

Logistics giants muscle in on data centres

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By Florence Chong

Demand for data centres is booming. Now the world's biggest logistics players have ambitions on the sector.

Florence Chong reportsThe world needs more data centres. It is a simple truth not lost on institutional investors – the asset class is one of the most in demand from real estate and infrastructure fund managers alike.

Demand in the US alone – measured by power consumption to reflect the number of servers a data centre can house – is expected to reach 35GW by 2030, up from 17GW in 2022, according to McKinsey.

In the US, data centres can cost as much as US\$2,400 per sqft to build compared with US\$150 per sqft for a traditional warehouse

The rise of artificial intelligence (AI) has only accelerated the sector's growth. Morgan Stanley Research currently expects new AI data centre requirements of around 24GW globally from 2024 to 2027. AI is anticipated to take up 75% of global availability, against 33% today.

Some of the companies best placed to take advantage of the boom are those that have grown very big in a markedly different real estate sector – logistics. The kind of footprint that data centres require is not dissimilar to large warehouses – both are large boxy, squat buildings. Providing the planning and power are in place, land for huge warehouses is interchangeable for data centres.

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With a combined power bank of some 9GW, the world's three largest logistics players have already made substantial inroads into the data centre market. Goodman Group has secured or is in the process of securing up to 4GW of power, Prologis has 3GW and GLP Capital Partners can speak of 2GW.

Data centres need well-located sites in proximity to large gateway cities, and such sites, whether for data centres or logistics, are running into moratoriums placed by local authorities in response to citizen concerns around the environmental impact of such facilities.

“With a combined power bank of some 9GW, the world's three largest logistics players have already made substantial inroads into the data centre market”

As the top three players have come to dominate the logistics/industrial market globally over decades, they have also amassed a large swathe of sites in prime locations in large metropolises in the US, Europe and Asia-Pacific. Prologis alone has more than 12,000 acres of land and a portfolio of 5,500 buildings, a ready resource for when it chooses to convert or develop data centres.

The cost of data centres varies from jurisdiction to jurisdiction, but it runs into many hundreds of millions of dollars to build one centre. The development cost is typically 10 times what it was a decade ago, partly because the centres themselves are much bigger and more sophisticated.

Industry experts say that in the US, for example, data centres can cost as much as US\$2,400 per sqft to build compared with US\$150 per sqft for a traditional warehouse. Others point out that some of the most complex data centres can cost up to US\$3bn (€2.8bn) each to develop.

Collectively, the big three talk about an estimated investment of around US\$60bn to bring their data plans to fruition.

The most ambitious data centre strategy belongs to Goodman Group, which expects to be managing a A\$50bn (€30.4bn) portfolio of data centres before 2030. At the same time, GCP will be in the market raising capital for its dedicated data centre funds. The Singapore-based group estimates the development cost of its centres will run up to US\$20bn just to fund its current pipeline.

Prologis, which plans to develop a further 20 data centres to add to its current repertoire of 28 over the next five to seven years, says this will entail an investment totalling US\$7-8bn.

While they insist their focus remains firm on the main game of logistics, the big three have moved quickly in recent months to formalise their data-centre strategies. Each has created a new division with a dedicated executive to lead expansion in the sector.

As an example, in January, the Goodman Group set up a regional office in Singapore, led by Hugh Baggie, who was appointed managing director of data centres for Asia. Baggie is responsible for connecting customers and investors with Goodman's data centre development and delivery capabilities across the region.

These logistics giants have come to where they are today propelled by the strong tailwinds of e-commerce, but while demand for warehouses continues to grow, it may have peaked. An indication is that the post-COVID rental growth spurt, driven by the near full capacity of warehouses, is softening, and there might not be a repeat scenario of what has been witnessed since the start of this decade.

Now, generative AI is opening another door, throwing up what Craig Duffy, global head of fund management at GLP Capital Partners, describes as a "generational" opportunity. Goodman takes the lead

Goodman Group

AUM: A\$79bn Earmarked for data centres: up to A\$6bn annually

Goodman Group has developments in progress valued at A\$13bn (€7.9bn) under way around the world, of which data centres account for 40%. Over the next few years, the company expects the data sector to make up half of all new starts in its key global markets.

The Sydney-based group has secured – or is in the throes of tying down – energy to deliver 4GW of power for sites that it owns in the US, Europe and Asia-Pacific. When completed, this pipeline will place the logistics leader high up the list of top data centre players.

Founder and CEO Greg Goodman says the group expects to work on up to A\$6bn of data-centre projects annually over the next seven to 10 years. At that rate, Goodman data-centre assets under management could be worth north of A\$50bn before the end of the decade.

“The big markets are going to be Europe, where we have a lot in our power bank,” says Goodman. “We also have secured power for projects in Asia. We have been building data centres in Hong Kong and Japan, but Japan is the real hub for us. That is because of our access to power and big sites there.

“Effectively, Japan, like Australia, does not have issues with sovereign risk. For Asia, Japan is a very good place for data customers. They want to know where their data is stored and processed.”

Tsukuba data centre in Tokyo, Japan, is one of four Goodman is building for a mix of hyperscalers and co-location customers

With an overhanging concern of geopolitical risk, countries have become more nationalistic regarding where their data is held, and Goodman says the company has factored this concern into its choice of markets. Its main markets and those earmarked for future development are Paris, Frankfurt, Amsterdam and London in Europe, and Los Angeles in the US. Goodman is also active in its home bases of Sydney and Melbourne.

“Of the 4GW pipeline, land is already embedded in the group’s business, and there are the infrastructure and the people to deliver the product,” Goodman says. “Over the past five years, we have had our heads down planning our data-centre development programme and securing power.

“It is necessary to have what I call the three Ps – power, planning and programme – in place” GREG GOODMAN

“It is necessary to have what I call the three Ps – power, planning and programme – in place. Customers don’t want to be given a lot of promises. They want a programme and they want to be assured that you can finance your promise. It is all about credibility and integrity – whether it is industrial property, or powered shells, or turnkey data centres.”

The cost of building data centres has grown exponentially as they have grown in size and complexity. Goodman recalls building the first centres with power of 3MW to 5MW. Today, he says, the minimum size is close to 50MW. The cost of building these runs into “hundreds of millions” of dollars.

In the same way, he says, a A\$50m logistics project was a big deal 10 years ago. Today, a “small” fully mechanised logistics facility costs at least A\$100m, and they go all the way up to about A\$1bn each.

Goodman is lowly geared with an uncalled capital pile across the group and partnerships sitting at A\$17bn – a good portion of that available for data centres. It can fund its share of data-centre capex using retained earnings, so project finance is no object. Goodman has also set up partnerships with institutional investors to develop data centres.

Goodman Group has an average stake of 30% in all its partnerships and, as with its logistics facilities, intends to sell some stabilised assets to investors who want to own them for the long term and to recycle capital for new projects.

Since developing its first small data centre in 2006 in Hong Kong, the group has delivered some 600MW of data centres in Europe, UK, Japan, Hong Kong and Australia.

“We are finishing four data centres in Tokyo at the moment,” says Goodman. “They are for a mix of hyperscalers and co-location customers.”

The company is focusing on the hyperscale market. “We have done some big projects in Australia, Europe and the UK, and we are currently working through some programmes with hyperscalers in the US,” he says.

“We see ourselves as an essential infrastructure provider. Whether they are data centres or highly mechanised warehouses to service e-commerce, these assets are a central part of the way we live and that is how we look at the business in and around Los Angeles, New York, Sydney, Paris, the Greater Bay area [in China and Hong Kong] and Tokyo. We are building infrastructure for cities.”

With the widespread application of technologies from shopping to learning and working, and now the rapid adoption of generative artificial intelligence, the demand for data centres driven by growth in data generally and the digital economy has “gone vertical”.

Goodman says: “Everything we are doing is basically funnelled into the cloud. The difficulty is supply [of data centres]. Barriers to entry are getting higher, with good sites hard to find. Getting planning approvals and securing power is even harder to secure.”

He adds: “We own big pieces of real estate sitting around cities [and] there has been an opportunity to power those sites for alternate use to meet growth in the digital economy, which is all around the power, fibre and infrastructure for data centres. We have a number of campuses with 150-300MW data centres co-existing with industrial. We treat these as integrated infrastructure.”

Goodman says this is an approach that is supported by some local authorities, which are happy to help create the infrastructure and secure the power to make the projects work.

Rather than converting existing warehouses, Goodman Group goes for new builds. The only exception is in Hong Kong, where warehouse conversions are more common. Goodman is currently redeveloping a warehouse in Tsuen Wan in Kowloon into a 50MW data centre. Upgrading older centres could present substantial opportunities five or 10 years down the track, Goodman says.

Goodman’s career has been shaped by the transformation of warehouses from the least-favoured segment property market to the keenly sought-after assets of our time, and he says logistics will remain in demand from customers and investors. “We will retain some of our data centres,” he says. “Over time, we will likely own upwards of \$30bn, but logistics will remain the larger part of our business.”

GLP prepares the ground for new funds

GLP

AUM: US\$128bn Earmarked for data centres: more than US\$20bn over the next five years

GLP Capital Partners (GCP) is preparing to launch new funds in the coming months as it expands into data centres – which it sees as a natural extension of its goal of providing critical digital infrastructure for the new economy.

“Moving into data centres is a deliberate and planned strategic expansion, a natural extension of our business”

CRAIG DUFFY

GCP estimates that it will invest more than US\$20bn (€18.5bn) to develop its target of data centres capable of delivering up to 2GW of power over the next four to five years. GCP is focused initially on three to four markets: China, Japan, Europe and, potentially, Brazil.

Craig Duffy, GCP global head of funds management, says: “We are actively developing our capital strategy in key markets where we will be launching dedicated data centre vehicles soon. Over the next five years, we plan to continue to invest strategically, and expect data centres to become a significant contributor to our future growth.”

Through its in-house, fully integrated data centre operating platforms, GCP currently operates 12 projects in China with 320MW of in-service capacity and a further eight projects under development that will increase total IT capacity to 1.4GW upon completion. Its powered land bank also includes prime sites in Greater Tokyo, Greater Osaka and London’s Docklands.

The first of three buildings on a 31MW data campus in Japan, known as Tokyo West 1, broke ground in the third quarter of last year and is expected to be ready for service in early 2025.

Specifically in Japan, Duffy adds, power supply is a tremendous constraint – both the availability of sufficient power and the lead time to secure that power. With the 600MW of secured IT capacity that GCP controls in Japan, CGP is expected to cover roughly 20% of that market once fully delivered.

Duffy says: “We are in advanced planning stages for our Docklands site in London, which will be one of the largest data centre campuses in the UK, delivering 210MW of capacity. Moving into data centres is a deliberate and planned strategic expansion, a natural extension of our business. We see a tremendous generational opportunity. We estimate that there will be close to US\$1trn of capital expenditure over the next three years in the data centre sector globally.

“AI workload will necessitate significantly more computational power than non-AI applications, and that, in our mind, creates massive demand for data centres, particularly at the hyperscaler end of the industry, so we’ve been trying to capitalise on this in a number of ways.”

He adds: “The greatest opportunities lie with trusted data-centre operators that have land and secured power, as well as sustainable, future-ready designs that can accommodate the demands of the large hyperscalers’ cloud and new AI deployment requirements.”

Since 2018, the group has built specialised teams to undertake the development of data centres. Duffy says these are highly specialised assets that require specific expertise. “We have been building that core technical competence across the full stack, ranging through design, engineering, construction, security, sustainability and operations,” he says.

In 2022, GCP recruited Jennifer Weitzel, a former Microsoft executive, to head a new venture, Ada Infrastructure, the group’s global data centre platform, to undertake projects outside of China. Ada Infrastructure launched with 850MW of secured IT capacity across Japan, the UK and Brazil and nearly 1.5GW of total potential future capacity.

Tokyo West 1, the first of three buildings on a 31MW data campus in Japan, broke ground in the third quarter of last year and is expected to be ready for service in early 2025

Duffy says GCP leverages the group's core expertise in logistics, especially in land-sourcing and project development, when commissioning new projects. "We have acquired a land bank and have secured power supply for data centre developments across key markets where we are active."

GCP's data centres will be grounded in "sustainability, safety and security", he says. To improve and secure access to clean energy for the group's logistics and data centre platforms, GCP has been increasing onsite renewable-power generation capabilities and selectively expanding into utility-scale projects, with 900MW of installed capacity worldwide.

"We have a dedicated renewable-energy fund in China, which we set up last year. We invest heavily in energy transition and we also have a rooftop solar joint venture in China. The fund invests in rooftop solar, ground-mounted, and utilities-scale solar projects.

"It also focuses on wind energy, and we have the flexibility to invest in storage solutions and other related technologies. Our private-equity arm also makes investment in technologies related to our core sectors, including energy transition."

Duffy foreshadows the launch of a new fund in Europe, targeted towards rooftop solar but it, too, will have the flexibility to invest in related technologies, including storage and battery solutions.

Duffy says: "GCP data centres will all be designed with future-ready features, with sustainability as a cornerstone. All our inflight projects will meet or exceed international green building specifications.

"Sustainability performance will be optimised through fully integrated building management systems and we plan to use energy-efficiency measures such as 'cool roofs', high-efficiency lighting and advanced liquid-cooling systems which optimise the balance between power and water consumption."

Today, GCP has assets under management totalling US\$128bn, but data centres will likely form an increasingly larger percentage. "We continue to like the fundamentals around logistics and we continue to invest heavily in logistics," says Duffy. "But I do expect data centres will become a much larger piece of our business over the next five years."

Prologis energising logistics sites for data

Prologis

AUM: US\$197bn Earmarked for data centres: up to US\$8bn over five years

Prologis first converted an existing logistics facility into a data centre in 1999. It was a project that came about at the instigation of a customer who needed a data centre in North Virginia, the hub of data centres in the US.

For the world's largest logistics player, the data centre project was an interesting exercise, but it remained very much an opportunistic endeavour – until recently.

“We’ve decided just over the last few years that we wanted to be more intentional with our data centre-conversion strategy,” says Damon Austin, global head of customer-led development. “What that meant for us is that we started to energise our sites and our buildings. Today we have 60 different power studies and applications on Prologis assets across the globe.

“We are looking at our 5,500 buildings and 12,000-plus acres in our land bank to make sure when appropriate that they are ready for data centre conversion.” He adds: “We’re only going through with conversion when there is an opportunity for outsized value creation.”

Typically, such conversion can generate profit margins from 50% to 100% higher than traditional industrial margins, he says. “We are doing this opportunistically, as part of our higher and better-use platform and to recycle capital to hyperdrive our core business, which is logistics.”

In the fourth quarter of 2023, Prologis started on development of more than US\$500m (€469m) of data centres. Austin says that, over the next five years, the company is expected to develop a further 20 data centres, which are estimated to represent US\$7-8bn of additional investment. Together, they will offer up to 3GW of IT load.

“We are looking at our 5,500 buildings and 12,000-plus acres in our land bank to make sure when appropriate that they are ready for data centre conversion. We’re only going through with conversion when there is an opportunity for outsized value creation”

Damon Austin

Over the past four decades, Prologis has built up an enviable land bank in gateway cities in the Americas, Europe, China and Japan.

Prologis, which has US\$197bn of assets under management, is present in 20 countries. India is its newest market. Austin says that nearly 3% of the world's GDP flows through Prologis-owned buildings.

The company's philosophy is to focus on its core business, but it constantly keeps an eye open for maximising the value of its buildings and land. “Over the decade, sometimes that has meant logistics properties have turned into office parks, life sciences or apartment buildings. Right now, the data centre world is very much in vogue,” he says.

Warehouse in Indiana: Prologis expects 60% of its data centres to be in the US

Prologis is looking at all its key markets. It expects 60% of its data centres will be in the US, with the remaining 40% in Europe, most likely in Paris, London and Amsterdam, with a smaller presence in Asia, primarily in Tokyo. “We don't have any data centre in Japan yet, but it is a market we are certainly exploring,” he says.

The task of driving the growth in data-centre business falls to Chris Curtis, co-founder of Compass Datacentres, which was acquired by Brookfield and Ontario Teachers' Pension Plan for US\$5.5bn in 2023. With more than two decades spent in the industry, Curtis is steeped in the experience of

procuring power and delivering complex data centres. In March this year, Prologis recruited the industry veteran to a newly created role as global head of data centres, reporting to Austin.

To date, Prologis has converted 28 buildings, mostly in North America, into data centres. “In the past, we have partnered with customers to convert properties into data centres, where the customers generally were prepared to pay rent well in excess of traditional logistics rent.”

Additionally, Prologis has a joint venture with Skybox Datacentre, formed in 2022. “Skybox is an example of a strategic partner we utilise that has unique skills and access to property projects. We have projects under way with Skybox right now, and it is a very successful partnership.” The joint venture is currently building six centres in the US.

Reflecting on the evolution of the data centre market over the past quarter of a century, Austin says: “The main difference between the data centres of today and the earlier generation is that they are so much more power-hungry. They are so much larger and so much denser.

“The biggest challenge really is in securing power today and being able to procure the equipment to outfit the centres. Today’s data centre users demand facilities with state-of-the-art green credentials.

“We are a proven leader in sustainability, and we speak the customers’ language, so when we talk to hyperscale customers they are thrilled to see that we have the same commitments towards net zero that they have. That really allows us to have the same conversation about how we can drive renewable power sources to fuel the data-centre business.

“The main difference between the data centres of today and the earlier generation is that they are so much more power-hungry”

Damon Austin

“This is one area where Prologis has a great competitive advantage by virtue of our sustainability teams. The group has established in-house capabilities with teams specialising in utilities, energy, battery storage, mobility and EV charging.”

On renewable energy alone, Prologis’s aim is to produce 1GW of renewable energy by 2025, and it is halfway there with its target. Currently, it ranks as the second-largest corporate solar-energy producer in the US after Target and ahead of Walmart.

However, it does not produce enough solar energy to power data centres. “So, we are exploring all sorts of renewable-energy sources to help fuel our data-centres business,” Austin says.