Real Estate Practice

The outlook for real estate and infrastructure in a changing world

Demand for more global infrastructure investment creates opportunities for real estate players. McKinsey's Adrian Kwok explores how the two industries can work together in a more dynamic environment.

The global infrastructure landscape is evolving and in need of massive investment. A McKinsey report projects that $106 trillion in infrastructure investment will be required through 2040 to meet demand for new and updated assets and services that support long-term economic growth, societal well-being, and modern industries. What role do real estate organizations play in this environment? In a conversation with McKinsey Global Publishing's Eric Quiñones, McKinsey Associate Partner Adrian Kwok explains how the real estate and infrastructure industries intersect, how they can collaborate, and how they can innovate with AI. An edited version of their conversation follows.

Eric Quiñones: Why is it important for real estate developers, operators, and investors to understand the insights from McKinsey's infrastructure report?

Adrian Kwok: The line between real estate and infrastructure is increasingly blurred. Take some of the asset classes we examine in the report, such as warehousing for logistics, data centers and digital infrastructure, hospitals, and affordable housing. They have always been classified as real estate because they are structures with people and physical assets in them, but they are increasingly considered infrastructure as well, given their role in forming the backbone of modern society.

Many of the macro trends we discuss in the report have implications for both sectors. Global population growth and rapid urbanization are driving the need for massive investments in new infrastructure and real estate development—and in modernizing or repurposing aging assets. Aging populations are increasing the demand for senior housing. Global decarbonization targets and greater demand for renewable-energy sources are equally on the minds of real estate and infrastructure professionals.

One of the major themes of the report is the growing intersection between infrastructure verticals like transportation, energy, and digital. That's also happening in real estate, where there is more interplay between different real estate asset classes—for instance, how the shift to hybrid work creates an opportunity to convert underutilized commercial office space into residential units.

In turn, there are more opportunities for infrastructure and real estate organizations to work together in a more expansive ecosystem. You can't do city planning without considering the right balance of commercial real estate versus residential real estate, the right transportation to get people to and from work, and the right amount of green space to make the environment nice to live in. You can't have a data center without enough access to power and water to cool it. You can't build a residential community without reliable access to power, waste disposal, and clean water. You can't build commercial developments in remote areas without access to reliable internet connections.

Eric Quiñones: The report emphasizes that the traditional definition of infrastructure—roads, bridges, and ports—is expanding to incorporate new elements such as data centers and fiber-optic networks. Is the real estate sector evolving in similar ways?

Adrian Kwok: Yes. Real estate is seeing growth in technology and services that maximize the value of the assets themselves. For instance, how do you make buildings more efficient from the standpoint of cooling, lighting, or security access? The increased focus on technology and services applies in both the real estate world and the infrastructure world. Companies that previously invested only in hard physical assets, like a data center, are now looking at ways to get into maintenance or other services or to invest in power assets that are required to run those centers.

Eric Quiñones: What steps should real estate organizations take to adjust to this more dynamic environment?

Adrian Kwok: Historically, the real estate sector has been seen as slower to evolve relative to other sectors in the economy. But it seems now that the pace of change is accelerating. For instance, the move to hybrid work has created significant shifts in demand for commercial versus residential real estate in city centers. Another example is how the rise of AI is accelerating demand to repurpose properties such as older federal government sites to turn them into data centers.

Within commercial real estate, as many employers try to get people back into the office, they realize that workers have much higher expectations for their work environment. So we're seeing more companies wanting to trade up to higher-quality offices, which means upgrading older, lower-quality spaces or developing new properties.

As new opportunities develop across the real estate and infrastructure sectors, organizations will need to be more creative in terms of funding sources throughout the ecosystem. They will also need to move quickly to embrace the latest technologies to build faster and more efficiently.

Eric Quiñones: How will technology, specifically AI, help real estate organizations meet the demands they are facing?

Adrian Kwok: I would say there's almost no limit to AI's impact on infrastructure and real estate—and there is a lot of innovation happening in both spaces.

AI can play important roles throughout the entire life cycle of an infrastructure asset or a real estate asset. Even before you put a single shovel in the ground on a new power plant, housing complex, or data center, AI can crunch tons of data and run scenarios to improve capital planning. It can make scheduling for major capital projects more efficient, which can help offset some impacts of labor shortages that are causing delays and increasing costs in infrastructure and real estate development.

In terms of services, AI can help with functions like operating energy-efficient lighting, booking space in office buildings, providing more secure building access, and improving tenant experience overall by being more responsive to feedback and needs. And AI tools for predictive

maintenance can enable a bridge or a building to operate much longer before it needs a major repair.

This is still relatively new technology, and a lot of applications are still in experimental phases with organizations at the forefront. AI use should pick up quickly across the full real estate sector.

Eric Quiñones: Are there other areas where real estate and infrastructure organizations will find more opportunities for collaboration?

Adrian Kwok: The report projects the need for $16 trillion of global investment in social infrastructure, which includes hospitals, affordable housing, educational facilities, and civic buildings. These types of assets bridge the real estate and infrastructure industries. Demand is growing because of growth in the global population and aging populations in the United States and Europe. New development is needed in many parts of the world, and many existing assets are aging and in need of improvement.

Eric Quiñones: What role will the private sector play in meeting this demand?

Adrian Kwok: The role of private capital in infrastructure is one of the big themes of the report. The value of dedicated infrastructure assets held by private-capital firms has tripled since 2016. One of the reasons is that we're increasingly operating in a dynamic world where private investors can sometimes respond faster, creating opportunities for private–public partnerships to fill gaps in infrastructure needs or for private investors to fund projects themselves. In the social sector, an example would be public university systems collaborating with private investment funds to build student housing.

In general, if you're a government that recognizes a need for additional infrastructure or different types of real estate in your geography, you have more options now to unlock that investment beyond adding it into your annual budget. You can go after partnerships with the private sector. You can use tax incentives, which we're seeing a lot now as more governments recognize the importance of bringing in data center development. Private capital will continue to be an increasingly important source of funding for both real estate and infrastructure investment.

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