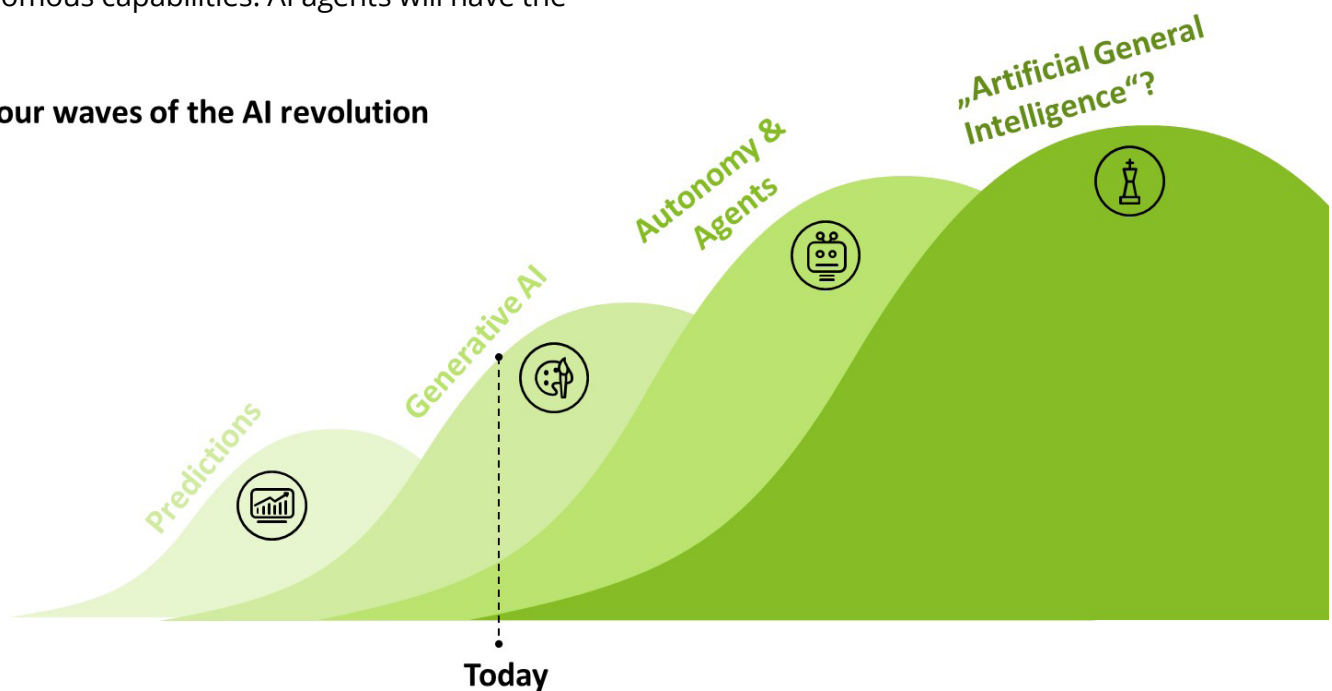


## The Disruptive Power of AI

Artificial intelligence has been developing rapidly in recent years, as we pass through four waves of the AI revolution. Generative AI has been of the utmost importance for the past two years but, today, autonomous AI agents are playing an increasingly decisive role. This third wave is just starting, and will see agents and multi-agent frameworks enhance generative AI's large language models (LLMs) by adding rich and autonomous capabilities. AI agents will have the

capability to plan, decide, execute and reflect on decisions independently, and incorporate human interaction only when necessary, to align on intent, deliver intermediate results, or resolve identified conflicts, for example. Beyond their own independent functions, AI agents are capable of communication and coordination between other agents and humans, to delegate and complete tasks.

### The four waves of the AI revolution



## AI Agents Shaping the Future of Work

Agentic AI is not just the next step as artificial intelligence evolves – it's a transformative force poised to revolutionize industries, as well as how we work and learn. More than that, we believe that visual agents (agentic video AI) will become particularly important for unlocking value and

untapped potential from photos and videos. Currently, visual content is one of the most underutilized data types, and is often rich in information, but has previously been difficult to analyze effectively at scale.

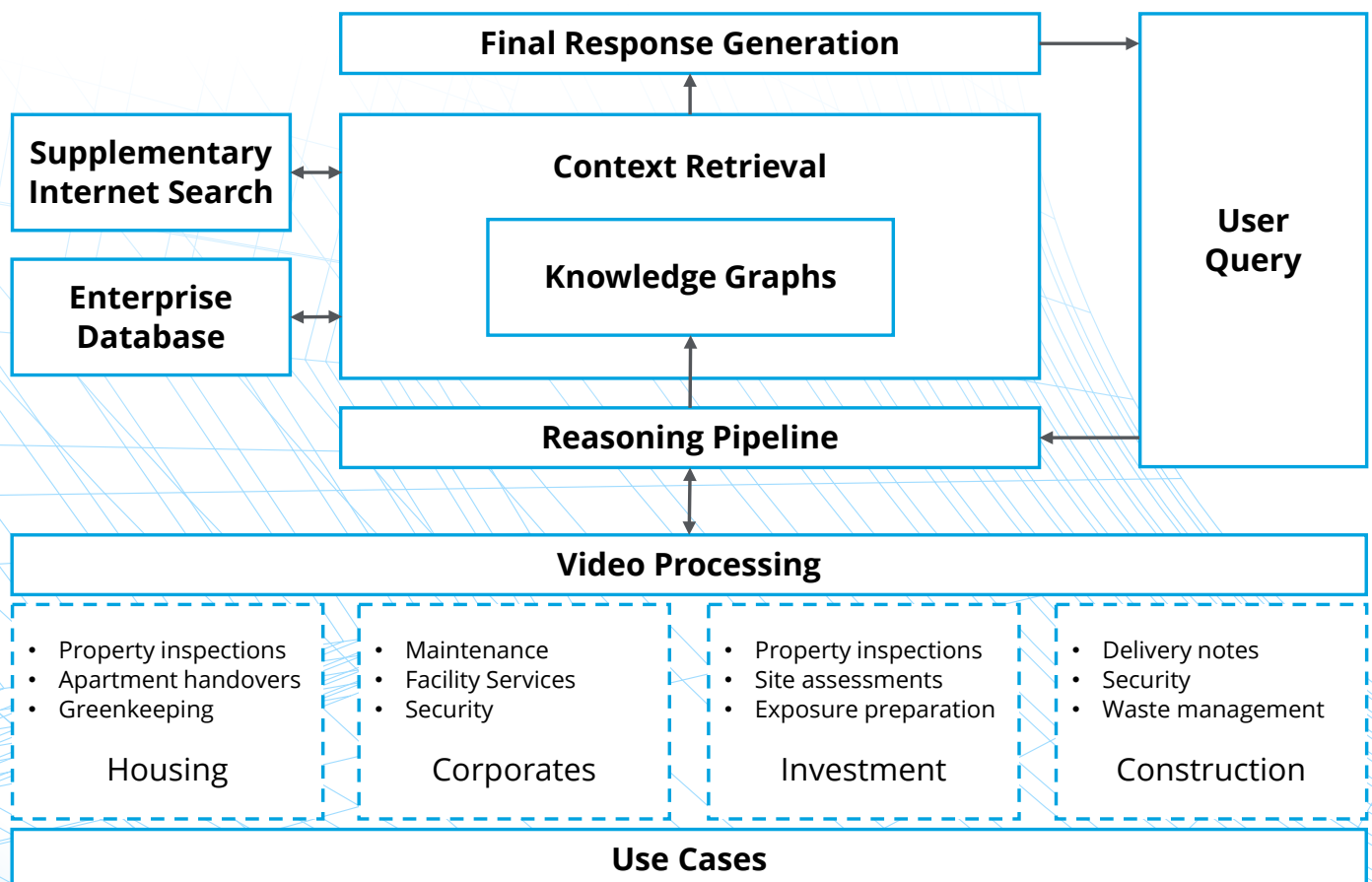




## Visual Content Will Drive Business Decisions

Traditional visual analytics tools rely on computer vision models that have been trained to recognize a specific and predefined set of features. This approach makes it difficult to build general-purpose systems that can understand and extract relevant context from video streams. Instead, a novel approach is needed, which enables dynamic, autonomous, and context-aware video analysis, so agentic video AI is now a game-changer. As a result, visual content will soon become the most valuable data type in decision-making, and more important than text or numerical data. For AI agents to understand visual content, they require both LLMs and VLMs (vision language models). VLMs enable a generic and adaptable

understanding of visual scenes, which makes it possible to develop visual AI agents that are capable of multi-step reasoning over video streams. These models are integrated with individual datastores (e.g., industry-specific or enterprise content), based on the latest retrieval augmented generation (RAG) techniques. The models, datastores and RAGs are combined in a secure platform to create agents that can understand and perform complex tasks on video, such as summarization, interactive interrogation or event detection, using both live streams and recorded files.










## Relevance for the Real Estate Industry

As a traditional and less innovative industry, real estate is ripe for disruption. Despite its massive economic significance, it still relies heavily on manual processes, inadequate data and outdated systems. It therefore has huge potential to benefit from AI-enabled automation, data extraction and analysis, which will impact all stakeholders, including owners, investors, tenants, service users or builders. With large volumes of untapped insights and inefficient workflows, real estate companies have a huge opportunity to realize the potential of agentic video AI, improve efficiency and reduce costs – regardless of asset class or business focus.

A few specific use-cases illustrate how agentic video AI can make the difference in redefining real estate operations and processes:

-  Automating asset monitoring, facility services and maintenance for properties and infrastructure, to improve both efficiency and service quality.
-  Streamlining processes such as tenant onboarding in commercial or residential real estate portfolios, including space checks and handover protocols .
-  Improving onsite safety, and ensuring compliance with security and environmental standards.
-  Automating delivery notes, identifying materials and analyzing waste disposal on construction sites.
-  Conducting site inspections and assessing property conditions, to facilitate M&A, sales or valuation.

Strategic guardrails around these use-cases will ensure that real estate companies can successfully harness the disruptive power of AI and keep pace in a highly competitive market. Although strategic elements such as ambition, data, technology, operating model, ethics, regulation and value contribution will all be relevant, the greatest impact will come from focusing on employee engagement and enablement.

## Conclusion

As the real estate industry faces economic crises and rising regulatory requirements, it urgently needs efficiency gains, quality improvements and intelligent solutions that can overcome the shortage of skilled workers. Imagine a future where employees no longer waste hours on manual processes or fixing erroneous data. Instead, they're empowered and supported to work more effectively, with intelligent and autonomous solutions that effortlessly capture insights, provide real-time feedback, and ensure compliance.

Agentic video AI offers a powerful approach to address these challenges, by transforming visual content into actionable insights and automated processes. To stay competitive, businesses must embrace agentic video AI – not simply as a standalone tool, but as a strategic enabler of digital innovation and operational excellence.





## Prediction 04

□ **The rise of physical AI and GenAI powered humanoid robots in construction and real estate management**



Today's rapidly evolving technologies will reshape real estate, through operational efficiencies, revolutionary onsite processes, and new data collection channels. The next frontier for AI will be the physical world, and this article explores how physical AI and humanoid robotics will transform construction and real estate management.





## The emergence of humanoid robotics: bridging the digital and physical worlds

Digital AI and physical robotics are converging to deliver radically new capabilities. Today's robots typically execute repetitive tasks in controlled environments such as assembly lines. However, humanoid robots will mimic human interactions and navigate dynamic, unstructured settings. They combine cameras, sensors and generative AI (GenAI), to bring enhanced decision-making abilities, real-time adaptive learning, and a finesse that was once the preserve of skilled human labor.

Digital AI and physical robotics are converging to unlock radically new capabilities. While today's robots perform repetitive tasks in controlled environments—such as assembly lines—humanoid robots are set to mimic human interactions and navigate dynamic, unstructured settings. By integrating cameras, sensors, and generative AI, these advanced systems deliver enhanced decision-making, real-time adaptive learning, and a finesse once exclusive to skilled human labor. Industry forecasts suggest that over the next 5–10 years, cumulative investments in humanoid robotics could reach US\$15–20 billion, driven by significant R&D from major technology players. Looking ahead, market projections indicate that the value of humanoid robotics could grow to approximately US\$38 billion by 2035 with an estimated robot shipments of 1.4 million units.<sup>1</sup>

Physical robots also unlock unprecedented opportunities to collect data in the physical world. The entirety of the internet has already been thoroughly mined to power today's Large Language Models (LLMs), meaning that tomorrow's game-changing data and insights will largely come from the physical

environment. This is why today's biggest technology companies, such as Nvidia, Meta, Tesla, Amazon and Google, are advancing their products into the realm of PhysicalAI. Whether on construction sites or in buildings, every interaction can be captured, analyzed, and transformed into actionable intelligence.

For example, at BMW's Spartanburg plant, Figure AI's Figure 02 robot already performs intricate assembly tasks with millimeter accuracy.<sup>2</sup> Its integrated cameras and sensors simultaneously capture, analyze and feed data into a digital management of the production line. This process yields detailed insights on material usage, environmental conditions and equipment performance, and enables managers to optimize workflows and predict maintenance needs.

The successful adoption of humanoid robotics in mass manufacturing is heralding a new era in the construction sector. With growing investment from venture capital funds and tech giants mass production is scaling rapidly, and millions of humanoid robots could be in circulation by 2035.

Consumer-grade humanoid robots like Tesla's Optimus are projected to cost between \$20,000 and \$30,000— with industrial models poised to reach or exceed \$100,000 due to higher costs associated with cutting-edge sensors, actuators, and processing hardware.<sup>3</sup> This pricing range highlights the push toward mass-market affordability, equal or less than the equivalent cost of a human to perform these roles, while still accommodating advanced, specialized robotics for high-end applications.





## Transforming onsite construction with humanoid robotics

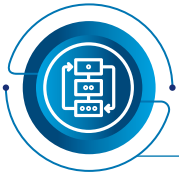
Construction sites have always been complex and volatile, but humanoid robots promise to solve two big challenges: skilled labour shortages and onsite safety risks. Since as far back as 2018, industry researchers have already shown that the humanoid robot prototypes, such as HRP-5P can autonomously install drywall, by lifting boards and fastening them with screwdrivers, guided by environmental detection and object recognition capabilities.<sup>4</sup> An autonomous robot could lay bricks or pour and finish concrete precisely, but also monitor and adapt dynamically to its environment, adjusting to temperature changes, modifying material placement, and even correcting errors as they occur.

The new generation of GenAI-powered humanoid robots deployed to sites can perform and link multiple precision tasks such as quality assurance, materials handling, and safety monitoring in unpredictable, hazardous environments, to reduce human risks while delivering quality and speed.

Humanoid robotics will improve efficiency, by automating routine yet critical activities, to reduce project delays and cut costs. Non-humanoid construction robots, such as Hadrian X and the Semi-Automated Mason (SAM), have already demonstrated productivity gains of 3–5x, and labor cost savings of 50%<sup>5</sup>, so Gen-AI-powered robots could deliver similar or higher benefits where activities require human levels of dexterity.

Furthermore, humanoid robots will play an active role in data-driven decision-making, by collecting data from the physical environment, not simply the task at hand. As they move through construction sites, robots continuously gather and transmit detailed information on material usage, project progress and environmental conditions. Critical insights from this real-time data then enable managers to fine-tune operational strategies in real-time.

Although these more sophisticated robots will deliver great benefits through both their execution and data-gathering capabilities, a critical consideration will be how they collaborate with human personnel. Upskilling the workforce to manage and integrate advanced robotics will be key to a successful transition, ensuring that human expertise complements robot precision



## Enhancing real estate management through data and integration

Physical AI will also transform how real estate is managed. IoT devices and smart building systems already streamline property management, but humanoid robots will continuously gather more extensive and nuanced data in ways and areas traditional sensors cannot reach. Whether to detect construction quality or maintenance needs, enhance facility management, or contextualize energy consumption relative to space and occupancy, tomorrow's robots bring a precision of actionable data gathering that will be transformative.

Leveraging its advanced AI, a humanoid robot can bridge the gap between construction and long-term facility management. As it navigates a partially completed building, the robot compares on-site conditions against digital blueprints,

alerting design teams to deviations that could affect structural integrity or energy efficiency. Once the building is operational, it transitions into a maintenance role—conducting routine inspections using thermal imaging, vibrational analysis, and other diagnostic tools. The collected data enables predictive maintenance scheduling that minimizes downtime, extends asset lifespan, and ultimately reduces lifecycle costs.

Property developers and owners will gain a strategic advantage, as richer insights drive better decisions on leasing strategies, capital investments, and asset management. By harnessing the data from physical AI, stakeholders can optimize asset performance, extend building lifecycles, and achieve greater tenant satisfaction.



## Strategic predictions

Over the next 5 to 10 years, we predict that adoption of physical AI and humanoid robotics will accelerate dramatically. In the short term, we expect to see pilot projects and new benchmarks for operational efficiency and safety. Longer-term, as these technologies mature, their full-scale integration is will transform traditional business models, and prompt a shift toward data-centric, technology-first strategies.

Construction and asset management leaders can dramatically add value by adopting advanced robotics. But this transformation is not without its challenges, including regulatory hurdles, cybersecurity risks, and data collection ethics. To anticipate these complexities, industry leaders must invest in robust roadmaps that balance innovation with compliance and risk management.



Construction and asset management leaders can dramatically add value by adopting advanced robotics.

1. **Mitigating skilled labor shortages:** robots can perform repetitive, labor-intensive tasks precisely, to keep projects on time and budget by reducing their dependence on scarce labor.
2. **Enhancing safety:** robots can minimize human exposure to potential hazards in dangerous environments, reducing accidents, lowering insurance costs and improving safety.
3. **Unlocking new data:** comprehensive, granular and real-time data from entire construction sites can help optimize project planning, quality control and predictive maintenance.
4. **Real-time “hive mind” coordination:** networked robots can create a site-wide, real-time “hive mind”, to coordinate tasks, streamline workflows and adjust dynamically to changing conditions.
5. **Increasing precision, repeatedly:** humanoid robots can execute precision tasks accurately and reliably, minimizing errors and reducing rework costs.
6. **Process innovation and cost efficiency:** although initial costs might be high, robotics will deliver long-term benefits, including lower labor costs, fewer delays, and increased productivity.
7. **Predictive and preventive maintenance:** advanced robots can monitor assets continuously, detect problems early, and alert management teams to potential issues before they escalate.

## Conclusion

Humanoid robotics is poised to revolutionize construction and real estate management by delivering unparalleled operational efficiency, enhanced safety, and robust, data-driven decision-making. As the physical world transforms into an ever more valuable source of actionable data, we anticipate a paradigm shift marked by groundbreaking innovation. In the near future, intelligent machines will not only construct and maintain our buildings but also continuously monitor and optimize them, ensuring resilient, sustainable environments for generations to come.



# Endnotes

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1. [The global market for humanoid robots could reach \\$38 billion by 2035, Goldman Sachs](#), February 27, 2024
2. [Humanoid Robots for BMW Group Plant Spartanburg, BMW Group](#), September 11, 2024
3. [How Much Does a Tesla Robot Cost? Tesla Optimus Price, Features, and Release Date](#), Plisio.net, January 12, 2025.
4. Laurie Cowin, "[Japanese researchers create humanoid bot that installs drywall independently](#)," Construction Dive, October 3, 2018.
5. [Construction Robotics Website](#)



## Prediction 05

**Maximizing business potential  
in real estate with AI and  
generative AI**



## Transforming real estate with AI-driven innovations

The real estate industry has traditionally been slow to adopt new technologies, but is now starting to recognize the transformative potential of artificial intelligence (AI). The sector's reliance on conventional practices, and the complexity of integrating AI, have previously caused some hesitation, but the real estate industry is now starting to realize the benefits of AI.

From automating routine tasks to providing advanced data analytics, AI can enhance your efficiency, creativity and strategic decision-making. This article examines how AI, particularly generative AI, is revolutionizing real estate, from property management and financial processes through to marketing and design, paving the way for a more intelligent future in the industry.





## Embracing the future: generative AI, agentic AI, and robotics transforming real estate

Real estate is a cornerstone of economic development, but has traditionally been slow to adopt technology. Fragmented markets, complex regulations and reliance on conventional practices have combined to slow innovation. However, technologies such as generative AI, agentic AI and robotics are heralding a new era that's revolutionizing both commercial and residential real estate, to unlock creativity, efficiency and growth.

As a real estate leader, you must consider how the effects of increasing urbanization will impact asset performance and security of energy supply. Retrofitting strategies and forward-thinking investments in smart energy systems can mitigate those risks while also enhancing your asset value.



## Commercial real estate applications

Commercial real estate companies use agentic AI to enhance operations and profitability. Generative AI can create detailed proposals for tenant layouts, or optimize space utilization in office buildings. Robotics handle routine facilities-management tasks such as autonomous cleaning, while AI-powered algorithms optimize energy consumption in smart buildings. Agentic AI also forecasts demand for office spaces, retail locations and industrial properties, to help commercial real estate firms stay ahead of market trends.



## Residential real estate applications

In the residential sector, agentic AI reshapes the customer journey. Virtual assistants provide 24/7 support and guide buyers or renters through property searches. Generative AI enhances virtual staging, which enables buyers to visualize different interior designs. Predictive models help homeowners and investors determine the best times to buy, sell or renovate. Robotics and AI-powered smart home technologies automate climate control, security and energy management systems, to enrich daily living experiences.





## Closing the technology adoption gap in real estate

The pandemic accelerated digital transformation in the real estate industry, which started to adopt tools such as virtual tours, online transactions and AI-powered analytics. This shift signals the sector's readiness for advanced solutions like agentic AI and robotics, which will address current inefficiencies and unlock new possibilities.



## Opportunities and use cases for generative AI, agentic AI and robotics

Intelligent technologies are creating transformative opportunities across the real estate landscape.

### 1. **Design optimization**

Generative AI allows developers to explore several alternative design concepts for interiors and exteriors, to assess their functionality and aesthetic appeal. Developers can tailor spaces to client preferences, and simulate sustainable designs that align with environmental standards.

### 2. **Project planning and risk mitigation**

Agentic AI leverages historical data from global projects to minimize risks and improve resource allocation during planning. It identifies challenges early, and offers data-driven solutions. For example, AI predictions have mitigated material shortages and delays, and created huge cost savings by improving project planning and risk management.

### 3. **Financial operations and lease management**

Generative AI and natural language processing automate financial tasks such as processing lease agreements, extracting data from invoices and managing payment schedules. These tools ensure accuracy, compliance and efficiency while also enhancing revenue forecasting and decision-making.

### 4. **Smart construction and urban planning**

Robotics and AI accelerate construction timelines and enhance precision. Generative AI helps urban planners simulate developments, to optimize land use and infrastructure for sustainable projects and future-ready environments.

### 5. **Market forecasting**

By analyzing extensive datasets, agentic AI provides more accurate market predictions. It helps investors and developers anticipate price trends, emerging hotspots and evolving consumer preferences, to make smarter investment decisions.



## Predictions for the years ahead

Generative AI, robotics and agentic AI will redefine the real estate industry, by fostering new creativity, efficiency and data-driven decision-making. Both commercial and residential sectors will benefit from innovations in predictive analytics, generative design and automation. The companies that adopt these technologies first, will become leaders in creating smarter, more sustainable environments.

### Conclusion

The integration of generative AI, agentic AI and robotics marks a transformative shift in real estate. These tools will streamline your operations, enhance customer experiences and optimize investments. Today's digital revolution will create limitless potential for growth and innovation, and real estate professionals who adopt these advances will position themselves as leaders in the future of real estate.



## Prediction 06

# Digital spatial models enhance urban estate planning and development





Urban planning in the 21st century will face unprecedented challenges. As cities grow and evolve, the complexity of managing urban environments is already increasing, with issues such as land use allocation, grant of title, jointly owned property, decentralized market information, and entangled processes with multiple stakeholders. This article explores how platforms built around generative AI (GenAI), holistic processes, and a flexible data ecosystem can help address these challenges and enhance the planning of urban environments.



## Challenges in modern urban planning

Modern urban planning is a multifaceted discipline that involves numerous stakeholders, including government agencies, private developers, community groups and environmental organizations. Stakeholders often operate with their own objectives and timelines, which can create conflicts of interest or timing and lead to inefficiencies. Significant challenges that impact development projects include:

- **Fragmented data sources:** urban planners must integrate data from various sources, which are often incompatible or incomplete.
- **Stakeholder misalignment:** differing priorities and lack of communication among stakeholders can lead to conflicting decisions and delays.
- **Complex regulatory environments:** navigating the myriad local, regional, and national regulations adds layers of complexity to urban planning projects.
- **Sustainability concerns:** balancing economic growth with environmental sustainability is a persistent challenge.



## Integrated digital environment

To address the above challenges, a new concept is gaining traction – the integrated digital environment (IDE), built around a digital model of a city. The IDE creates a comprehensive and dynamic digital twin of the urban area, using key metrics such as real estate market trends, road traffic and social-infrastructure-related information – and powered by GenAI.

In itself, this digital model has limited value, until it's complemented by a robust set of processes and data flows. These can build stakeholder commitment to the IDE and make it an important tool for shared planning, data consolidation, and decision-making.





## Case study

To demonstrate how effective the IDE approach could be, Deloitte built a GenAI-powered digital model for Riyadh – a vibrant city in Saudi Arabia that embraces its rich history while striving to become a modern hub for tourism and business.

**Background:** Riyadh is currently undergoing extensive development activity, as the city transforms into a global destination for tourism and business. With several mega-events on the horizon, including EXPO 2030 and FIFA World Cup 2034, the city must plan for housing needs, tourist inflows and the required infrastructure – a hugely complex process that can benefit from adopting an IDE approach powered by GenAI.

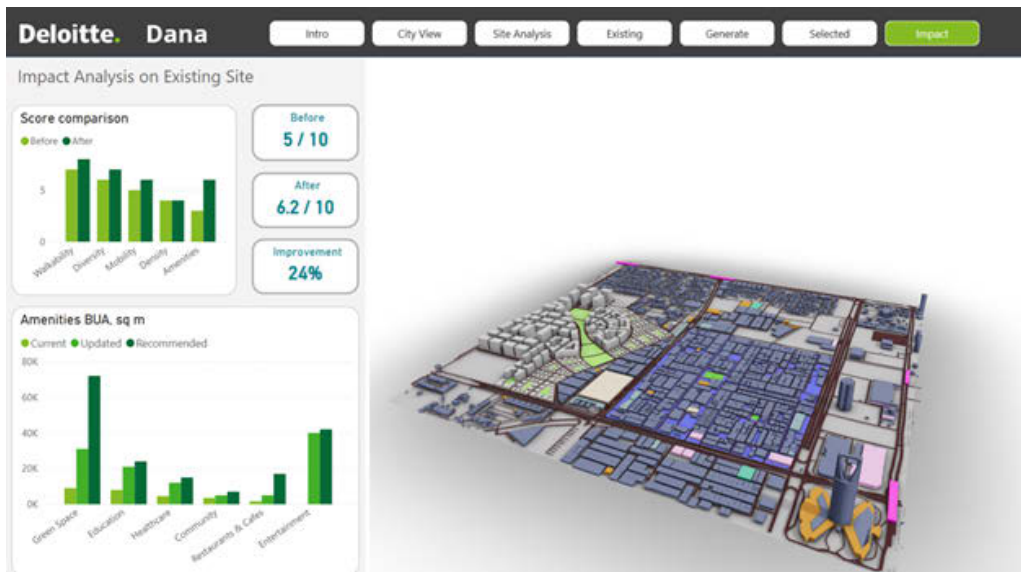
**Scenario analysis:** As part of the case study, a 905,000 sq m plot in the Ar Rahmaniyyah district of Riyadh was selected, to evaluate the potential options for developments on the site. These options were assessed against a range of parameters, including:

- |   |   |
|---|---|
|  <b>1. Livability metrics:</b> <ul style="list-style-type: none"> <li>a. Population density (dwellings per hectare)</li> <li>b. Infrastructure provision (educational, healthcare, retail, leisure)</li> <li>c. Walkability index</li> <li>d. Provision of green areas</li> </ul> |  <b>2. Financial metrics</b> <ul style="list-style-type: none"> <li>a. Sufficiency of demand</li> <li>b. Financial feasibility for the commercial developer</li> </ul> |
|---|---|

In the broader application of IDE, the parameters can be customized and benchmarked using local and global target values, including livability and overall sustainability metrics, as well as financial measures of profitability. The tool can incorporate assessments of dwellings per hectare for existing districts, and 'sandbox' different scenarios to balance financial performance with city-level integration. Using GenAI, the system conducts assessments based on input from a data lake that contains market transactions, infrastructure information, reviews, and other relevant data.

**Outcome:** The analysis of the single plot using multiple parameters led to more than 2,500 options being generated in just minutes, and which can easily be assessed against both strategic and financial objectives. The scenarios can be also tested for a broader city-level assessment of available land and/or redevelopment opportunities. The outputs and user interfaces can be customized to allow stakeholders the flexibility to gain unique insights that reflect their own specific requirements.





## Conclusion

The integration of GenAI and holistic processes into urban planning represents a significant advance in managing the complexities of modern cities. By creating an integrated digital environment, planners and developers can overcome the challenges of fragmented data, stakeholder misalignment and regulatory complexity, gain rich and holistic insights, and ultimately make tomorrow's cities more sustainable and efficient.



## Prediction 07

**Life sciences partnerships and collaborations: how life sciences clusters drive economic value in the United Kingdom**





## **The driving force behind growth of the life sciences sector**

The UK has a prestigious and highly productive life sciences sector, generating a large share of global scientific and technological innovation. This is due, in part, to the UK's strong academic base, which includes four of the world's top ten universities for science and medicine.<sup>1</sup> The UK also benefits from strong partnerships and collaborations with the many teaching and research hospitals that are part of the National Health Service (NHS). Currently, life sciences organisations employ some 300,000 people across the UK with the expansion of new and existing investment zones projected to create nearly 70,000 additional jobs by 2035.<sup>2</sup> Together these factors position life sciences as a critical vehicle for UK economic growth as well as a key plank in the Government's 'growth' strategy.<sup>3</sup> This matters for UK developers. The UK real estate market has faced economic headwinds. Geopolitical uncertainty and contractor insolvencies have also impacted project viability and costs. These headwinds began to abate somewhat thanks to the Bank of England announcing interest rate cuts towards the end of 2024, but this will take some time to be felt in the plans and pockets of developers. The predicted growth of the life sciences sector should attract significant investment – crucial in building the required research and development (R&D) and manufacturing infrastructure that is needed.





## Drivers for life sciences development

The life sciences industry comprises a wide range of companies operating in the research, development and manufacturing of pharmaceuticals, biotechnology, medical devices, biomedical technologies, and other products that improve lives. The commercial drivers of growth in this sector include:

- **Demand** – life science schemes have been historically undersupplied.<sup>4</sup> Depending on the location, demand for such space varies but there are opportunities to capitalise on this growing sector. The commercial real estate needs of these companies are similarly varied and complex, from small generic laboratories to large customised, quality-controlled spaces.
- **Flexibility** – Life sciences are an alternative occupier market which can offer portfolio diversity. This can be beneficial to target a different and wide range of life sciences organisations.
- **Utility** – supporting life sciences development in turn supports the growth of the economy and resilience of the local communities concerned, consequently the life sciences sector has been identified as among the most valuable and strategically important to the UK economy.

Other drivers of demand include demographic shifts that not only affect the health ecosystem but also the social determinants of health, like the quality of housing and education and employment services – both in terms of who needs these services, where are they needed and who is available to provide them. Specifically:

- **Growing population** - the population of the UK is growing and is projected to reach 70 million by the end of 2026 (up from 67.6 million in 2022).
- **Ageing population** – the UK population is also ageing, with almost 13 million, or 19 per cent, of UK citizens aged 65 or above in 2022. This number is expected to exceed 22 million, or 27 per cent, by 2072, presenting significant future healthcare challenges for the nation.<sup>5</sup>
- **Increasing number of years spent in ill health** - increasing the demand for new and existing medical treatments and technologies.<sup>6</sup>

Older citizens also tend to have more complex healthcare needs, often involving multiple, overlapping conditions. Given the importance of medical research to solving the challenges of living a longer life well, this will be another potent driver of demand for life sciences and healthcare solutions, which in turn will intensify demand for suitable spaces from which to develop the innovations needed to support an ageing population.<sup>7</sup>



## The economic opportunities in meeting this demand

In 2023, life sciences contributed £108 billion to the UK economy.<sup>8</sup> And, as one of eight priority sectors included in the Government's new 10-year national growth strategy<sup>9</sup>, space will be needed for the sector to grow. In Deloitte's Winter 2024 London Office Crane Survey<sup>10</sup>, we recorded new construction starting on almost 1.3 million square feet of new premises for use by life sciences firms. This confluence of demand and supply should therefore see life sciences projects representing a significant and increasing share of future commercial real estate development activity in the UK.

The property needs of life sciences companies are as varied and complex as the sector itself, with demand for everything from small generic laboratories to large, highly customised, quality-controlled spaces. Life sciences landlords are just as diverse, ranging in size from large real estate

investment trusts (REITs) and real estate developers to smaller building owners repurposing their holdings into laboratory space. Nevertheless, while the commercial real estate opportunity presented by life sciences is significant, firms seeking to service the sector will also need to navigate more complex lease arrangements as well as the bespoke needs of clients who can require a blend of research, manufacturing and office space.

Successive UK Governments have described the life sciences sector as among the most valuable and strategically important to the economy, as well as being critical to the country's health, wealth, and resilience.<sup>11</sup> A new £520 million fund for new Life Sciences Innovative Manufacturing in the UK is aimed at securing a promising future for the sector.<sup>12</sup>



## The growing importance of life sciences clusters

A common theme across the most economically developed countries, is the presence of a thriving network of life sciences and healthcare clusters. Life science clusters bring together industry, investors, academia, healthcare providers, universities and life sciences R&D and manufacturing hubs. Together they drive growth and productivity by facilitating networking and collaboration, supporting research, innovation, skills development and training as well as creating space for innovators to undertake 'high-risk' work\* in a relatively low-risk environment.<sup>13</sup>

Such clusters are increasingly recognised for their contribution to GDP growth and improved healthcare outcomes for citizens. Local governments, which are responsible both for infrastructure planning and in attracting and supporting inward investors and development, have a critical role to play in aiding the development of the buildings and infrastructure required to grow the UK's network of life science clusters. These benefit the health and wealth of the communities they serve, through better services, job creation, education and talent development.

\* High-risk work defined as the utilisation of chemicals and other hazardous material as well as compliance with stringent regulatory requirements to prove safety and efficacy. This means that only a small proportion of drugs that enter phase 1 get approved for use in the general public.



## A vibrant and diverse network of life sciences clusters operate across the UK

The UK comprises multiple life science clusters of varying sizes, ranging from small, localised Life Science Opportunity Zones (LSOZ) to growth clusters like those in Manchester, Yorkshire and Newcastle. The UK also boasts well established and globally competitive 'super clusters', such as those located in the so-called 'golden triangle' of London, Oxford and Cambridge. These three cities are well connected by public transport and provide fertile ground for collaboration, talent and knowledge exchange. They also rank individually as three of the top dozen global life sciences clusters in the world (London #3, Cambridge #10 and Oxford #11).<sup>14</sup>

In London, Canary Wharf's 20 million square feet of office, retail and residential space is home to a growing life sciences community. Organisations such as Genomics England, the Medicines & Healthcare Products Regulatory Agency, the UK Health Security Agency and the General Pharmaceutical Council are all located within walking distance. This will be added to by a single 823,000 square feet "vertical campus" developed by Canary Wharf Group and Kadans, which when completed is expected to be the largest life sciences development in Europe. There are also plans and outline consent for an additional 2.6 million square feet of life sciences buildings.<sup>15</sup>



## Life sciences present a dynamic and compelling case for investment

To provide the quality of real estate space that life sciences require, investment is key. Investor confidence and capital allocations trended upwards in 2024 due to the availability of funding for life sciences companies, the strong show of Government support for future investment, as well as the stabilisation of volatile interest rates. The UK life sciences sector also leads Europe in attracting venture capital funding, receiving £11.7 billion from 2020 to 2023.<sup>16</sup> Moreover, UK life sciences companies attracted £2.7 billion in venture capital backing between Q1 and Q3 of 2024<sup>17</sup>, the second highest level over the past decade.

The future growth trajectory of UK life sciences hinges on the complex interplay of enabling factors and potential barriers. Besides venture capital, firms need to be able to access a skilled workforce, other innovative streams of funding and business models, a supportive regulatory environment and pseudonymised patient data from the NHS, all of which are important elements of this growth story.





## So, why is London currently the most sought-after life sciences cluster in the UK?

London has more than ten world renowned research hospitals and research centres, together with outstanding access to a large and diverse population to support robust clinical trials, with 46 per cent of its residents identifying as ethnically Black, Asian, Mixed, or 'Other'.<sup>18</sup> As a result, London's life sciences industry has been boosted by a wave of significant investment and plans to develop more than 6.2 million square feet of new laboratory space by 2032.

Specific examples include:

- **Francis Crick Institute**, which brings together 1,500 scientists under one roof.
- **Imperial West**, which co-locates researchers and businesses across its 25-acre site.
- **UCL East**, a cross-disciplinary enterprise and innovation centre focused on health and biological technologies, built on the site of the Queen Elizabeth Olympic Park.
- **Institute of Cancer Research**, which is creating the world's second largest cancer research campus in south London.<sup>19</sup>
- **Mitsui Fudosan** has recently announced its participation in the redevelopment of the British Library. This will be the global real estate companies first foray into a life sciences scheme and has positioned investments into alternative asset classes as a key strategy for 2025.<sup>20</sup>

Altogether, these developments are helping to make London one of the world's most sought-after locations for life sciences businesses.

London's status as a global life sciences "super cluster" was confirmed in a recent report<sup>21</sup> that benchmarked life sciences activity in cities around the globe in five key dimensions: research innovation, health research environment, talent ecosystem, investment environment, and business environment. The report ranked London third out of 20 cities, with Boston and New York ranked first and second respectively, making it the highest ranked European city, with a top five ranking across all five metrics. It was noted that London excels in the areas of health research and investor concentration; and second overall in Europe for the number of clinical trials conducted. The report called out 'London's thriving ecosystem of over 2,400 life sciences companies, and its ability to attract talent with its excellent international connectivity, commitment to

sustainability, low operational risk, and highquality talent pool at competitive labour costs'.<sup>22</sup>

Looking forward, London is receiving a further boost from the growth in AI-based drug discovery and is home to more life sciences AI and data companies than anywhere else in the world. Together, these firms have raised more than £2.1 billion in venture capital investment in 2024<sup>23</sup>, supported by leading research centres such as the Alan Turing Institute and Google's DeepMind. Additionally, the UK's largest biopharma company, GSK has committed to London with a new headquarters location which opened in 2024 that focuses on collaboration, sustainability and employee wellbeing.<sup>24</sup>



## What's next?

While there are challenges to this growth story – including the need to increase pace and scale of adoption of innovation in the NHS, the need to develop homegrown academic and technology skills to address the demand for talent, as well as the problems of conducting trials at a time of budgetary pressure – we feel there is significant cause for optimism. The current strength of the UK life sciences ecosystem, the positioning of London as a key destination for innovation, talent and investment as well as the UK Government's decision to include life sciences as a strategic growth area for the nation all bode well for the future development of the sector. Likewise, they also give further credence to the positive findings outlined in the Winter Crane Survey, which highlighted life sciences as a significant opportunity for UK developers.<sup>25</sup>

Life sciences innovations are vital for a nation's wellbeing and economic security. And, driven by shifts in technology, health policy and investment, the sector finds itself at a pivotal moment, with efforts focused on accelerating innovation, enhancing healthcare resilience, strengthening pharmaceutical supply chains and investing in advanced technologies all beginning to bear fruit. Trusted partnerships between industry, academia and healthcare providers are an essential feature of the UK's health and wealth strategy. Looking to the future, with levels of investment, skill building and job creation all in the ascendent, we predict the UK life sciences sector will become an increasingly popular choice for real estate developers in the clusters identified, offering significant opportunities for firms to diversify their portfolios and contribute to a national success story.

# Endnotes

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*The authors would like to thank Caroline Waldock and Robert Stubbs for their collaboration on this article.*



## Bonus Prediction

**Innovations and legacy of the Olympic and Paralympic Games Paris 2024 for sustainable, resilient and inclusive urban developments**



**Introduction** Our management consulting partnership with the International Olympic Committee is embedded at the heart of the Games operations, redefining the complex ecosystem that supports the Olympic Movement and enhancing the strategy and governance that underpin the Games. Through this collaboration, Deloitte helps empower the Olympic Movement to reach more people around the world — and to build a lasting, positive impact for host cities.

Paris 2024 provided an opportunity to demonstrate how the immediate needs of a major global event — including large-scale infrastructure such as housing, transport and venues — can be designed with long-term legacy in mind. As well as delivering management consulting services, Deloitte has been focused on sustainability, diversity, equity and inclusion, and athlete wellbeing as part of this partnership. In this piece, we look at how the ambitions set by Paris 2024 translate into a broader vision for the city, and what lessons other cities can draw when preparing for future large-scale events.





## Leveraging infrastructure

A key decision for this edition of the Olympic and Paralympic Games was to maximize the event's use of existing infrastructure. The Village des Athlètes occupied 52 hectares in Saint-Denis, Saint-Ouen-sur-Seine and L'Île-Saint-Denis as new reusable infrastructure to complement the existing Olympic infrastructure such as stadiums and other venues. By reimagining current facilities and reusing new amenities for a different purpose after the Games, Paris significantly reduced the potential environmental impact and costs of the Olympics and Paralympics, demonstrating a key strategic principle for future urban planning.



## Promoting a circular economy

The mega-event projects emphasized the importance of a circular economy. In constructing the Olympic Village, 94% of materials<sup>1</sup> were recovered from the site's deconstruction, to showcase the importance of material recycling and reuse. Furthermore, once Paris 2024 finished and athletes departed, at least 75% of materials were reused, to transform the Olympic Village into housing and offices. This process sets a precedent for future Olympic and Paralympic Games and highlights the feasibility of large-scale material recycling and reuse.



## Integrating low-carbon solutions

Paris 2024 was committed to carbon reduction. The Olympic Village achieved a 47% reduction in carbon impact compared to 2019 standards<sup>2</sup>, by using design and construction methods such as ultra-low carbon concrete, geothermal energy, timber primary structure and façades, and efficient ventilation systems. This focus on low-carbon solutions provides a roadmap for future urban projects aiming to combat climate change.





## Enhancing biodiversity

Paris 2024 prioritized biodiversity, and created balanced, resilient ecosystems in the Olympic Village and new competition sites, by integrating green spaces and preserving local species and habitats. These measures [continue to] enhance urban living conditions and promote environmental resilience.



## Inclusive urban spaces

Inclusion and accessibility were core components of the strategy, and a priority was to make urban spaces accessible to everyone, including individuals with disabilities. This has shown that, by building inclusion into major events, cities can become more accessible and welcoming to a wider range of residents and visitors.



## Community and economic benefits

Paris 2024 brought significant social and economic benefits to the local community. Construction sites employed over 4,000 workers<sup>3</sup> who were in professional reintegration programs including individuals far removed from the job market, residents of priority neighborhoods, apprentices facing difficulties in securing training opportunities, and people with disabilities. Together, they contributed more than 2.8 million hours of work.<sup>4</sup> Moreover, 36% of contracts were awarded to SMEs or social enterprises<sup>5</sup>, which provided immediate economic benefits for the city, increased local capacity, and fostered long-term community development.



## Strong public-private partnerships

Public-private sector collaboration emerged as a crucial element, and strong partnerships were built on three key pillars. First, effective communication among stakeholders was essential. Second, all partners shared common objectives, including ambitious and precise specifications across sustainability, accessibility and reversibility elements. Third, strong program governance facilitated innovation and cost management.



## Future directions and predictions

These examples show how Paris 2024 successfully put its guiding vision and principles into practice. But they also exemplify industry trends and new directions, for some key predictions.

### 1. **Maximizing infrastructure reuse**

Future urban development will increasingly prioritize the reuse and adaptation of existing infrastructure, demonstrating both financial and environmental prudence.

### 2. **Advancing circular economy practices**

We will see a growing emphasis on material reuse and recycling. The Paris 2024 model shows how these practices can be adopted, at a local and global scale, to promote sustainability.

### 3. **Implementing low-carbon innovations**

Future projects will adopt ultra-low carbon materials and renewable energy sources more widely. This will be essential for meeting climate goals and ensuring energy-efficient city designs.

### 4. **Enhancing biodiversity in urban planning**

Integrating biodiversity into urban environments will become standard practice. Cities will focus on creating green spaces that promote environmental resilience and offer natural recreation areas for residents.

### 5. **Promoting inclusive urban design**

Urban spaces will be designed to accommodate all residents, including those with disabilities. Inclusive design principles will shape future developments to be universally accessible and welcoming.

### 6. **Strengthening community partnerships**

Projects will increasingly involve local businesses and communities, recognizing their role in creating sustainable urban environments. This will build local capacity, and ensure economic and social resilience.

### 7. **Adopting program management best practices**

Integrating sustainability, accessibility and reversibility from the start will become the norm. By establishing ambitious specifications and public-private governance, cities will facilitate innovation and execution at pace and within budget.

## Conclusion

The legacy of the Olympic and Paralympic Games Paris 2024 will be its significant influence on the construction of future cities. Through our management consulting expertise, Deloitte helped translate the vision of Paris 2024 into actionable strategies — from infrastructure planning to sustainable development. The innovations and practices implemented offer a blueprint for building sustainable, resilient urban environments. By applying these lessons, we can address global urbanization challenges, and ensure that large-scale events positively impact the cities of tomorrow.





# Endnotes and additional sources

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## Endnotes

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## Bonus Prediction

□ **Next-generation leaders may accelerate real estate investment in alternative properties**



US commercial real estate investing opportunities favored core property sectors for decades. But recent market forces and new leadership could knock down long-established pillars.

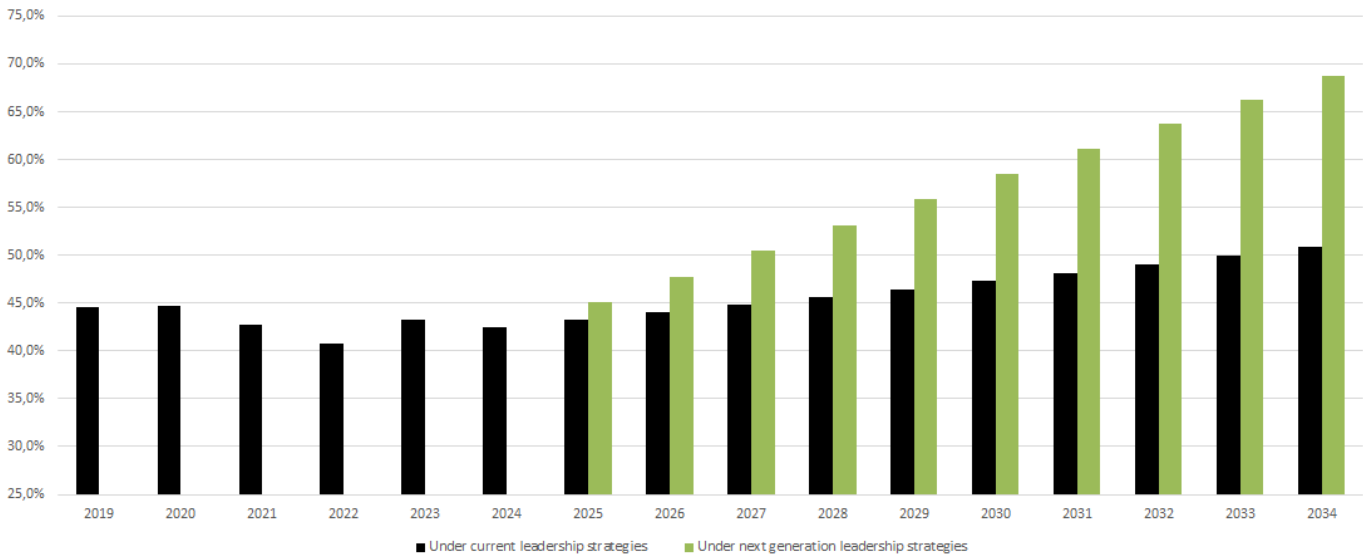
Traditionally, commercial real estate (CRE) owners and investors built a portfolio of properties by selecting from a wide array of high-quality assets defined within four core property types: office, industrial, retail, and apartment. Having a diversified portfolio of these core assets provided consistent income from rental growth, sustained value appreciation, and minimal variability in performance.<sup>1</sup> This approach was generally enough to meet investor objectives and even outperform other financial assets like equities or treasuries when adjusting for risk.<sup>2</sup>

Not anymore. The emergence of alternative property sectors has begun to topple long-established pillars for CRE portfolio construction. At the same time, [more of the industry's top](#)

[decision makers are approaching retirement](#), challenging the next generation of leaders on ways to prepare to adapt from conventional strategies.

Over the next decade, the emergence of niche property types, coupled with next-generation leaders accelerating nontraditional portfolio construction decisions, are expected to result in fundamental shifts in real estate investment. The Deloitte Center for Financial Services predicts that by 2034, the value of alternative properties will grow at a 15% compound annual growth rate (CAGR) to account for nearly 70% of industry portfolio values, an increase from just over 40% today ([About this prediction](#)) (figure 1).

Figure 1: alternative properties could account for nearly 70% of portfolio values by 2034  
Projected growth of investment in alternative property types, 2019–2034



Source: DCFS analysis of NCREIF and Nareit data, accessed Q3 2024





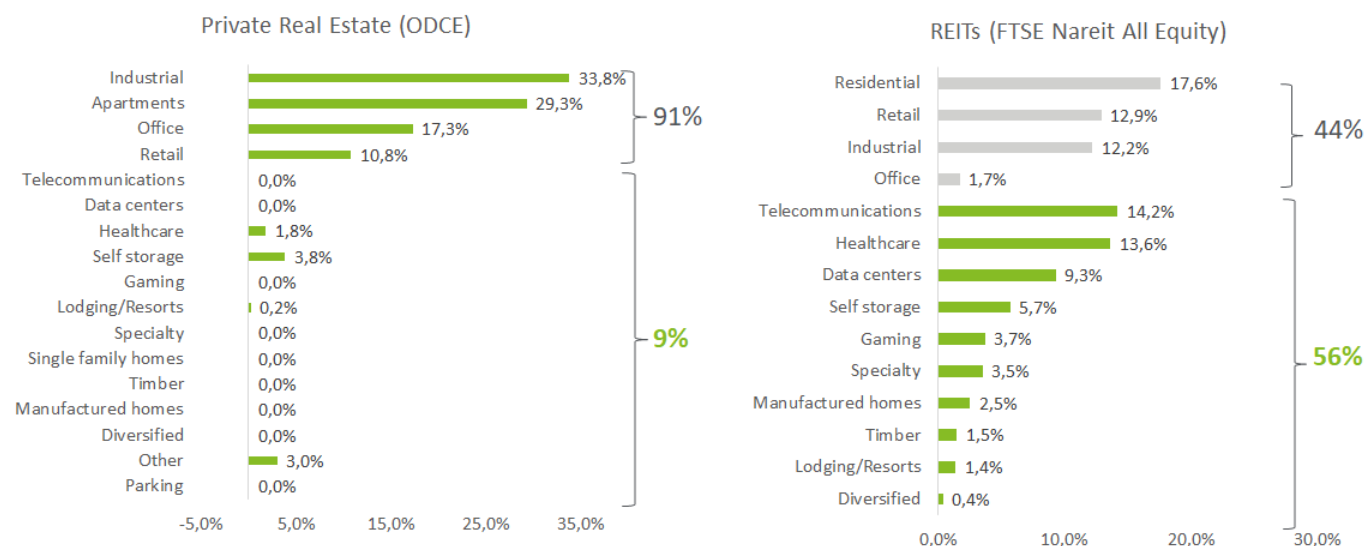
## The shift toward alternatives is already underway

Alternative property types—data centers, cell towers, life sciences, health care, self-storage facilities, single family rentals, senior housing, and student housing, among others—are pushing some real estate leaders to realign their long-held portfolio construction proclivities. Alternatives have grown at a 10% CAGR, from US \$67 billion in 2000 to over US\$600 billion by 2024.<sup>3</sup>

Alternatives have also outperformed traditional properties over the past decade, achieving 11.6% annualized returns compared to 6.2% for traditional property types.<sup>4</sup>

Public real estate investment trusts (REITs) have spearheaded the adoption of alternatives, enabling access to a wide range of real estate assets while the private real estate market has approached allocations with more caution. REITs have increased their allocation to alternatives in the public markets, rising from 26% in 2000 to over 50% in 2024.<sup>5</sup> Meanwhile, the original NCREIF Fund Index—Open End Diversified Core Equity (ODCE), an index of 25 private funds—did respond to the growing demand for some alternative types following the pandemic by adding these asset classes to the index, but core property types still make up over 90% of the total value (figure 2).<sup>6</sup>

**Figure 2: public real estate is currently driving the shift toward alternatives**



Source: NCREIF ODCE ending market value as of 2024 Q4; Nareit All Equity Index data as of October 10, 2024.

*... advances in technology, demographic shifts, and housing affordability could make alternatives a long-term, durable asset class.*

In the current environment of elevated interest rates and vacancies, some properties within core sectors are facing structural challenges. With capital locked up in aging assets facing value erosion, some investors could pivot to alternatives. Some private funds that have substantial capital reserves are acquiring existing REITs, their underlying assets, and operating platforms.<sup>7</sup> Following the take-private of American Campus Communities, the last of the four public student housing companies have

been privatized.<sup>8</sup> This follows the previous acquisitions of EdR by Greystar, Campus Crest by Harrison Street, and GMH Communities by American Campus Communities.<sup>9</sup>

Meanwhile, advances in technology, demographic shifts, and housing affordability could make alternatives a long-term, durable asset class. Artificial intelligence and 5G innovations are spurring investor interest in data centers and cell towers.<sup>10</sup> In the United States, the 75+ age group will grow to 40 million by 2040<sup>11</sup>, underpinning an expected demand for senior housing facilities and life sciences properties. Meanwhile, a persistent [lack of affordable housing](#) has boosted consumer interest in self-storage and institutional-grade manufactured housing.



## The next generation should bring different philosophies

In Deloitte's [2025 commercial real estate outlook survey](#), which polled C-suite real estate leaders and their direct reports, we asked which property sectors could present the greatest opportunity going forward. Respondents age 40 or younger selected alternative property types, nearly 10% more frequently than respondents over 40. Since [nearly 60% of industry leaders are expected to hit the age of retirement](#) within the next decade<sup>12</sup> an influx of next-generation leaders will be stepping into these roles. This could accelerate the shift toward alternatives.

However, it will likely take time to reallocate capital across portfolios from core properties to alternatives. Currently, elevated interest rates and uncertainties in the global economy have made shifts in portfolio strategy more difficult to execute.<sup>13</sup> Should conditions around real estate dealmaking, lending, and fundamentals continue to improve—as predicted by nearly 90% of global real estate leaders for 2025—reallocation opportunities could arise as the next wave of leaders in real estate prepares to take charge.<sup>14</sup>



## About this prediction

Ownership of commercial real estate assets in the United States can be split into two domains: public and private. Combining these two domains yields a representative portfolio allocation of owners and investors across US commercial real estate.

At the end of 2024, core property types accounted for 58% of total US commercial real estate values, while alternatives were 42%. Both of these were notable adjustments from a decade earlier, when the split was 65% and 35%, respectively.<sup>15</sup> Following similar patterns of growth for the upcoming decade would yield a split of 49% core and 51% alternatives by 2034, making it the first year alternatives in this baseline case would exceed the value of core assets.

However, if we adjust the growth in alternative investments by the propensity for next-generation leaders to favor alternative assets over legacy core strategies, which we estimate is approximately +10% more often based on responses to our 2025 commercial real estate outlook survey, the shift toward alternatives could accelerate. Under this next-generation leadership strategy scenario, alternative property types could grow to nearly 70% of all owned US commercial real estate over the same time frame.

Recent investor patterns point toward a couple of key subsectors within alternatives as potential drivers of growth. Through the end of 2024, active managers were most frequently reallocating funds toward the digital economy, including data centers and telecommunications, and health care sectors.<sup>16</sup> In the 2025 commercial real estate outlook survey, digital economy properties were ranked second as the asset class with the greatest opportunity for investment and ownership through 2025.<sup>17</sup>





## Navigating the shift toward alternative properties

As owners and investors pivot their portfolios toward emerging sectors, they could consider focusing on:

1. **Active management and experienced partnerships**

Investors should be aware of operational, regulatory, and industry-specific nuances to managing these property types. Partnerships like joint ventures could be an inroad that may enable less experienced partners for certain asset classes, with available capital, to collaborate with experts who have specialized knowledge.

2. **Regional supply and demand gaps**

Regional differences could impact availability; some areas may lack assets, others may face regulatory hurdles. Energy availability and energy costs can be key factors, especially for properties like data centers.

3. **Alignment with broader strategic goals**

Alternative sectors have offered significant yields lately.<sup>18</sup> But investors may consider choosing allocation strategies based on their long-term potential.

4. **Balancing alternatives with core property types**

A shift to alternatives does not mean ditching core assets entirely. Having a diversified balance of core and alternatives could help mitigate potential volatility risks.

Alternative property types are relatively immature assets compared with the behemoth core sectors that have driven traditional commercial real estate ownership. It will likely take a collaborative effort among partners, leaders, and the next generation to bring these alternatives to the mainstream.

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*Deloitte shall not be responsible for any loss sustained by any person who relies on this article.*

# Endnotes

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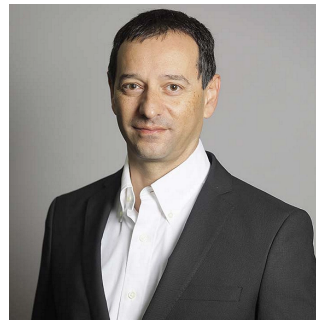
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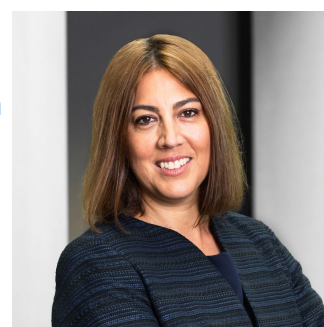
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