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Korea Data Center Investment:

Diagnosing Scarcity Premiums, Supply & Exit Potential

July 2026 CBRE Research

INTRODUCTION

Korea’s data center market has experienced an unprecedented boom over the past five years, with domestic and international asset managers and global private equity funds undertaking large-scale projects in Greater Seoul. With several major transactions having been completed and a robust deal pipeline forming, data centers are now firmly established as a core alternative asset class.

At the root of this growth is the structural expansion of computing demand driven by generative AI. Global big tech infrastructure investment is setting new benchmarks each quarter, providing strong support to data center demand, with Korea among the beneficiaries of this global expansion.

In 2026, however, the market is entering a critical inflection point. Secured land and grid power availability in Greater Seoul have reached practical limits, triggering a structural supply cliff, while the sustainability of AI workload demand and exit structures are being questioned.

This report cross-analyzes global demand structures with Korea's supply constraints; outlines entry requirements by potential buyer type; and charts capital circulation pathways. It concludes by providing solutions for developers, institutional investors, and capital providers seeking viable exit routes.

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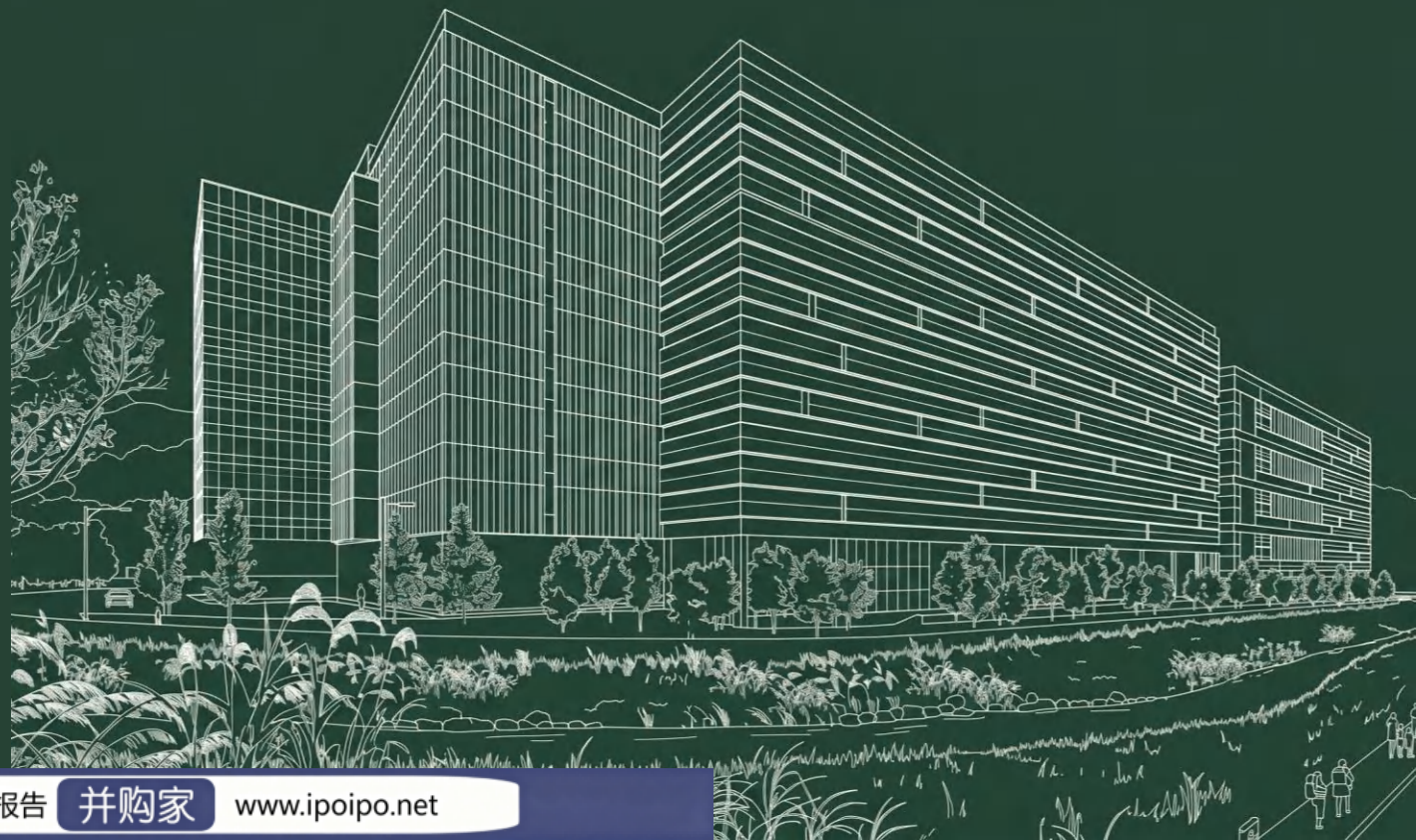
01

Global AI Trends and Analysis of Advanced U.S. Markets



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AI Transition Triggers Structural Surge in Power Demand, Diversifying Global Beneficiary Regions

Driven by the launch of ChatGPT in late 2022, recent years have seen the global data center market undergo a structural paradigm shift toward high-performance computing infrastructure. The proliferation of generative AI has triggered hyperscale demand for Large Language Model (LLM) training and inference, while the rise in AI workloads—unfolding much faster than the cloud transition era—is driving exponential growth in global power demand.

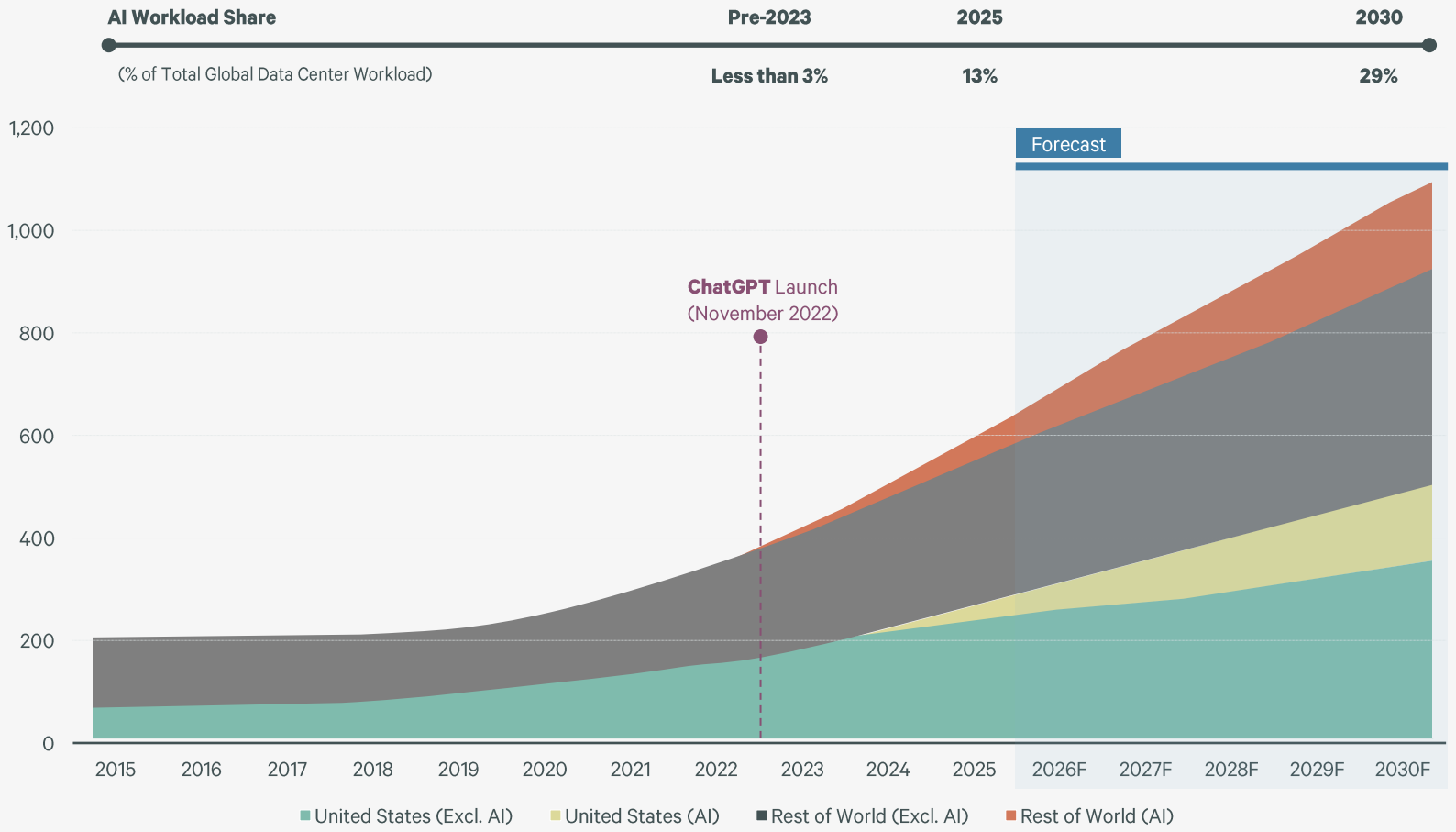
Figure 1 shows that global data center power consumption is projected to surge more than 5x from approximately 200 TWh in 2015 to more than 1,100 TWh by 2030. The share of AI within total workloads is estimated to expand steeply from less than 3% prior to 2023 to 13% in 2025 and 29% by 2030, indicating that a significant portion of future power growth will be allocated to AI operations.

While the U.S. currently anchors global power demand, future AI-driven infrastructure demand is set to expand worldwide rather than being confined to specific geographical regions. With synchronized growth becoming visible globally, including in Asia, the steep growth trajectory of the Rest of World AI segment within the chart is expected to be particularly prominent.

This decentralized global demand trend is projected to serve as a new opportunity for major Asia Pacific hub markets. As the AI workload demand curve outside the U.S. slopes steeply upward, the focus of global big tech companies seeking to expand infrastructure and secure new data centers will gradually diversify beyond the U.S. into major Asia Pacific hub markets, such as Korea.

Figure 1: Global Data Center Power Consumption Trends and Outlook (2015–2030F)

Unit: TWh



Source: Goldman Sachs, CBRE Research, July 2026.

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Global Tech Big Four CapEx Signals Structural, Cycle-Independent Data Center Demand

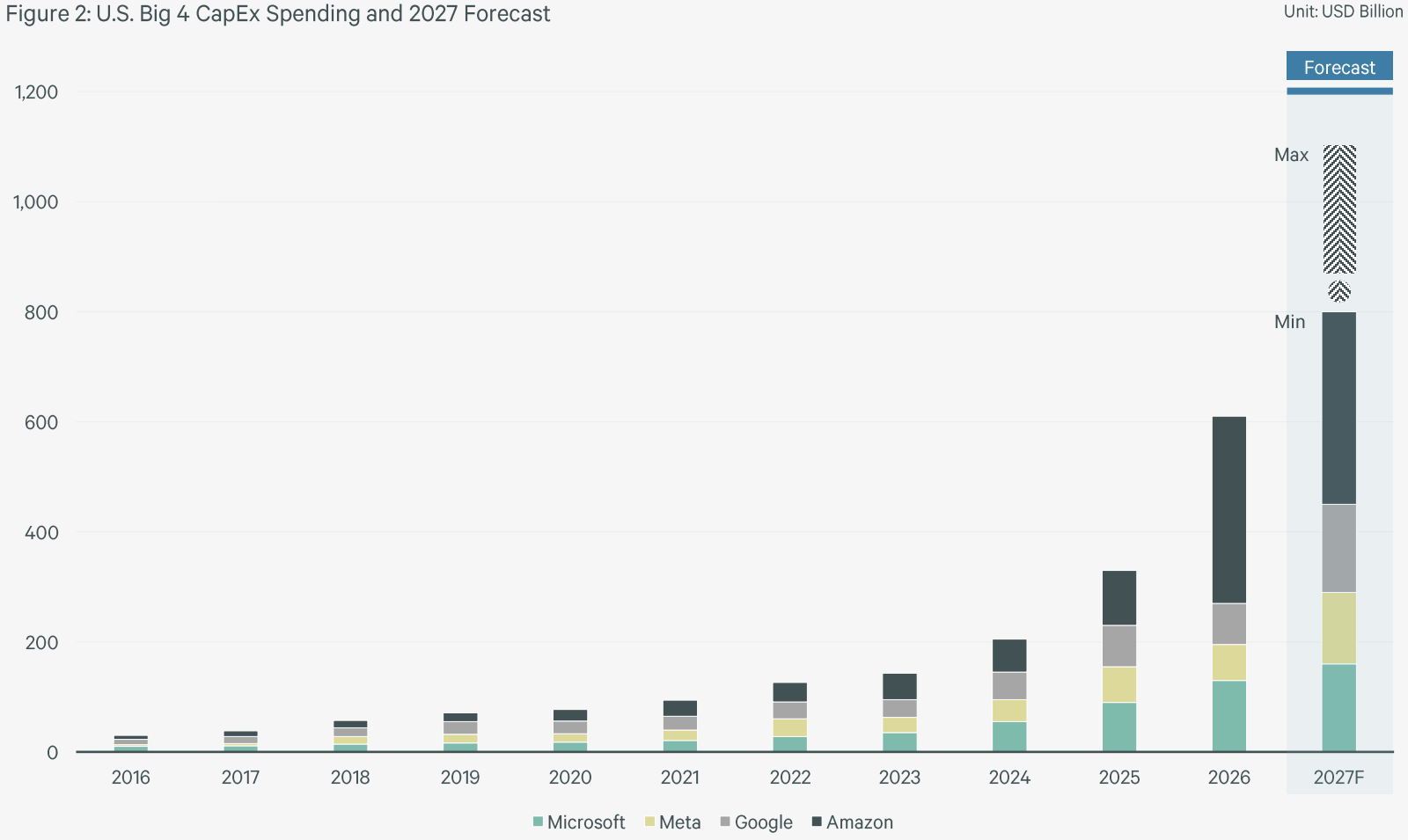
The acceleration of the global generative AI market is directly translating into a surge in CapEx by big tech companies, structurally supporting data center demand. The combined CapEx of the four largest global tech companies - Microsoft, Meta, Google, and Amazon—has shown a steep increase since 2022 when generative AI took off, serving as the strongest fundamental driving the growth of the data center market.

Bloomberg and market research data show these firms' combined CapEx, which stood at approximately USD 200 billion in 2024, surged to around USD 330 billion in 2025 and USD 610 billion in 2026. It is estimated that the big four tech companies will deploy CapEx ranging from a minimum of USD 800 billion to a maximum of USD 1.1 trillion in 2027.

This surge in capital spending is not a simple cyclical investment expansion, but rather a structural increase in expenditure aimed at advancing generative AI services and expanding hyperscale infrastructure. With major global demand drivers publicly expanding their mid-to-long-term CapEx, the sustainability of future AI demand appears solid.

Competition among major big tech companies to preemptively secure data centers is therefore expected to remain intense. Coupled with the growth in global demand mentioned in the previous chapter, these firms' massive capital deployment and commitment to securing infrastructure will likely act as a key driver that further intensifies pressure for preemptive infrastructure expansion into Asia Pacific and Korea.

Figure 2: U.S. Big 4 CapEx Spending and 2027 Forecast



Source: Bloomberg, CBRE Research, July 2026.

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AI Penetration Gap Between Theory and Reality – Evidence of Early-Stage Demand Capture

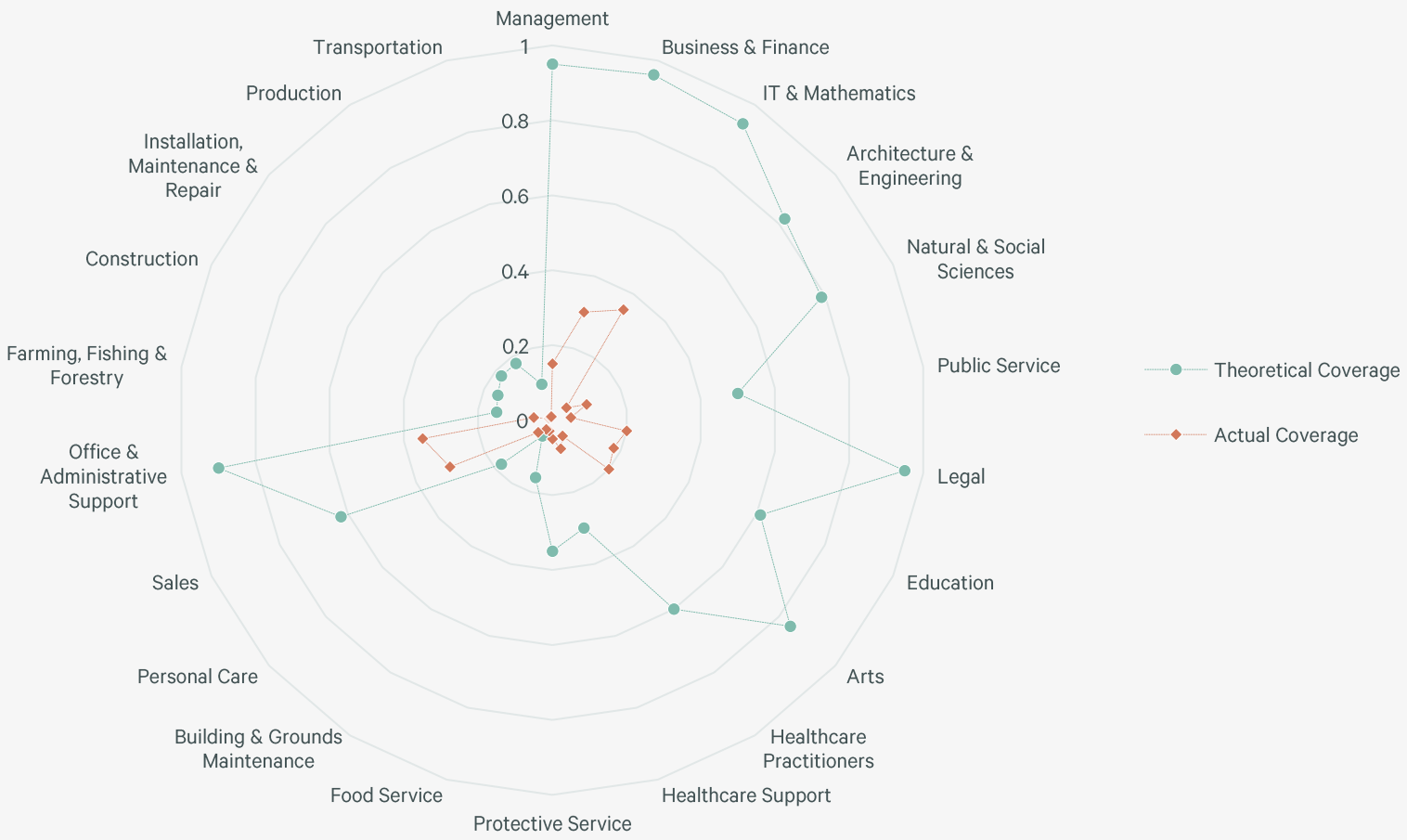
Despite significant capital deployment by big tech companies, the actual penetration of AI within industries has been slower than expected. This indicates a time lag between technological advancement and practical adoption in the corporate field.

Recent labor market analysis by Anthropic (Figure 3) found that compared to "theoretical coverage"—the level technically applicable—the "actual coverage" reflected in industrial fields shows a significant gap across all occupations. Except for selected white-collar sectors such as management, finance, and IT, a structural gap exists where actual penetration falls short of theoretical potential.

This perspective implies that current infrastructure investment may be leading ahead of actual demand, while serving as a potential indicator to gauge the pace of future expansion. While data center demand appears driven primarily by initial utilization in certain white-collar sectors, the demand curve across manufacturing and services will be influenced by the resolution of barriers, including regulations, technical validation, and integration costs.

This gap therefore appears closer to a typical time lag seen in the early stages of a paradigm shift rather than a technological limitation. Current large-scale investment is an infrastructure-building phase to preempt the future full-scale penetration phase, embodying potential for further demand expansion. Depending on the actual speed and scope of penetration, big tech infrastructure strategies and the data center supply-demand environment in major hub markets, including Korea, will be reshaped.

Figure 3: Anthropic Theoretical vs. Actual AI Coverage by Job Function



Source: Anthropic, Labor market impacts of AI, March 2026.

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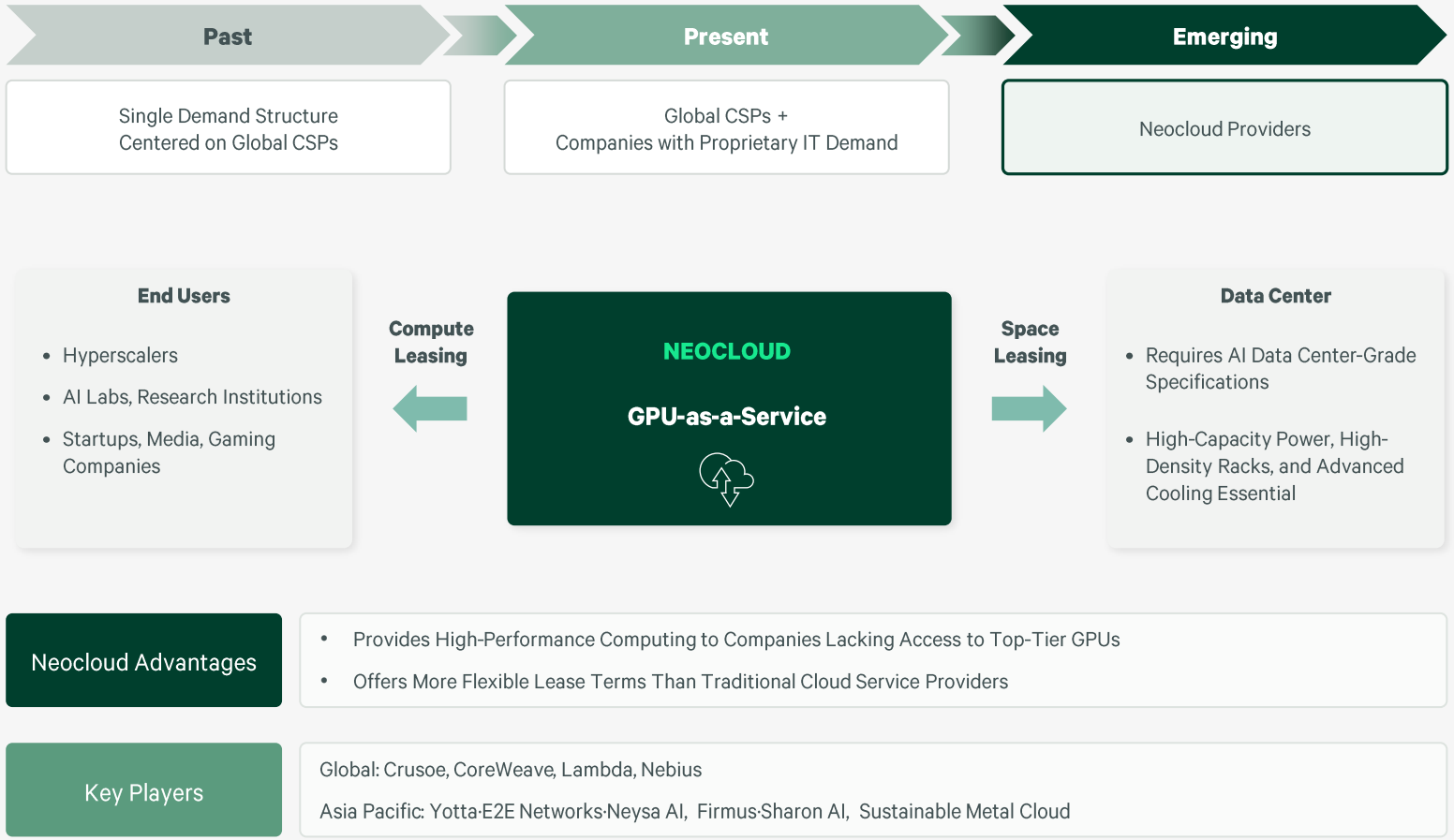
From CSP Monopoly to Multi-Layered Demand: Neoclouds Emerge as New Tenant Class

The structural growth of the global data center market is entering a new transition phase coupled with the diversification of infrastructure demand drivers. While the market was previously a single structure effectively monopolized by global tier-1 Cloud Service Providers (CSP*s) such as AWS, Microsoft Azure, and Google Cloud, IT companies pursuing internal infrastructure internalization amid recent AI advancement have begun to join as core drivers. This shift in the center of gravity is driving the market to evolve into a multi-layered structure.

Starting in 2024, Neocloud providers offering GPU-as-a-Service as their core business began to become prominent globally. Neoclouds are rapidly establishing themselves as major tenants by professionally absorbing high-density AI computing demand that traditional hyperscalers struggle to accommodate. Relying on high-spec GPU infrastructure to rent computing power to end-users, they require high power capacity, high-density racks, and advanced cooling solutions. Major players include CoreWeave, Lambda, and Nebius.

The emergence of this new demand pool is set to further accelerate the diversification of global infrastructure expansion. Major Neocloud firms are already expanding beyond the U.S. into Asia Pacific, reportedly considering Korea alongside Singapore, Japan, and India as key target markets. The influx of this multi-layered demand is projected to induce data center infrastructure expansion in major Asia Pacific hub markets, including Korea, serving as a catalyst driving both the qualitative and quantitative growth of the entire market.

Figure 4: Evolution of Data Center Demand Drivers and Neocloud Structure



Source: CBRE Research, July 2026.

*CSP (Cloud Service Provider): A company that delivers virtualized computing infrastructure—such as servers and storage—over the internet on a subscription or on-demand basis.

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Pre-Leasing at 2x Net Absorption; Demand Capture Outpaces Supply Expansion

The surge in global AI demand is fundamentally reshaping data center supply mechanisms and intensifying the structural supply shortage. Competition among big tech companies to preempt infrastructure and the sweeping influx of new demand drivers have triggered a supply-demand imbalance across major North American markets, creating a situation where preemption outpaces the expansion of supply.

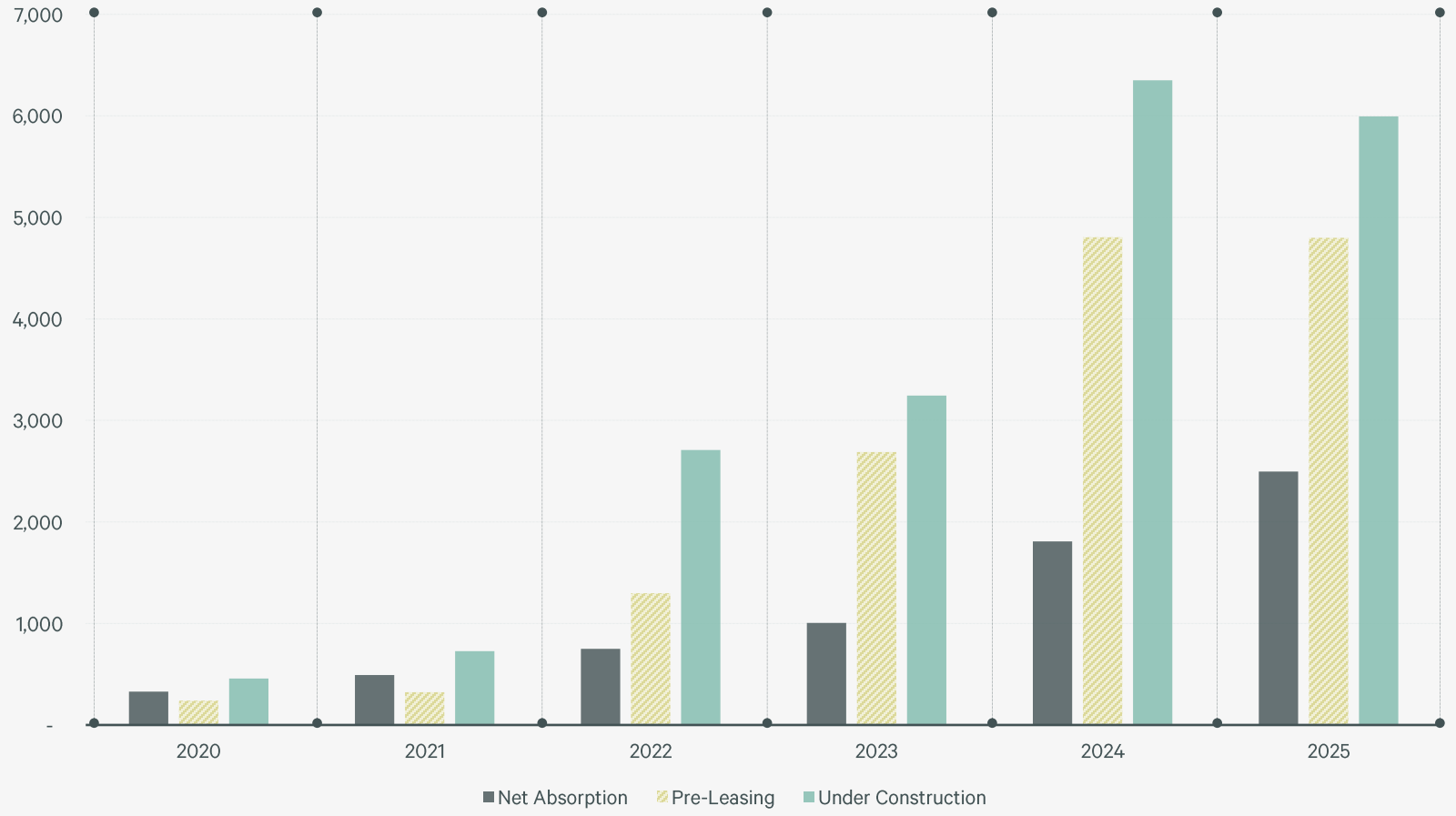
Data center construction in the US skyrocketed as risen more than 13-fold over the past five years, increasing from 458 MW in 2020 to 5,994 MW in 2025, maintaining record-high supply volumes. On the demand side, pre-leasing has been overwhelmingly prominent. As of 2025, pre-leased volume (4,800 MW) reached nearly twice net absorption completed post-construction (2,498 MW), reflecting intense competition among big tech players to secure power and space prior to completion.

Excluding already pre-leased volume from the 2025 pipeline under construction, actual available supply stands at only about 20% of the total. This bottleneck, where actual availability remains limited despite outward supply expansion, is intensifying market concerns over supply slowdowns while enhancing the overall value and scarcity of data centers.

This structural supply shortage and fierce preemption in North America align with the previously discussed diversification of global infrastructure focus. As time lags for securing available power and sites in major North American hubs prolong, pressure to decentralize demand to the Asia Pacific and Korea, where infrastructure supply is more stable, is expected to increase further.

Figure 5: U.S. Data Center Net Absorption, Pre-Leasing, and Under-Construction Supply Trends (Major Markets)

Unit: MW



Source: CBRE Research, July 2026.

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Inference to Become Dominant Workload, Elevating Value of Data Centers Near End Users

The record-breaking pre-leasing boom and supply-demand imbalance in North America are closely intertwined with a fundamental shift in data center location strategies driven by the structural transition of AI workloads from training to inference. Alongside expanding global demand, AI inference for real-time services is projected to surpass model training demand starting in 2027, further intensifying the concentration of demand on core locations within major hubs.

McKinsey data show the share of inference within total AI demand is set to expand from 26% in 2025 to 42% by 2030. Unlike training infrastructure centered in outer areas with low power costs, inference workloads for real-time services prioritize physical proximity to users and latency management.

This shifting workload composition forms a structural backdrop where future data center demand inevitably concentrates on specific hub markets, such as near-urban facilities with high user density. While training data centers can utilize decentralized supply, inference demand requiring low-latency locations is confined to major hubs, providing a strong technical rationale for global big tech firms to pre-emptively secure power and space prior to completion.

This inference-driven demand shift will serve as a new growth engine for major Asia Pacific hubs, including Korea, which feature stable IT infrastructure and high user accessibility. Amid intensifying supply constraints near urban centers, the scarcity of assets that have pre-emptively secured locations will become more pronounced, driving the growth of the market.

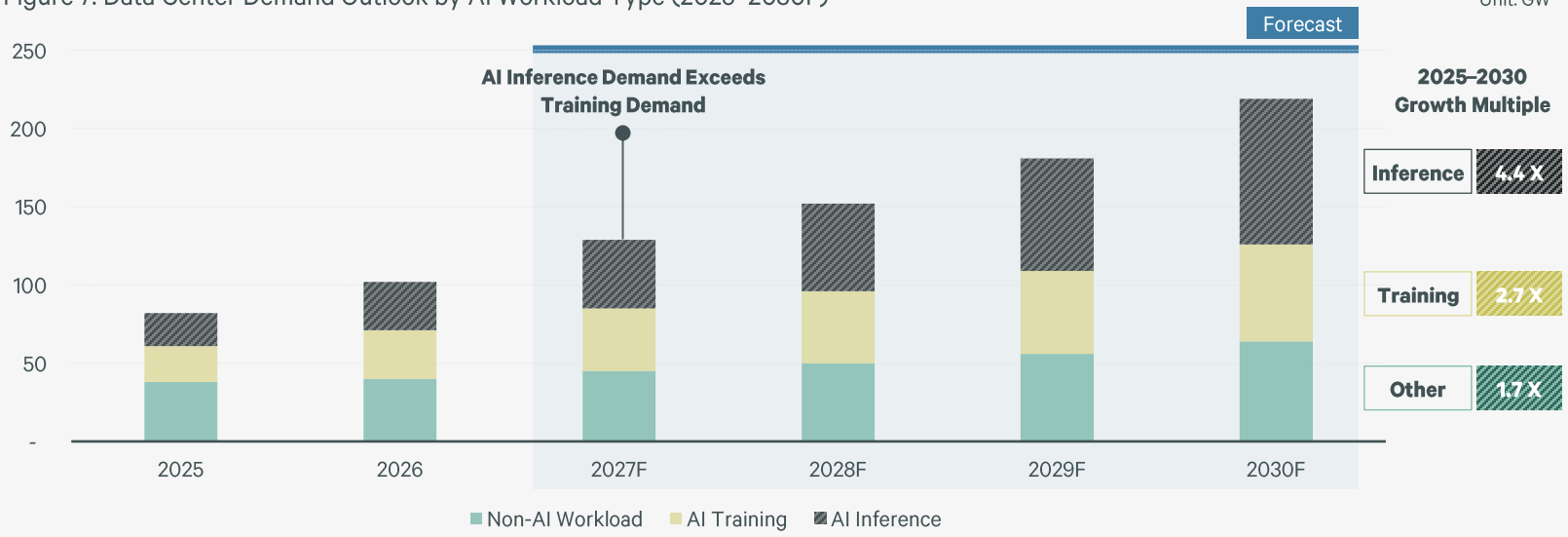
Figure 6: Comparison of AI Workload Characteristics: Training vs. Inference

Category	Training	Inference
Purpose	Model Training	Real-Time Service
Location Requirements	Power-Cheap Regional or Suburban Areas	Urban Areas Near Users
Latency	Insensitive	Sensitive
Representative Demand	Hyperscalers' In-House Build & Government	Search, Finance, Autonomous Driving, etc. (Physical AI)

- **Inference :** Real-Time Service Characteristics, Require Low-Latency Locations Near User-Dense Areas

  → **Underpins the Scarcity Value of Greater Seoul Data Center Assets**

Figure 7: Data Center Demand Outlook by AI Workload Type (2025–2030F)



Source: The net big shifts in AI workloads and hyperscaler strategies (McKinsey & Company, December 2025). CBRE Research, 2026.

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Vacancy at 1.4%, Rental Growth Continues to Surge as Price Reversal Driven by Supply Constraints

Intense preemption competition among global big tech companies and the structural supply shortage are clearly reflected in indicators such as vacancy rates and rental performance.

As of the end of 2025, the overall average vacancy rate in North America stood at a record low of 1.4%, representing effective full capacity. Except for select regions where new supply is concentrated, such as New York (7.5%) or Silicon Valley (4.5%), available space in core clusters across major hubs is practically exhausted. This acute supply shortage is serving as a direct catalyst prompting a sharp reversal in the leasing market.

Lease rental rates remained stagnant from 2015 to 2021, hovering between -6% and 1% annually, but shifted to a steep upward trajectory starting in 2022 as AI demand materialized. Following jumps of +15% in 2023 and +19% in 2024, double-digit growth sustained through 2025. Given extremely low vacancy of just 1.4% and limited new available supply, upward rental pressure is unlikely to ease in the short term.

This supply-constrained, surging rental structure witnessed in key North American hubs provides an important milestone for global infrastructure investors' asset valuations and portfolio diversification strategies. As solid capital appreciation of data center assets in core markets is supported, entry barriers and cost burdens are simultaneously intensifying. This dynamic is poised to prompt global investors and occupiers to seek alternative markets, such as Asia Pacific and Korea, which offer relatively stable supply capacity and greater price competitiveness.

Figure 8: Vacancy Rates Across Major U.S. Data Center Markets (2025)

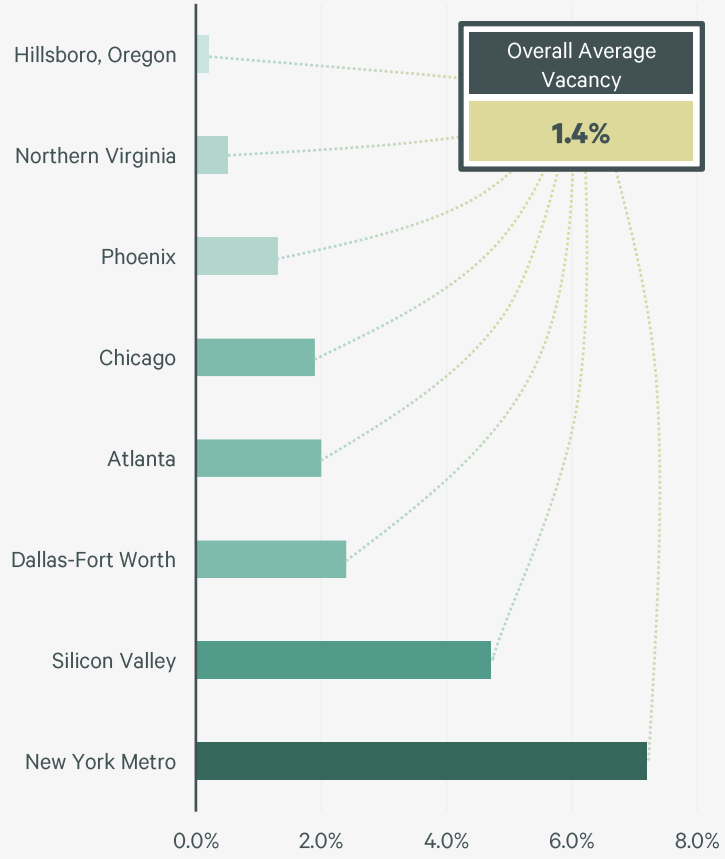
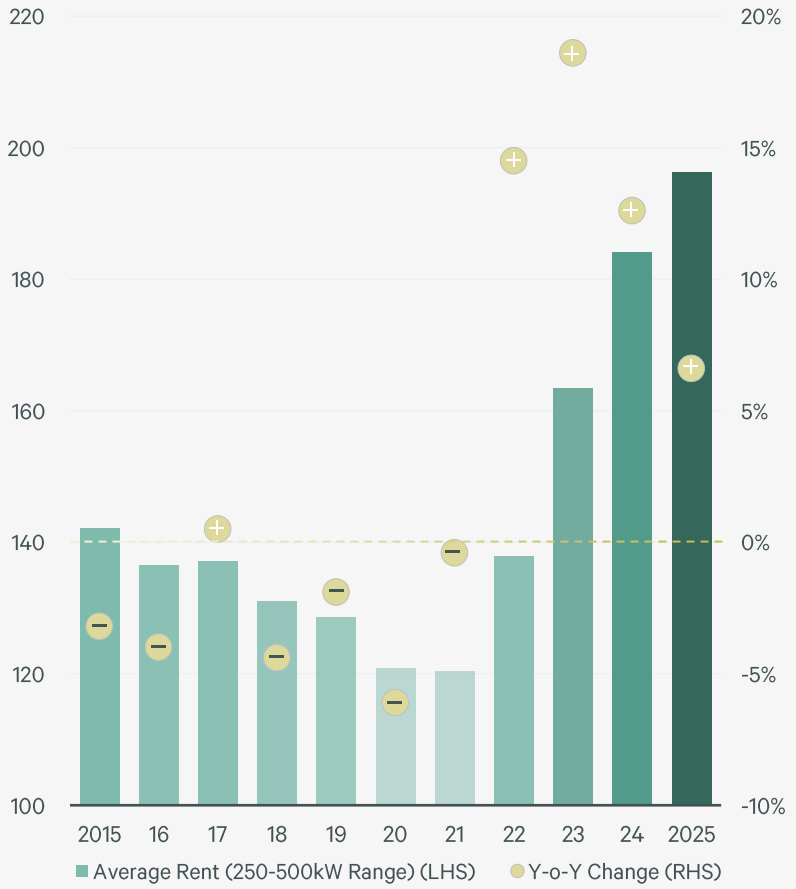


Figure 9: Average Rent and Y-o-Y Growth Rate

Unit: USD



Source: CBRE Research, July 2026.

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Grid Constraints and Social Pushback: Structural Roots of North America's Data Center Supply Bottleneck

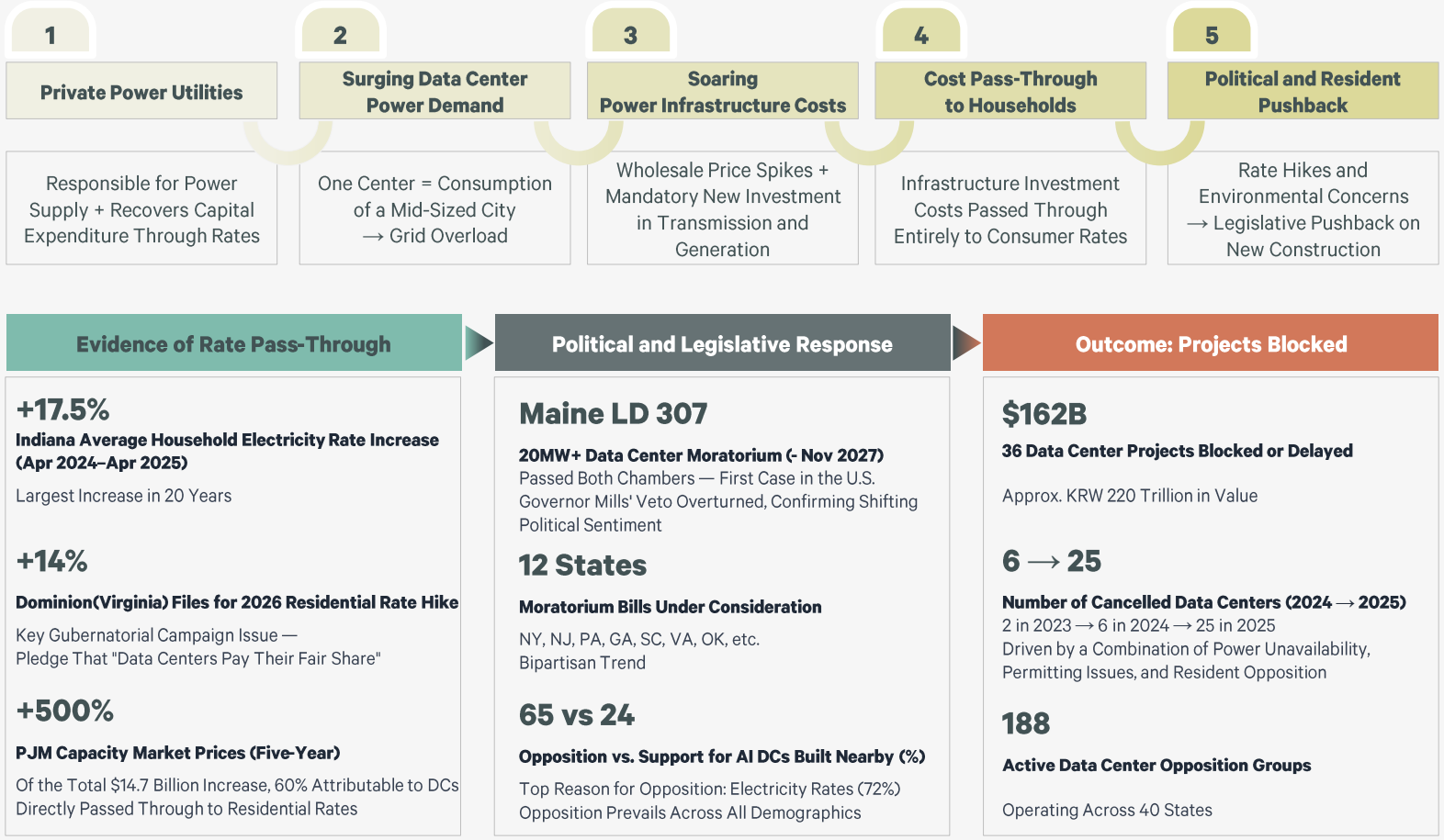
In the U.S., the inability to expand data center supply in the short-term stems from structural grid limitations and subsequent cost escalations. Massive loads from data centers have driven up infrastructure costs and shifted financial burdens to residential ratepayers, triggering intense social and political resistance.

The impact of this utility cost shift is evident in Figure 10, which shows that the average residential electricity bill in Indiana surged by 17.5% in 2025, marking the sharpest y-o-y increase in two decades. Price hikes such as this have spurred the introduction of data center moratorium* bills across 12 states. In major hubs such as Virginia—the world's largest data center market and a core North American location—the business environment is deteriorating rapidly, with public opposition blocking or delaying 36 projects.

These supply constraints do not reflect a lack of capital deployment but rather a complex bottleneck of grid expansion, public grievances, and permitting delays, which will slow short-term supply momentum. However, such constraints structurally support a scarcity premium for operational and under-construction assets, further solidifying asset values within core hubs.

Power and regulatory bottlenecks in North America serve as key drivers accelerating the diversification of global infrastructure focus. As time lags to secure power capacity prolong, the decentralization of demand toward alternative markets with stable supply pipelines is inevitable—a trajectory that is highly likely to mirror developments in Korea.

Figure 10: U.S. Data Center Power Cost Pass-Through Structure and Political/Social Pushback



Source: Data Center Watch, Dominion Energy, IEEFA, CBRE Research, July 2026.

*Moratorium: A measure that temporarily suspends or postpones a specific activity or legal obligation.

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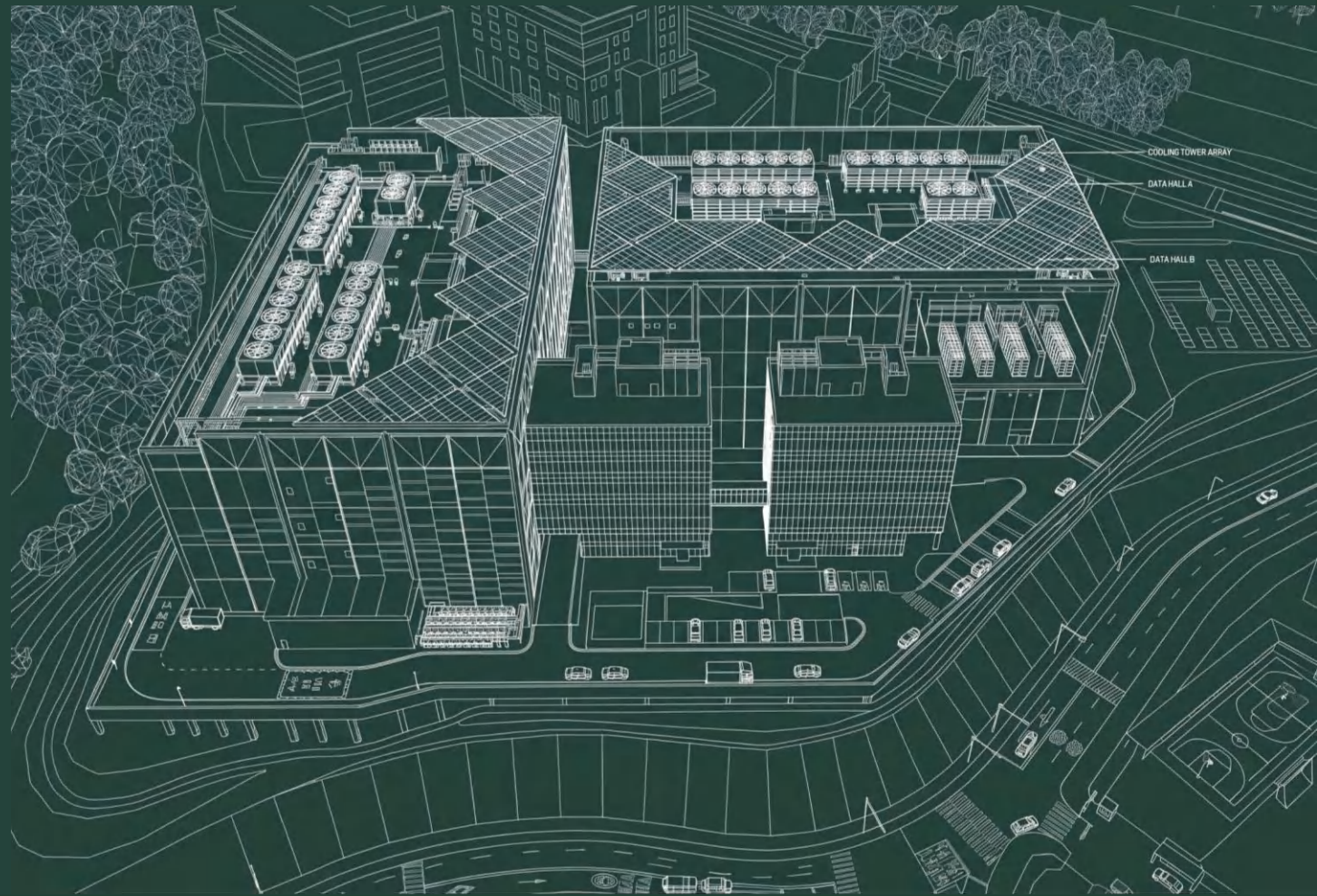
Korea Data Center Market Analysis



From Telecom Self-Build to Global Capital-Led Growth: Korea's Data Center Market Enters a New Stage of Maturity

The Korean commercial data center market has already transitioned through Phase 1 of market growth, driven by domestic telco self-use, and Phase 2, marked by global CSP entries. As of 2026, the market is in Phase 3, an advancement stage led by asset managers and global specialized operators. Since 2021, Phase 3 has exhibited a 20% Compound Annual Growth Rate (CAGR) driven by hyperscale-level supply expansion, with total Greater Seoul inventory expected to surpass 1,450 MW by 2028, creating a qualitative and quantitative paradigm shift in supply.

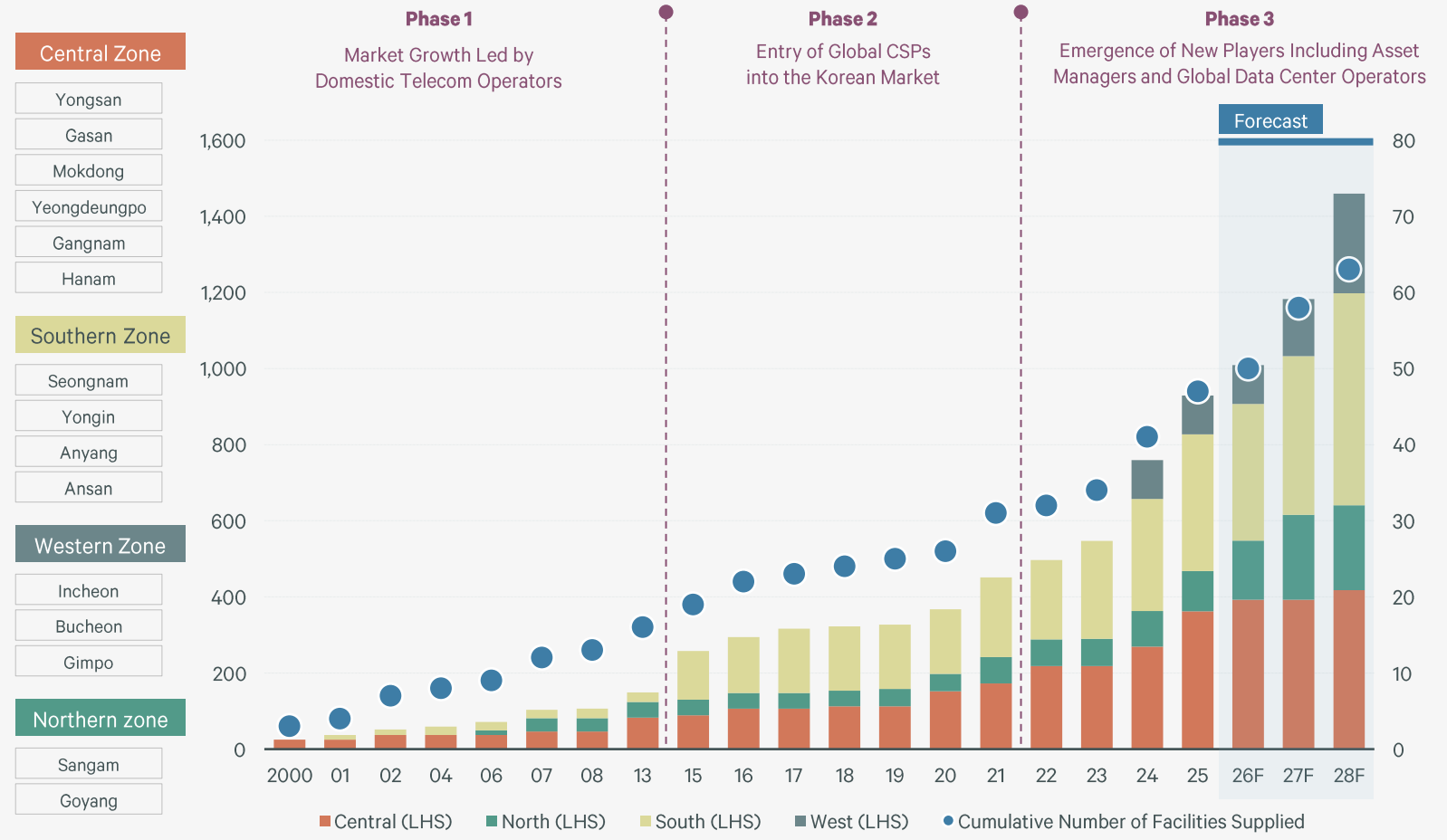
This large-scale supply trend is inducing a structural diversification of locations. While early development was concentrated in the Central zone, the supply axis is expanding to outer Greater Seoul. By 2028, supply in the Southern zone is projected to reach 557 MW, surpassing the traditional Central hub (417 MW) to emerge as the largest submarket in the Greater Seoul area. The Western zone—encompassing Incheon, Bucheon, and Gimpo—has grown its capacity substantially to 262 MW, establishing itself as an independent core cluster rather than just a back-up infrastructure base for the Central zone.

The evolution of supply drivers is a key catalyst reshaping data center asset values. The influx of global funds and specialized developers has enabled large-scale capital raising and the adoption of advanced operational standards, positioning data centers in the initial stages of securing a foothold as an independent, core yield-generating asset class.

Furthermore, the Greater Seoul market is now assessed to have entered a full-scale supply transition phase, rapidly positioning itself as an unrivaled hyperscale infrastructure hub within Asia Pacific through geographic expansion to outer submarkets and the strengthening of supply expertise.

Figure 11: Cumulative Data Center Supply by Region and Characteristics by Market Growth Stage

Unit: MW



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Power Availability Dictates Location, Eroding Relevance of Regional Boundaries

The geographic expansion of the Greater Seoul data center market is being driven not by limited sites in Seoul or shifting preferences, but by a strict power-seeking shift.

Initially, site selection was dominated by the Central zone, where urban accessibility and telecommunications infrastructure were strongest, with global CSP availability zone (AZ) requirements later emerging as the critical criterion for hyperscale site selection. As land supply constraints and power procurement challenges within central Seoul have become increasingly tangible, however, the supply axis is shifting rapidly toward outer zones where power reception can be more readily secured.

This trend is already visible in the pipeline. Post-2026 supply is concentrated in high-density clusters in the Western and Southern zones, with record-breaking volumes for individual submarkets expected in 2027 and annual supply projected to surge to several multiples of prior levels by 2028. The Central zone will maintain some new supply but its share is gradually declining, while the Northern zone remains comparatively limited.

Meanwhile, recent demand diversification means that outer Greater Seoul locations with reliable power access are emerging as credible alternatives, though areas lacking adequate transportation and supporting infrastructure may rank lower in preference than major non-capital hub cities such as Busan and Cheonan. As locations that have pre-emptively secured power function as core infrastructure bases underpinning the Greater Seoul supply chain, the market is likely to reorganize around new geographic units defined by the power grid rather than traditional submarket boundaries.

Figure 12: Distribution of Data Centers in Greater Seoul

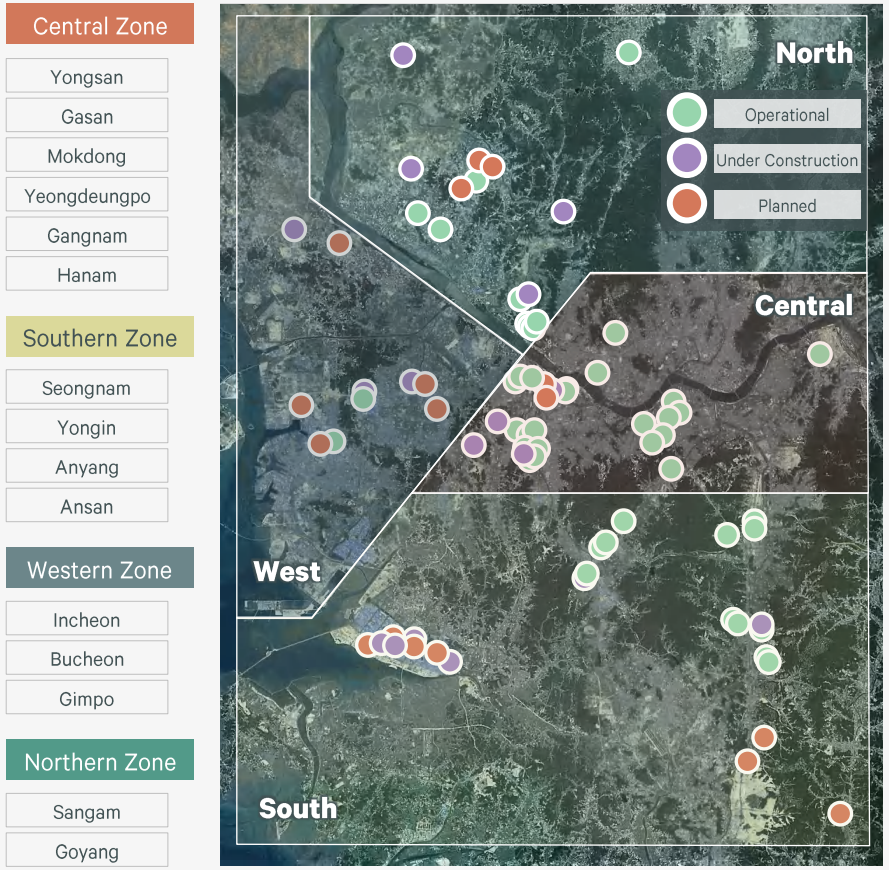
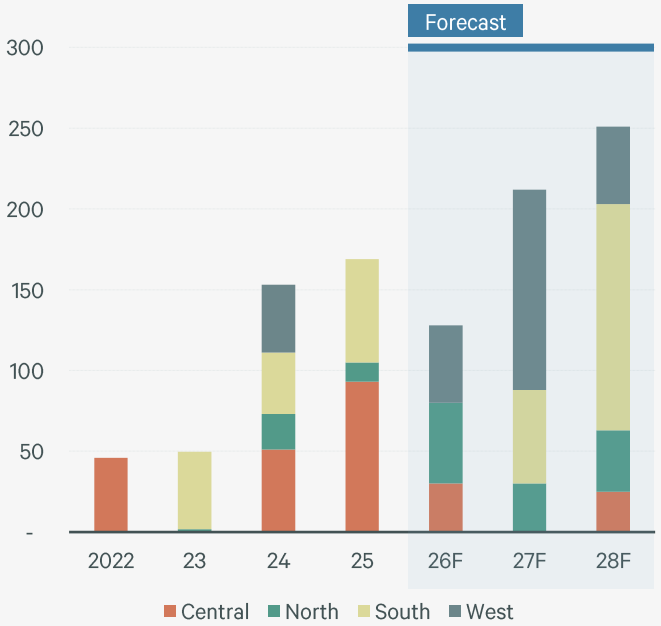
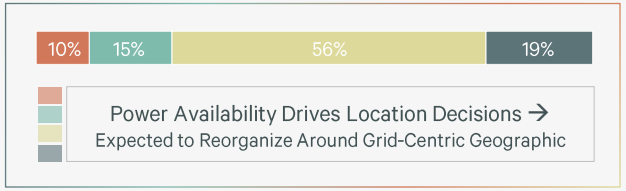


Figure 13: Annual Supply by Region

Unit: MW



[Data Center Supply Share by Region (2028 Basis)]
(by IT Load Capacity)



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Korea's Data Center Supply Bottleneck: Structural Entrenchment of Barriers from Distributed Energy Act and Power System Review

The Distributed Energy Promotion Act, enacted in 2024, serves as the most significant turning point and structural risk, reshaping the development and supply landscape of the domestic commercial data center market. Since its introduction, applications for the Power System Impact Assessment required for data center development in Greater Seoul have surged. However, KEPCO's actual grid supply capacity has already reached its limit.

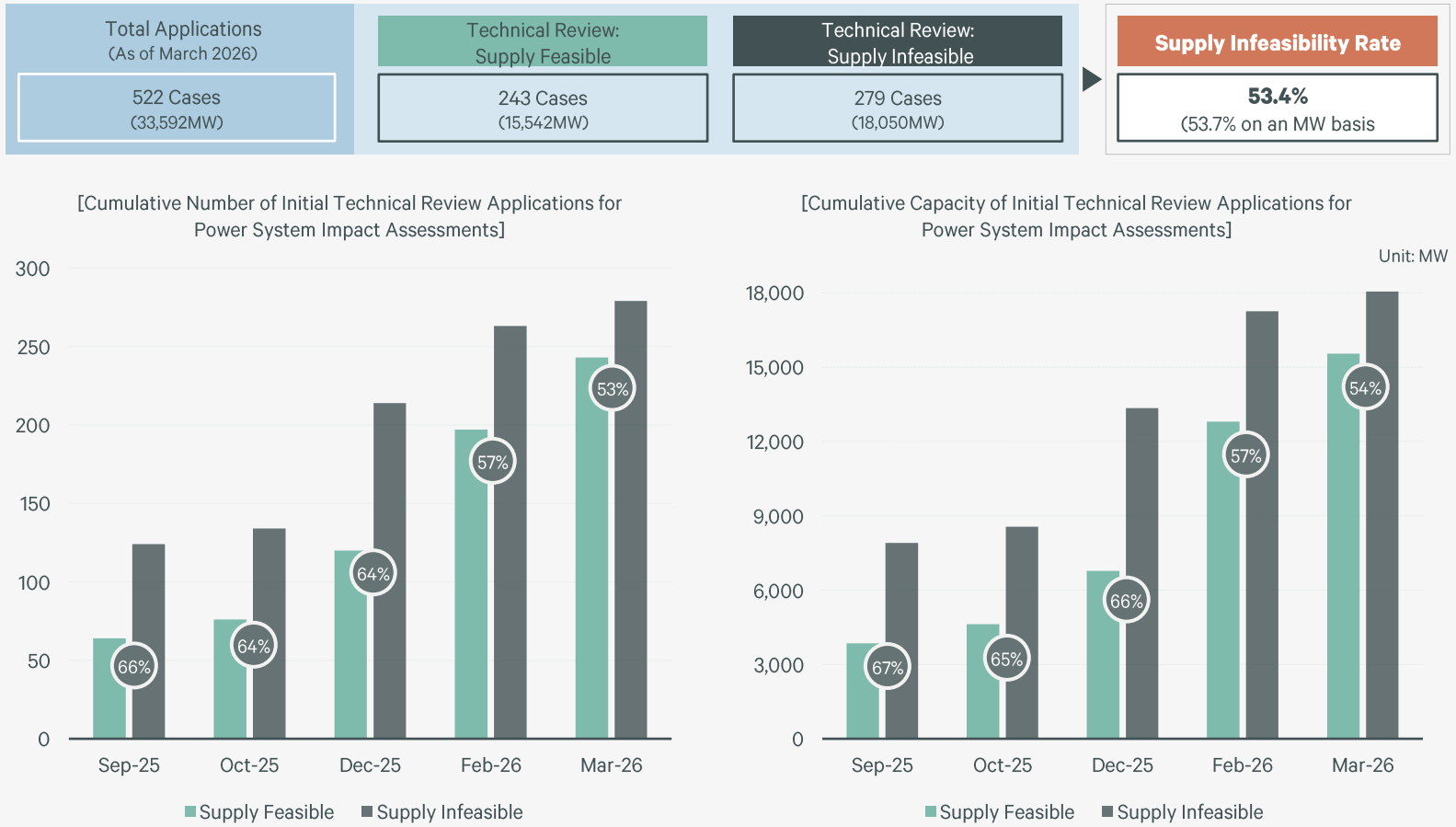
As of March 2026, a cumulative total of 522 technical review applications (33,592 MW) were submitted, but more than half—279 cases (18,050 MW)—received "supply unavailable" decisions, proving that Greater Seoul grid saturation has materialized into actual supply disruptions.

This grid saturation and regulatory stance present risks that cause short-term supply contractions, while acting as the core driver forcing the market to expand into wider regional areas. With the supply unavailability rate reaching 53.7% based on power capacity, large-scale new power reception within existing dense hubs like the Central zone is effectively blocked.

Developers and investors are therefore being compelled to turn to outer Greater Seoul submarkets or provincial areas where permitting and power procurement remain feasible, forcing geographical expansion into regional belts following grid availability.

As securing new power reception emerges as the primary bottleneck, new entry assets must clear more stringent system assessment hurdles. Supply chain stability will face high entry barriers, becoming subordinate to national grid timelines rather than simple site preemption.

Figure 14: Initial Technical Review Applications for Data Center Power System Impact Assessments (Post-Distributed Energy Act)



Source: Korea Electric Power Corporation (KEPCO), CBRE Research, July 2026.

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Korea's Data Center Supply Bottleneck: Structural Entrenchment of Barriers from Distributed Energy Act and Power System Review (Cont.)

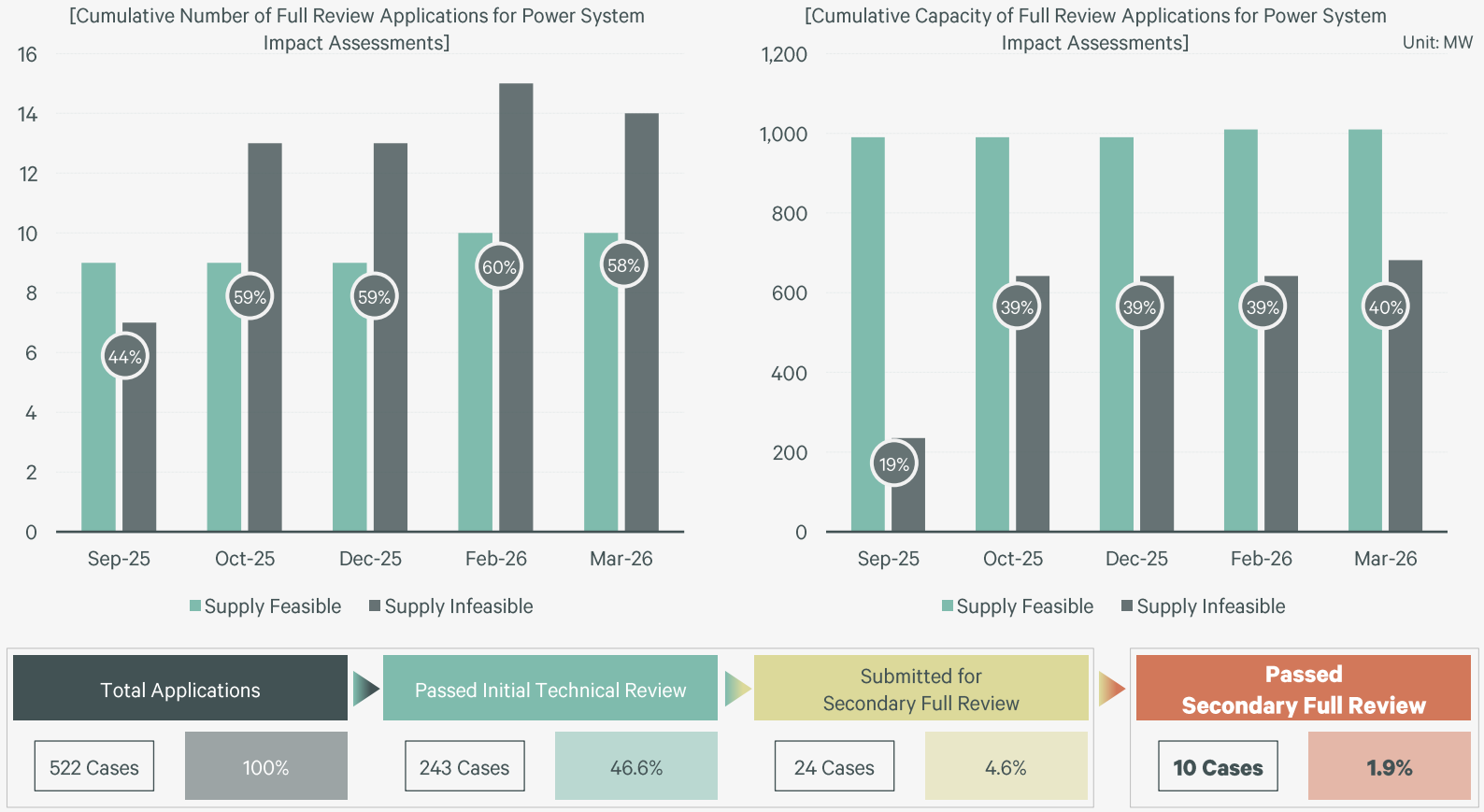
Even assets that barely clear the initial technical review hurdle face a severe bottleneck during the final review phase for actual power procurement. As of March 2026, of the 243 cases that passed the initial review, only 24 (9.9%) progressed to the final evaluation, and a mere 10 assets ultimately secured supply approval. This translates to a final approval rate of just 1.9%.

Of the total requested capacity (33,592 MW), approved power stands at 1,010 MW (3%), showing a slightly higher capacity pass rate compared to the project approval rate. While the margin is minimal, it implies that within KEPCO's limited grid capacity, selective approvals are leaning toward large-scale hyperscale projects with clear anchor tenants or robust infrastructural viability, rather than smaller, fragmented assets.

This widespread elimination at the final evaluation stage demonstrates that passing the initial technical review by no means guarantees actual power procurement. As rejected cases continue to accumulate during the final phase while successfully approved assets remain scarce, the entire Power System Impact Assessment process is clearly the greatest structural entry barrier blocking new data center development in Greater Seoul.

Having completed the final approval in the current domestic market implies an exclusive status that overcame a 1.9% probability. As risks from the Distributed Energy Promotion Act intensify, the premium and value of operational or secured assets that cleared the final hurdle are projected to rise further. Conversely, new projects languishing in the permitting stage face increasingly heightened risks of prolonged schedule delays or cancellation.

Figure 15: Full Review Trends for Data Center Power System Impact Assessments (Post-Distributed Energy Act)



Source: Korea Electric Power Corporation (KEPCO), CBRE Research, July 2026.

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125 Substations Planned but Private Data Center Capacity Largely Unaccounted For

The persistent bottleneck in Greater Seoul's Power System Impact Assessment can be evaluated through KEPCO's infrastructure supply plans. Under the 11th Long-term Transmission and Substation Facility Plan, KEPCO plans to establish 41 new 345 kV substations and 84 new 154 kV substations in Greater Seoul by 2038, which will expand total power capacity by 66,200 MVA.

However, this long-term facility expansion does not directly improve power procurement capacity for commercial data centers. A significant portion of the planned capacity is pre-allocated to specialized high-tech industrial complexes, such as the Yongin Semiconductor Cluster, or large-scale residential districts. Excluding these dedicated zones, available power capacity for private commercial data centers is practically negligible.

Furthermore, a chronological mismatch exists in the supply timeline. Planned supply is heavily front-loaded up to 2028, while capacity additions slow down sharply and stagnate from 2029 onward. Considering the typical three-to-five-year lead time from site acquisition to full permitting and construction, the total capacity cushion available to private operators will become increasingly restricted over time.

Expectations for short-term relief in private data center power supply remain unrealistic despite national grid visions. Driven by supply stagnation and development time lags, grid dependency and market entry barriers are projected to intensify further.

Figure 16: Cumulative and New Power Supply Trends and Outlook in Greater Seoul

Unit: MVA

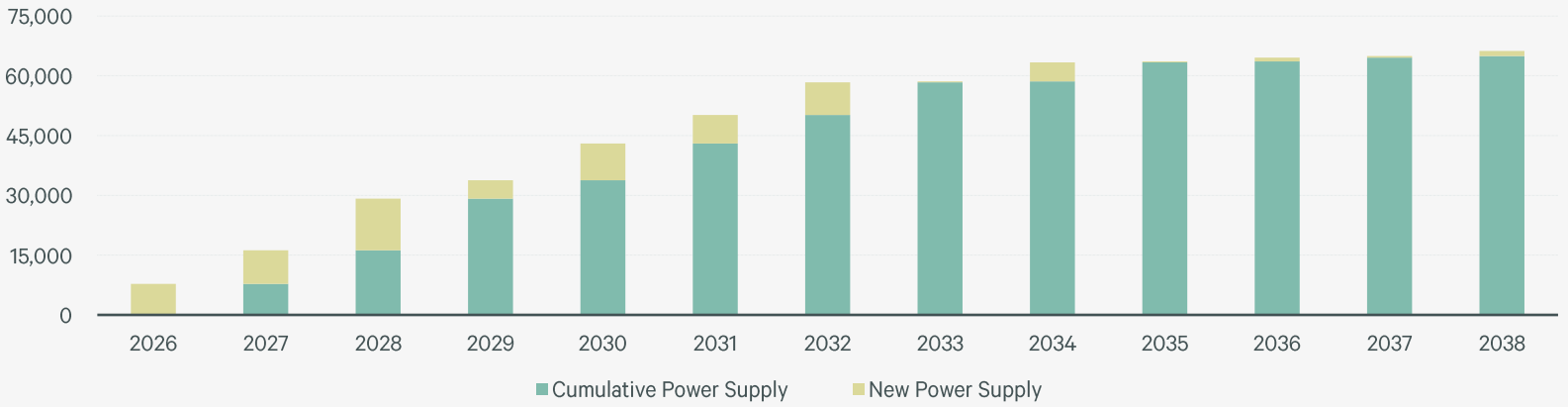


Figure 17: New 345kV Substation Supply Plan in Greater Seoul

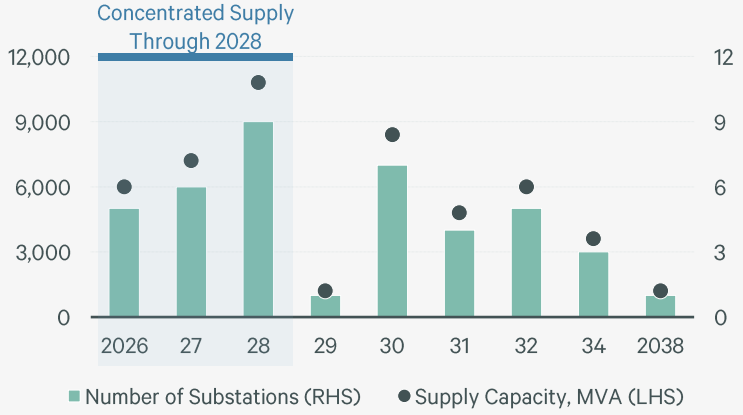
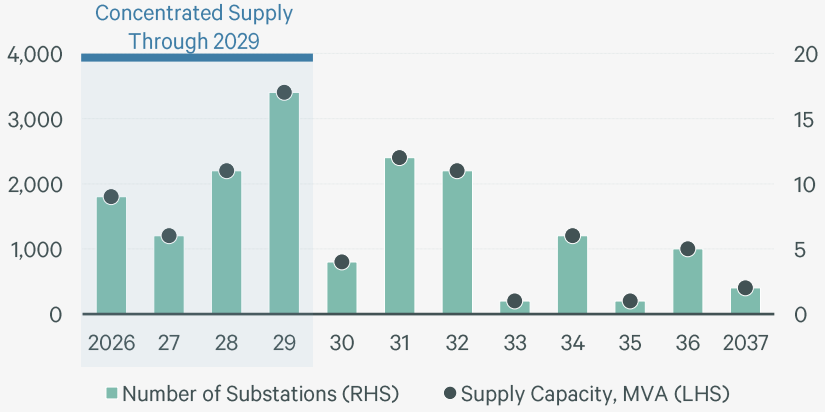


Figure 18: New 154kV Substation Supply Plan in Greater Seoul



Source: Korea Electric Power Corporation (KEPCO), CBRE Research, July 2026.

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HVDC Offers Structural Solution to Greater Seoul's Power Constraints but Limited Near-Term Relief

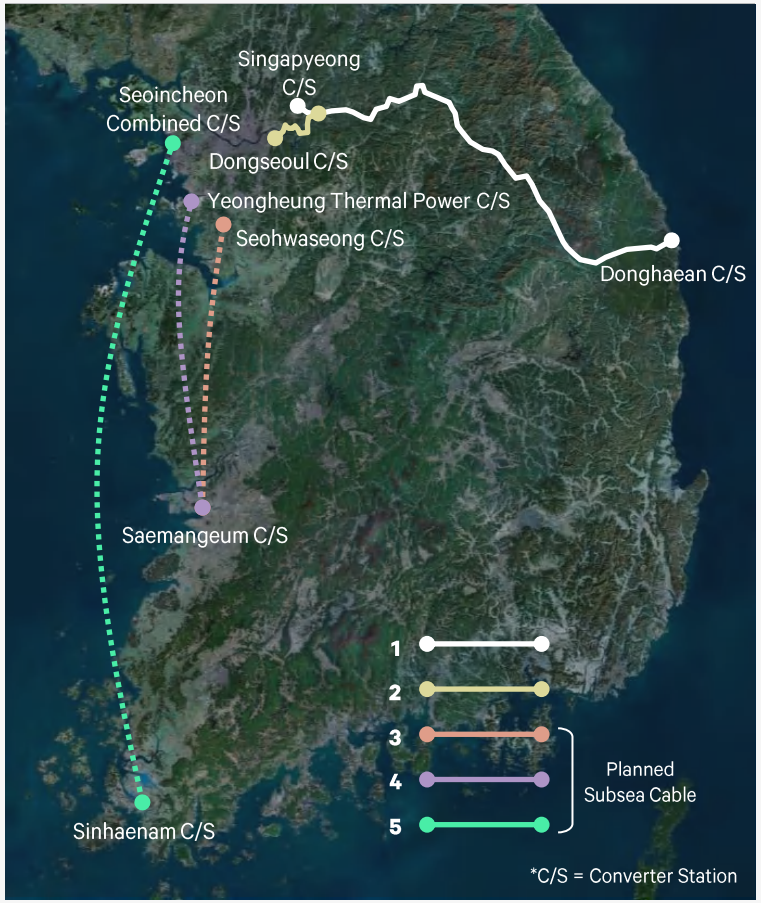
High Voltage Direct Current (HVDC) technology appears to be the only structural alternative to resolve the power supply constraints acting as the primary bottleneck for data center development in Greater Seoul. As a next-generation infrastructure capable of transmitting large-scale power over long distances with minimal loss, HVDC serves as a technical solution to directly draw abundant regional power into the high-demand Greater Seoul core.

According to KEPCO's 11th Long-term Transmission and Substation Facility Plan, five new HVDC lines linking to the Greater Seoul and Central zones are scheduled. The East Coast-Greater Seoul lines are set for sequential completion in October 2026 and December 2027, while the Saemangeum-Seohwaseong line—a core axis connecting the Honam region to Greater Seoul—is targeted for completion by December 2030.

However, this transmission grid plan is unlikely to provide an immediate remedy for data center power procurement. Even with the initial line completing at the end of 2026, considering typical data center development lead times, new facilities will not practically utilize this power until at least 2030. Subsequent phase lines are not scheduled for completion until as late as 2038, failing to alleviate short-term supply shortages.

High entry barriers to market entry are therefore projected to persist long-term. Within this highly supply-constrained structure, these constraints will act as a catalyst, driving the value of operational or under-construction assets with pre-secured power to unprecedented levels and establishing a robust foundation to support successful exit for institutional investors.

Figure 19: Greater Seoul HVDC Transmission Line Route Map and Project Overview



	HVDC Project Name	Length	Expected Completion	Connected Region
1	Donghaean#1 C/S-Singapyeong C/S	230km	26.10	Yeongdong Region-Greater Seoul
2	Donghaean #2C/S-Dongseoul C/S	280km	27.12	Yeongdong Region-Greater Seoul
3	Saemangeum C/S-Seohwaseong C/S	220km	30.12	Honam Region-Greater Seoul
4	Saemangeum C/S-Yeongheung Thermal Power C/S	210km	38.12	Honam Region-Jungbu Region
5	Sinhaenam C/S-Seoincheon Combined C/S	350km	38.12	Honam Region-Jungbu Region

Figure 20: HVDC System Configuration and Advantages

Bypasses Saturated Existing AC Grid	Asynchronous Operation from the AC Grid Maintains Receiving-End Stability Even During Adjacent Grid Disturbances
Minimizes Long-Distance Losses	Significantly Lower Transmission Loss Rate Compared to AC

Source: Korea Electric Power Corporation (KEPCO), CBRE Research, July 2026.

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Immediate Absorption of New Supply and Pre-Leasing Confirm Structural Demand Strength

CBRE's analysis of data center absorption in Greater Seoul from 2024 to 2028 confirms highly resilient structural tenant demand, where new inventory is absorbed almost immediately upon entering the market. In 2024 and 2025, absorption rates reached 99.7% and 99.4% respectively, achieving near-perfect stabilization and driving current Greater Seoul vacancy rates to an all-time low of under 5%.

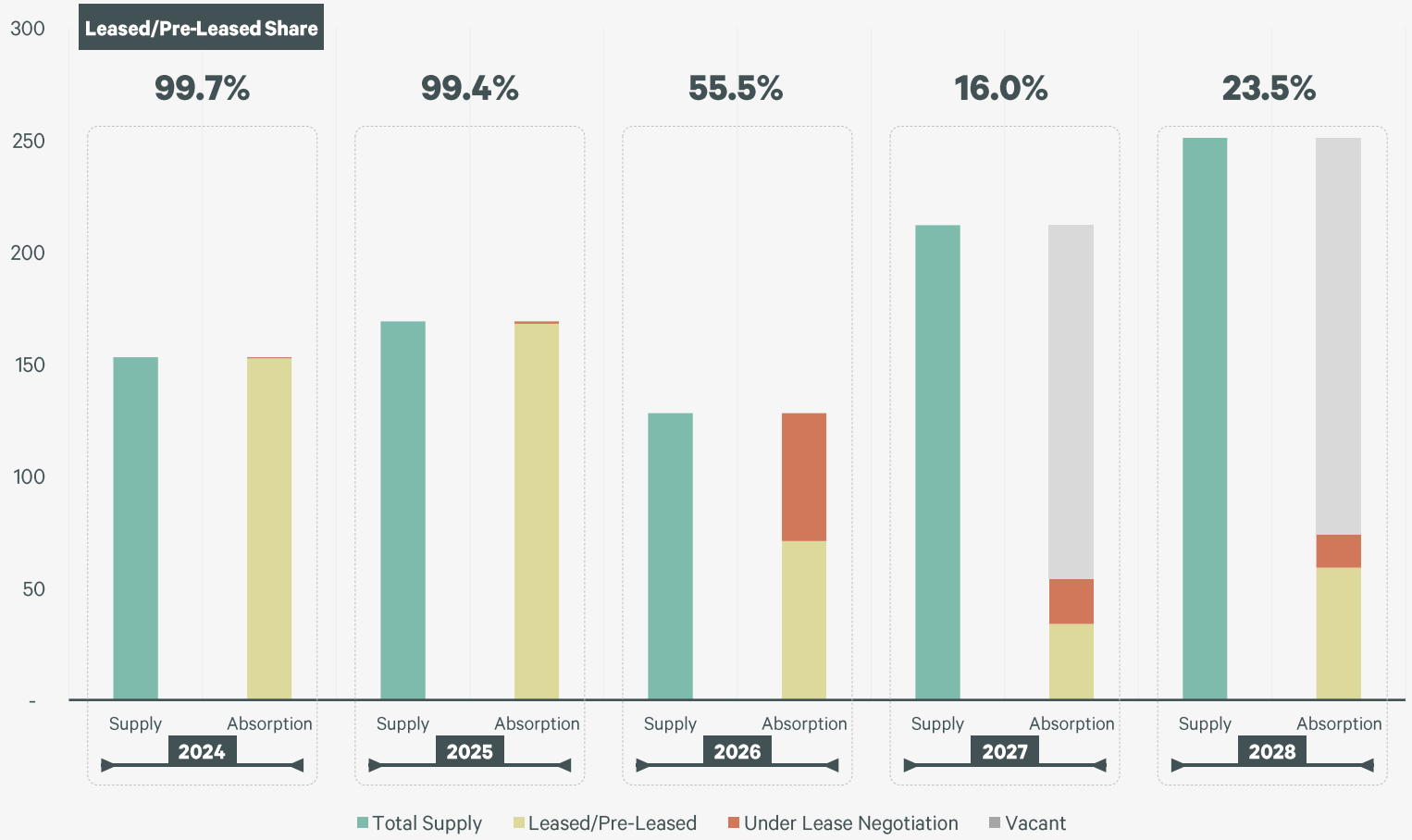
While the projected 55.5% absorption rate for 2026 could be misinterpreted as a rise in vacancy, it reflects a transitional phase where completed assets are fully absorbed, while under-construction assets are actively undergoing lease negotiations. When accounting for pre-completion pipelines currently under negotiation, the effective demand satisfaction level remains consistent with prior stabilized years.

Pre-leasing commitments have already reached 16.0% for 2027 and 23.5% for 2028, well ahead of actual supply visibility. This is an unprecedented phenomenon in the Greater Seoul data center market, indicating a critical shift where occupiers proactively secure capacity long before construction completion.

This evolving pre-leasing pattern signals a fundamental structural transition. Market participants have internalized the upcoming supply scarcity, shifting the competition for space earlier along the development timeline. As new supply materializes, the pace of absorption is expected to accelerate further, structurally strengthening the scarcity premium of assets with pre-secured tenants.

Figure 21: Annual Data Center Supply and Absorption in Greater Seoul

Unit: IT Load (MW)



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Diversifying Demand Drivers and Concentration of High-Quality Anchor Tenants

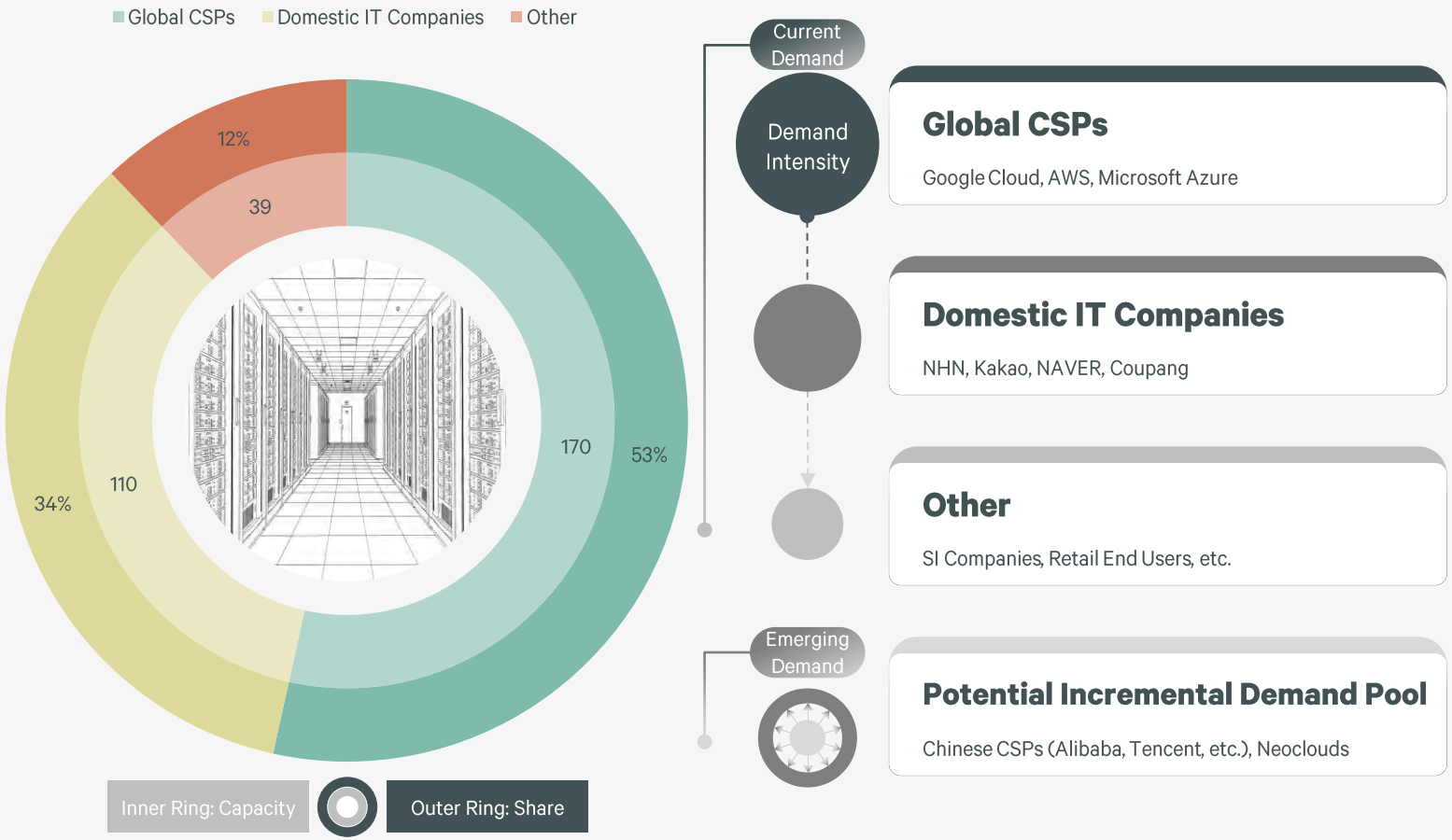
The primary driver of tenant demand in the Greater Seoul data center market stems from global CSPs and large domestic tech platforms, which dominate total market absorption. By occupier composition, global CSPs constitute the largest demand segment at approximately 170MW (53%), while domestic IT companies have emerged as a core pillar, accounting for 110MW (34%). Big tech subsidiaries of major domestic conglomerates are expanding their footprint as hyperscale occupiers comparable to global CSPs, accelerated by their proprietary AI deployments and cloud in-house strategies.

Structural shifts are also evident among traditional market participants. Domestic operators that historically focused on DBO (Design-Build-Operate) arrangements are rapidly transitioning into direct tenants and sub-lessors—validating through their own actions that the market has evolved to enable simultaneous capture of rental spreads and subleasing revenues. Under persistent supply scarcity, this trend further intensifies leasing competition for secured assets.

This multi-layered demand structure is structurally bolstering the credit profile of prime Greater Seoul assets. Long-term leases secured with institutional-grade anchor tenants representing 87% of total demand deliver highly visible and stable cash flows, serving as a core justification for premium valuations among global institutional investors and major REITs. Adding further depth, Chinese CSPs and Neocloud providers are rapidly emerging as a new potential demand pool, suggesting that the breadth of leasing demand is set to expand further.

Figure 22: Analysis of Major Greater Seoul Data Center Leasing Cases, 2024–2025

Unit: IT Load (MW)



Source: CBRE Research, July 2026.

*DBO (Design-Build-Operate) Project: A contractual arrangement under which the design, construction, and operation of a data center are outsourced as an integrated package.

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Financial, Public, and Corporate AX Demand Layer Onto CSP-Centric Structure, Driving Three Emerging Demand Pools

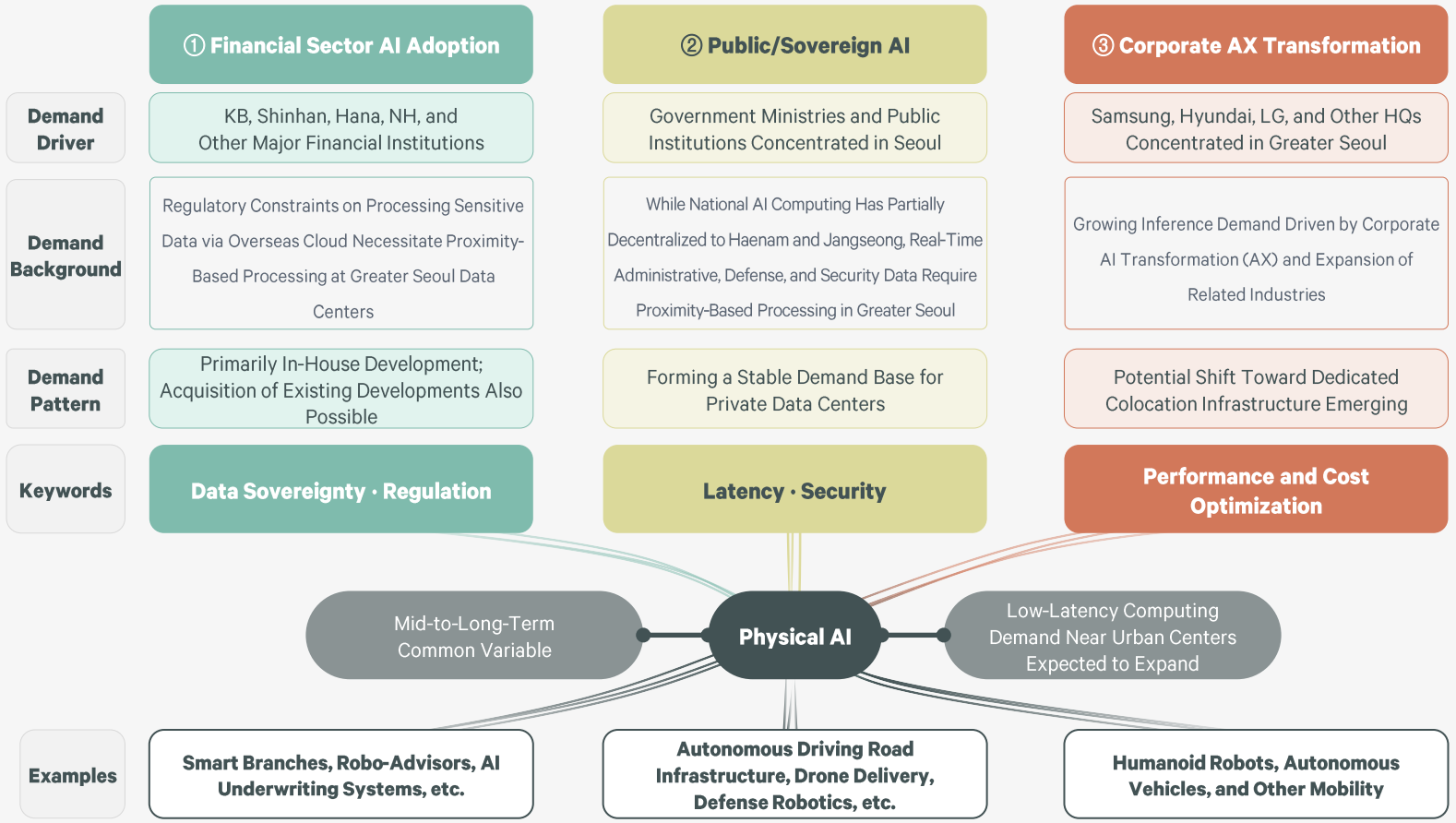
While global CSPs currently drive the majority of demand in Greater Seoul, three distinct user segments focused on data sovereignty, security, and technical optimization are emerging.

The financial sector is accelerating its transition to dedicated colocation due to regulatory constraints on offshore data processing, while public and sovereign AI sectors require proximity processing within Greater Seoul for security and real-time responsiveness. Furthermore, as AI transformation(AX*) deepens, major domestic conglomerates are increasingly exploring a shift from public clouds to dedicated colocation infrastructure to optimize cost efficiency and inference performance—though actual transitions remain limited in practice at this stage.

This expanding potential demand, coupled with blocked self-development routes due to local power constraints, will concentrate leasing toward assets with pre-secured power. With self-build options structurally foreclosed, the entry of these new segments will diversify a leasing market previously biased toward hyperscalers, while simultaneously exacerbating the overall supply-demand imbalance across Greater Seoul.

In the mid-to-long term, the commercialization of physical AI—including smart factories, robotics, and autonomous driving—will structurally expand demand for ultra-low latency computing near urban centers. Even as the primary supply axis shifts toward peripheral submarkets, this trend will continuously attract distinct occupier demand toward assets with urban accessibility. Taken together, this occupier diversification and the growth of ultra-low latency demand demonstrate that the Greater Seoul data center market has progressed beyond simple quantitative expansion into a stage of qualitative advancement.

Figure 23: Potential Demand Pool Types and Location/Operational Characteristics



Source: CBRE Research, July 2026.

*AX: AI Transformation, the AI-driven transformation of corporate management.

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Korea's Status Among World's Top in AI Adoption, Development, and Production Creates Structural Demand Fundamental

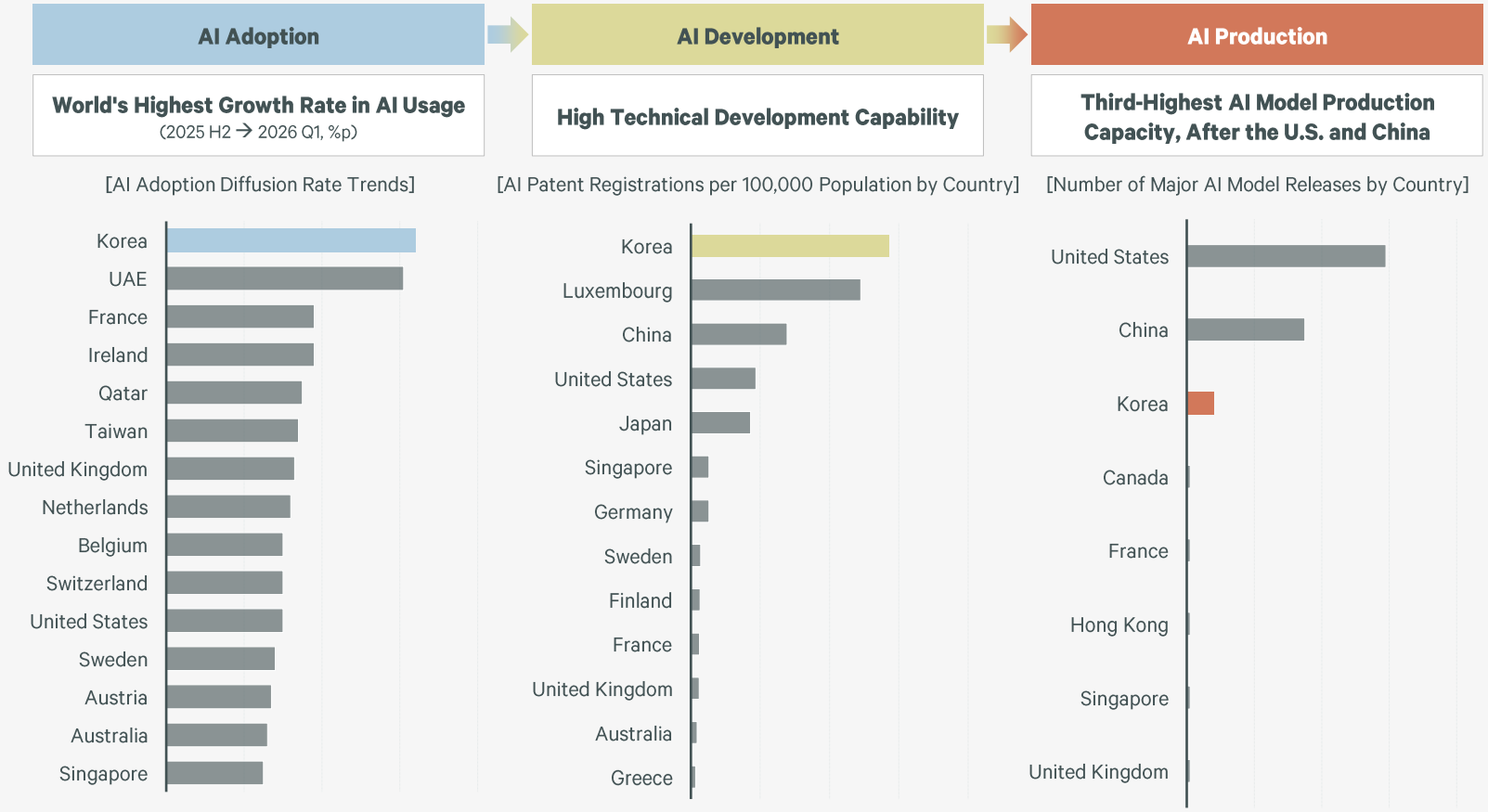
The rise of structural potential demand in Korea's data center market is underpinned by the strong competitiveness of the country's overall AI ecosystem. Structurally robust demand for data centers is driven by the country's top-tier global capabilities across all three core pillars: AI adoption, development, and production.

In terms of AI adoption, Korea recorded a 6.4 percentage point increase in its AI deployment expansion rate as of Q1 2026, ranking first among surveyed nations and demonstrating the fastest tech absorption speed of any market. This rapid adoption aligns with the previously mentioned AX demand from major domestic conglomerates, acting as a key driver that accelerates proprietary infrastructure expansion.

For AI development, Korea ranks first globally with 14.31 AI patent registrations per 100,000 people, outpacing the U.S. (4.68) and China (6.95), and establishing its status as a technology innovator rather than a mere consumer. The nation ranks third globally in the number of major AI models released (eight), effectively forming a top-tier production trio with the U.S. and China. This distinct development and production capability continuously generates internal demand for dedicated colocation from the financial sector and public/sovereign AI infrastructure, where security and sovereignty are paramount.

Korea is uniquely positioned as the only nation ranking at the top globally across adoption speed, technological development, and model production. The competitive expansion of data centers in Greater Seoul by global big tech and large domestic platforms is a direct result of structural demand generated by these three pillars, serving as a solid fundamental that supports the long-term sustainability of the domestic market.

Figure 24: Comparison of AI Adoption, Development, and Production Capacity by Country



Source: AI Index, 2026 (Stanford HAI), CBRE Research, July 2026.

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Supply-Demand Imbalance Drives Rapid Rent Growth, Though Asset Value Linkage Warrants Further Scrutiny

The structural supply-demand imbalance and robust occupier base in the Greater Seoul data center market are already exerting direct upward pressure on market rents.

Average rents hovered at around 140,000 KRW/kW in 2019 but shifted to a steep upward trajectory starting in 2022 when hyperscale demand accelerated, surging over 70% over a six-year period to reach approximately 250,000 KRW/kW by 2025.

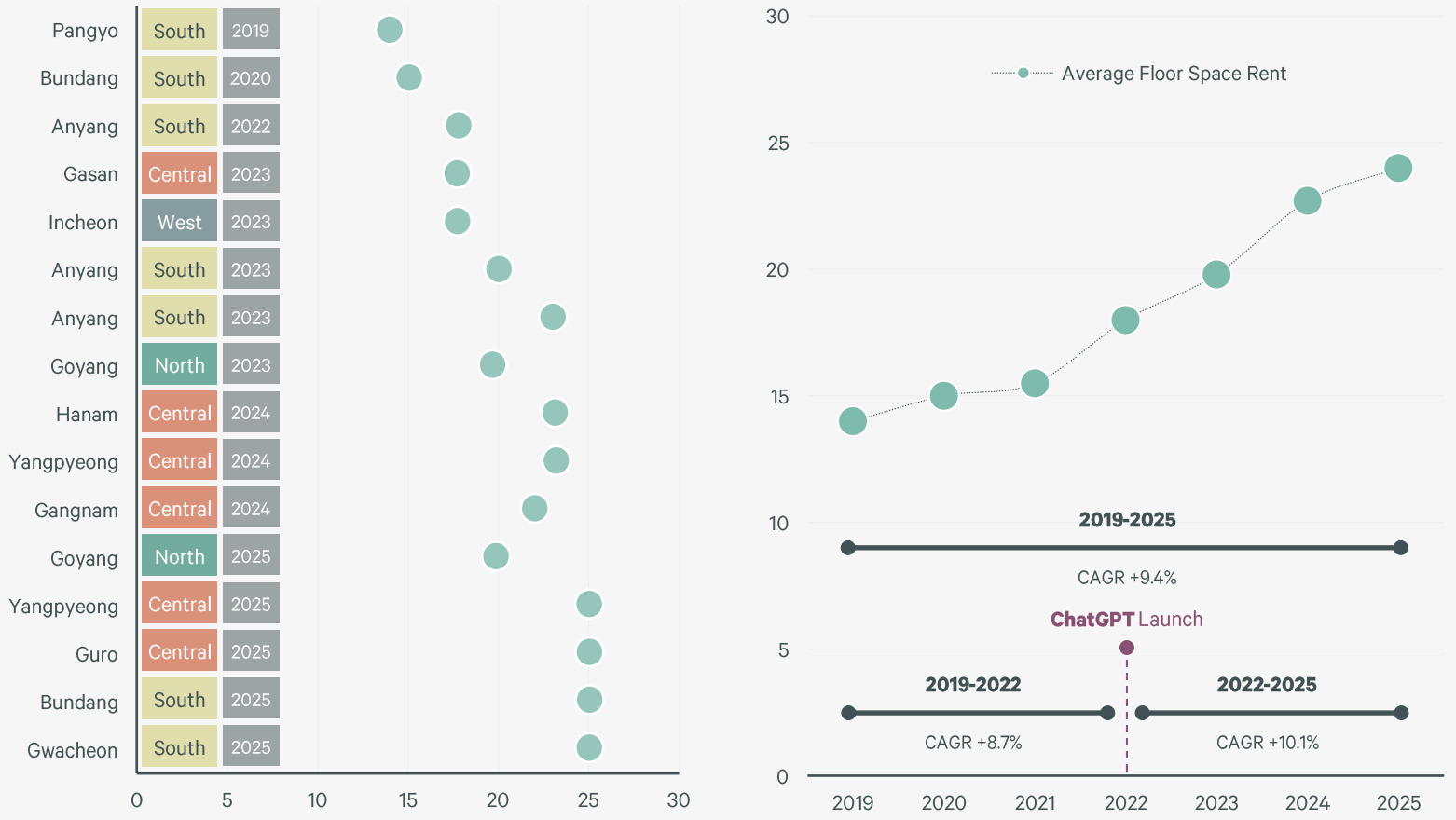
CBRE's detailed submarket analysis through case distributions captures this rental growth even more clearly. A prevailing market rate of approximately KRW 250,000/kW has now formed broadly across major Greater Seoul submarkets, including the Central and Southern zones—reflecting the convergence of supply scarcity and concentrated demand. That said, meaningful variations exist based on location, asset specifications, and contract scale, and even within the same submarket, pricing differentials can emerge between hyperscale-grade assets and smaller facilities.

However, a multifaceted evaluation is required to determine whether this rapid rental growth can be sustained across the entire market. This requires a preliminary analysis of potential regional variations based on locational advantages or power procurement capabilities, as well as the actual rental ceiling limits acceptable to occupiers during large-scale, long-term lease executions.

In light of future shifts in the market environment, macro checkpoints must be examined from an investment perspective to assess whether this rental growth can fully translate into actual asset value appreciation.

Figure 25: Greater Seoul Data Center Floor Space Rent Trends (1MW+, by Case, Region, and Year)

Unit: KRW 10,000/kW/Mth



Source: CBRE Research, July 2026.

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Entrenched Demand, Deepening Supply Disconnect: An Inflection Point for Scarcity of Existing Assets

Korea's world-class AI ecosystem provides powerful fundamentals to underpin robust demand in the domestic market. The Greater Seoul data center market is currently in an ideal demand phase, characterized by sub-5% vacancy rates with immediate absorption of new inventory and the expansion of global CSPs and domestic IT firms. This trajectory mirrors the U.S. market, which expanded rapidly through the simultaneous forces of structural AI demand growth and tightening supply constraints.

On the supply side, however, structural constraints have materialized in both the U.S. and Korea, leading to severe supply-demand imbalances. In the U.S., rising electricity rates and community opposition caused a sharp increase in construction cancellations, driving vacancy rates to historic lows and triggering a rental surge after 2022. Korea is following an identical path of supply constriction. With the final approval rate for the Power System Impact Assessment in Greater Seoul standing at a mere 1.9%, market entry barriers have heightened significantly. Furthermore, since practical power utilization remains unavailable until after 2030 when the West Coast HVDC lines are completed, a structural disconnect in new supply is becoming visible.

The repercussions of these supply constraints are already directly impacting pricing indicators. Space rents in Greater Seoul are on a sharp upward trajectory, pricing in the supply-demand imbalance with a 70% surge compared to 2019. At this critical juncture, where infrastructure demand is growing structurally while new supply routes are entirely blocked by institutional and physical limitations, the scarcity value of secured assets has peaked. Robust analysis of the structural risk factors that must be evaluated for future investments, alongside the corresponding strategies of potential buyers, is therefore essential.

Figure 26: Comparison of U.S. and Korea Data Center Markets — Demand Base and Supply Constraints

Source: CBRE Research, July 2026.

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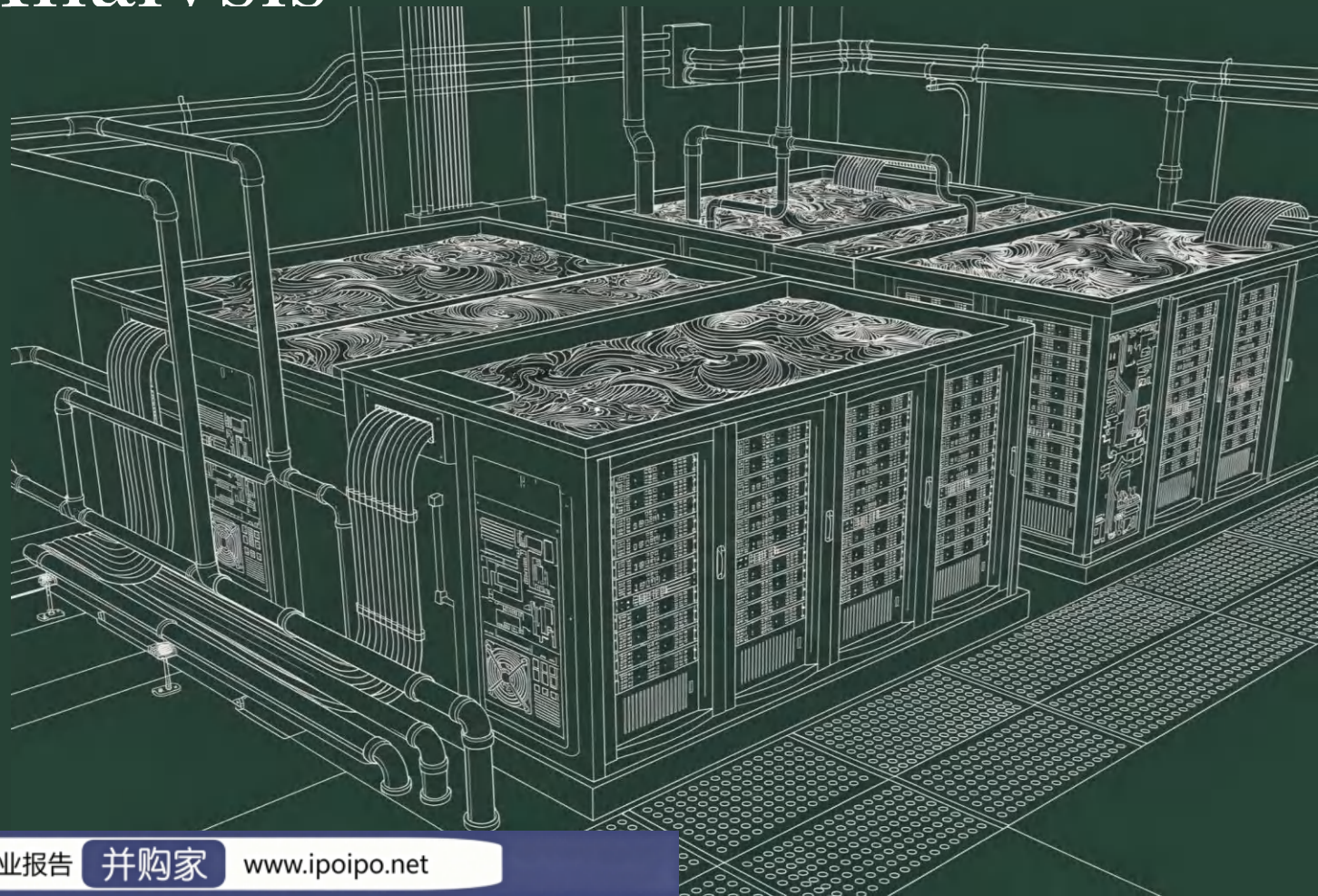
03

Korea Data Center Investment Market Analysis



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Data Centers Complete Full-Scale Entry into Institutional Alternative Asset Class Status

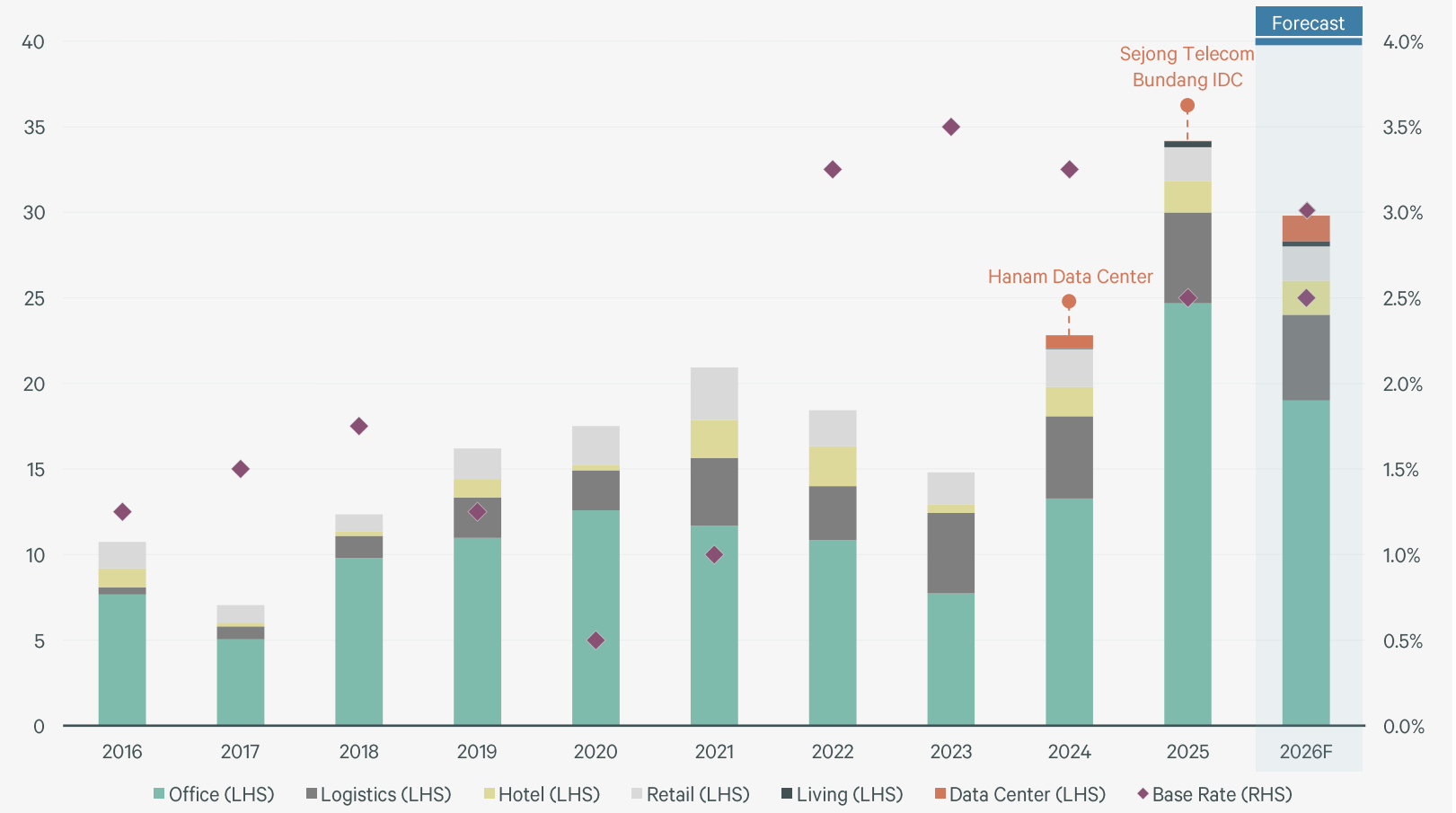
Seoul commercial real estate investment remains dominated by the office and logistics sectors, with the data center investment market remaining in its infancy with limited transaction volume. However, major transactions involving prime colocation assets are starting to emerge, signaling a turning point.

Major deals since 2024 include the Hanam Data Center, which was traded from IGIS Asset Management to Macquarie Infrastructure for approximately KRW 734 billion.

This year, Actis's Epoch Anyang Center is expected to be acquired by Koramco Asset Management for approximately KRW 840 billion, demonstrating the successful absorption of hyperscale assets with a power capacity of 40 MW. Such assets have commanded significant valuation premiums, sharing the common characteristic of having secured long-term leases of 90% or above with institutional-grade anchor tenants, including global CSPs and major domestic IT companies.

This rising visibility of institutional transactions suggests that data centers, while still alternative assets, are gradually entering the mainstream investment market. Just as logistics transactions recorded rapid growth over the past decade to become a staple core asset class, data centers are projected to quickly expand their share of overall commercial real estate investment volume, backed by robust structural demand. The inclusion of data centers in the portfolios of both domestic and international institutional investors is therefore expected to accelerate in the coming years.

Figure 27: Annual Commercial Real Estate Transaction Volume



Source: CBRE Research, July 2026.

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Amid Conviction in Value Appreciation, Risk Diligence Seen As Essential for Successful Execution

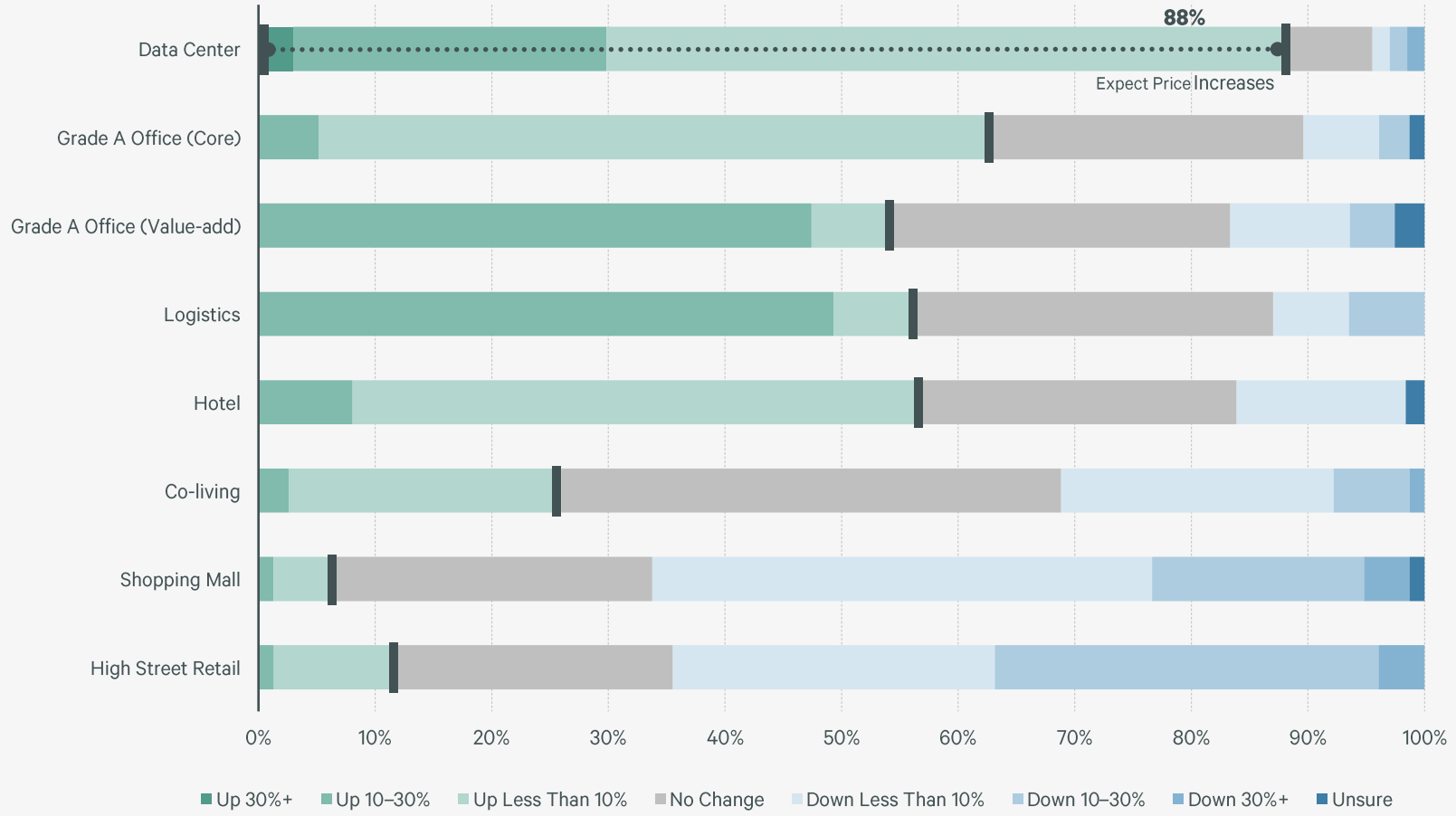
The structural supply shortage and strong downstream demand in the Greater Seoul data center market are driving premium asset valuations; a macro trend clearly reflected in investor sentiment surveys regarding price expectations.

According to CBRE's 2026 Korea Investor Intentions Survey, the outlook for capital appreciation remains dominant across most major asset classes, excluding retail. Among these sectors, pricing expectations for data centers demonstrated the most overwhelming upward trajectory.

Some 88% of domestic investors stated that data center asset values would increase, indicating that the strategic value driven by AI industry expansion has been widely priced into the market. While expectations for value appreciation of traditional core asset classes, such as Grade A offices and logistics, are stable, the overwhelmingly positive sentiment concentrated on data centers underscores its status as the market's primary growth engine. This indicates that investment demand to preemptively acquire prime assets remains highly competitive under persistent supply constraints.

Although investor confidence in data center value appreciation has reached a peak, successful investment execution requires a careful examination of the practical risk factors behind this optimistic outlook. The following section will provide a detailed review of the core checklist items that must be preemptively evaluated to minimize risks and secure stable yields when investing in the Greater Seoul data center market.

Figure 28: 2026 Asset Price Outlook by Sector



Source2026 Investor Intentions Survey, CBRE Research, July 2026.

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Cap Rates Reach Convergence with Global Peers, Limiting Further Compression-Driven Exit Gains

Investors' strong expectations for price appreciation are underpinned by macroeconomic indicators and risk factors that must be preemptively evaluated for successful investment execution.

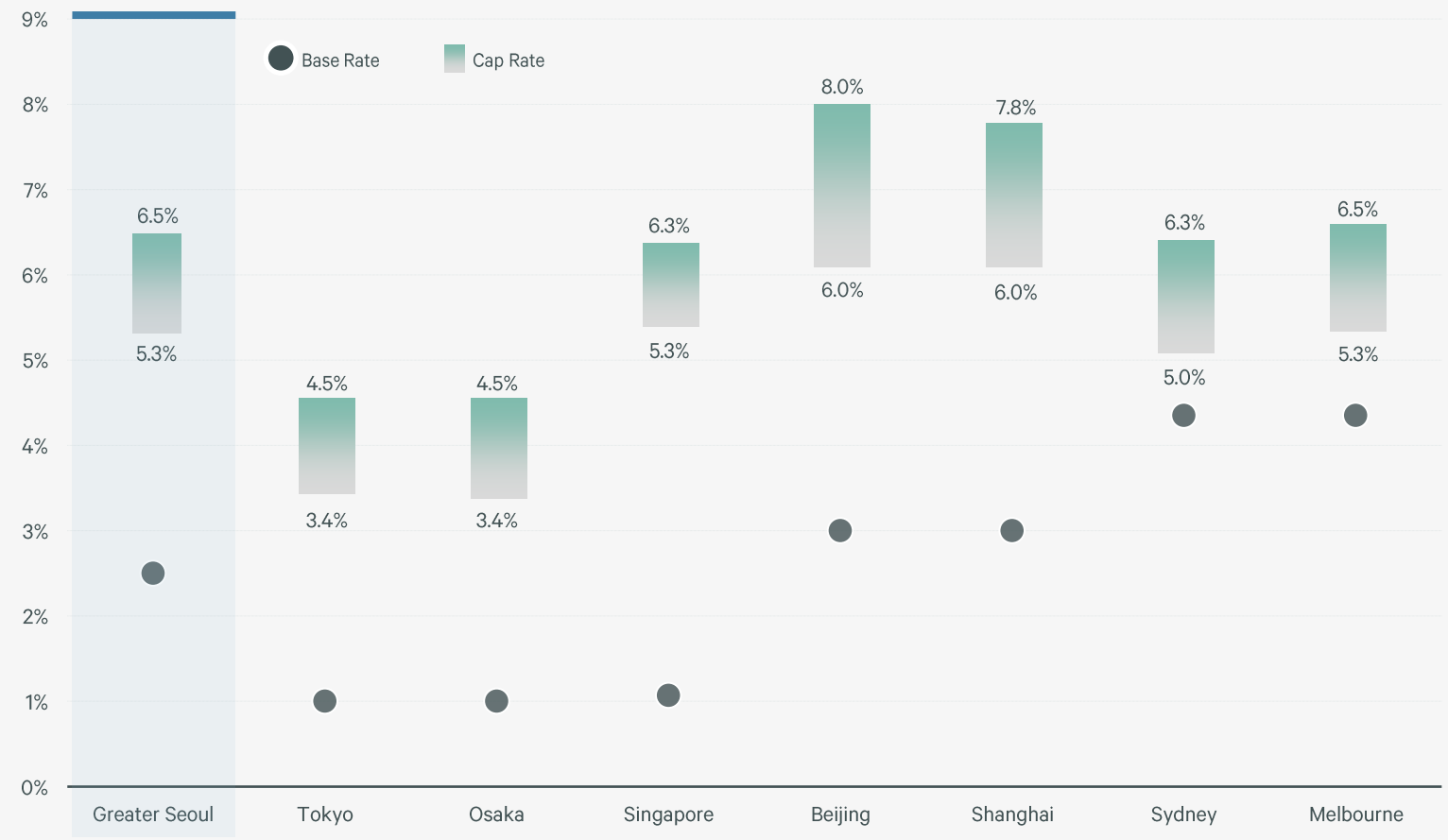
As Korea's data center investment market rapidly institutionalizes, local cap rates have reached convergence with global markets and major Asia Pacific gateway cities. Investment strategies that rely on capturing outsized capital gains through aggressive cap rate compression—similar to historical trends in traditional assets—are therefore projected to be limited.

When compared to major Asia Pacific cities, the implied cap rate for hyperscale data centers in Greater Seoul is 5.3% to 6.5%, tracking closely with prime markets such as Singapore (mid-5% range) and Australia. Even when evaluating the yield spread against Korea's base interest rate (2.5%), the spread stands at approximately 3.4 percentage points, which aligns with the ultra-low interest rate environment of Japan. Compared to global financial hubs such as Singapore (4.8 percentage points), the scope for further compression is highly restricted.

This suggests that the classic real estate investment formula—seen in Seoul's Grade A office market, where cap rates compressed from double-digits post-GFC down to the 3-4% range to drive explosive capital growth—cannot be directly replicated in the data center sector.

Limited expectations for cap rate compression stem from the structural characteristics of data centers. Specifically, equipment and facility investments constitute a significantly higher portion of total development costs than the physical structure, resulting in rapid technological depreciation over time.

Figure 29: Hyperscale Data Center Cap Rate Estimates vs. Base Rates Across Major Asia Pacific Cities



Source: CBRE Research, July 2026.

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Two-Decade Cap Rate Compression Cycle Ends; Return Drivers Shift to NOI Growth

The structural limits on data center cap rate compression are closely followed by a second critical risk: the challenge of translating sharp market rental growth into immediate short-term profitability due to unique lease structures embedded in the domestic market.

This constraint stems primarily from the nature of development capital in Korea. Unlike advanced markets where perpetual capital, such as listed REITs, dominates and secures ultra-long-term leases of 15 to 20 years, the Korean market relies heavily on short-term development capital via project funds or Project Financing Vehicles (PFVs) designed for exits within three to seven years. To secure project financing and ensure a stable exit, lenders routinely impose a condition precedent requiring pre-leasing commitments spanning at least five to 10 years (typically a five + five year structure) prior to loan drawdown.

Consequently, during the initial ramp-up period (0 to 36 months), assets frequently collect only 50% to 70% of the baseline rent. When combined with modest fixed annual escalations of around 2.0%, early-stage NOI growth remains constrained throughout short-term investors' typical fund holding period.

Despite spiking market rents, meaningful rental upside cannot therefore be realized until lease renewals are signed five or 10 years down the line. Furthermore, due to a general lack of development and operational expertise among domestic asset management companies, the market relies heavily on OpCo structures—such as master leases or operations outsourced entirely to global operators or IT service subsidiaries of large conglomerates (e.g., LG CNS). This operational dependency introduces additional risk, making it significantly harder to flexibly restructure lease terms mid-term.

Figure 30: U.S. Data Center REIT (NAREIT) Implied Cap Rate and Policy Rate Trends

Unit: %

Source: NAREIT, CBRE Research, July 2026.

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Development Capital's Short-Term Exit Premise Creates Lag in NOI Growth

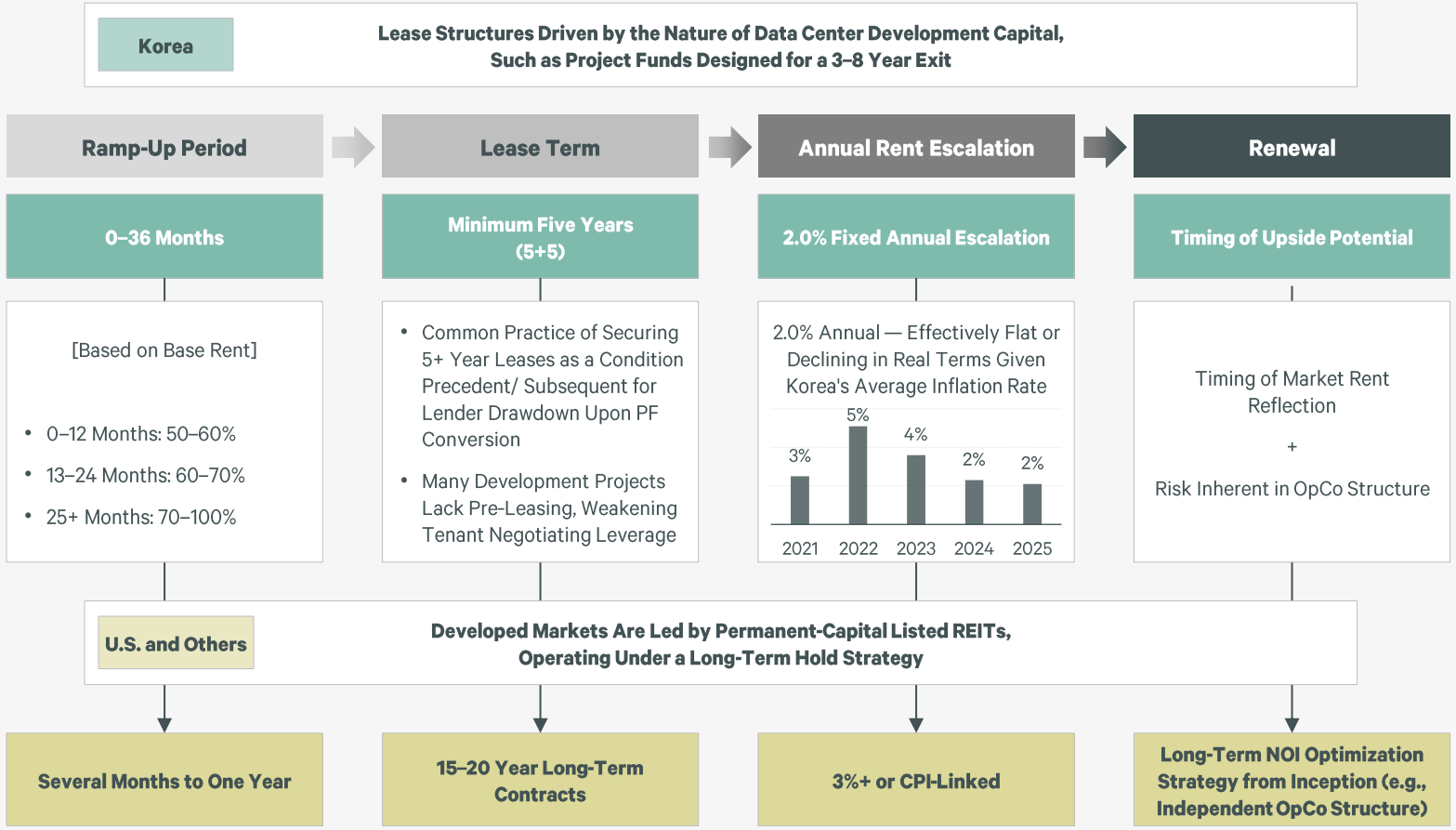
The structural limits on cap rate compression are closely followed by a second critical risk: the challenge of translating sharp market rental growth into meaningful near-term NOI improvement, given lease structures uniquely embedded in the domestic market.

Unlike advanced markets where perpetual capital such as listed REITs dominates and secures ultra-long-term leases of 15 to 20 years, the Korean market is structurally oriented around short-term development capital via project funds or PFVs designed for exits within three to seven years. To facilitate PF conversion and ensure a stable exit, lenders routinely require pre-leasing commitments of at least five to 10 years as a condition precedent to loan drawdown. When combined with ramp-up period rent discounts and modest fixed annual escalations of around 2.0%, early-stage NOI growth remains structurally constrained throughout the fund holding period.

Compounding this, heavy reliance on OpCo structures—master leases or operations outsourced to IT service subsidiaries of major conglomerates or global operators such as LG CNS—makes mid-term lease restructuring significantly more difficult, introducing an additional layer of risk.

That said, recent trends in Greater Seoul suggest these constraints are = being resolved. Strong demand has enabled large-scale floor space to be absorbed immediately without ramp-up discounts, while global operators committing to 10-year minimum leases for contracts of 10MW or above have eased lenders' stability requirements. The prevalence of 3.0% or CPI-linked annual escalations is further offsetting risks that previously suppressed NOI growth, with lender requirements in project financing for new developments expected to gradually ease as a result.

Figure 31: Comparison of Data Center Leasing Structures: Korea vs. Developed Markets



Source: CBRE Research, July 2026.

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Physical Obsolescence Is Unavoidable Risk, Requiring Proactive Consideration of Retrofit Costs

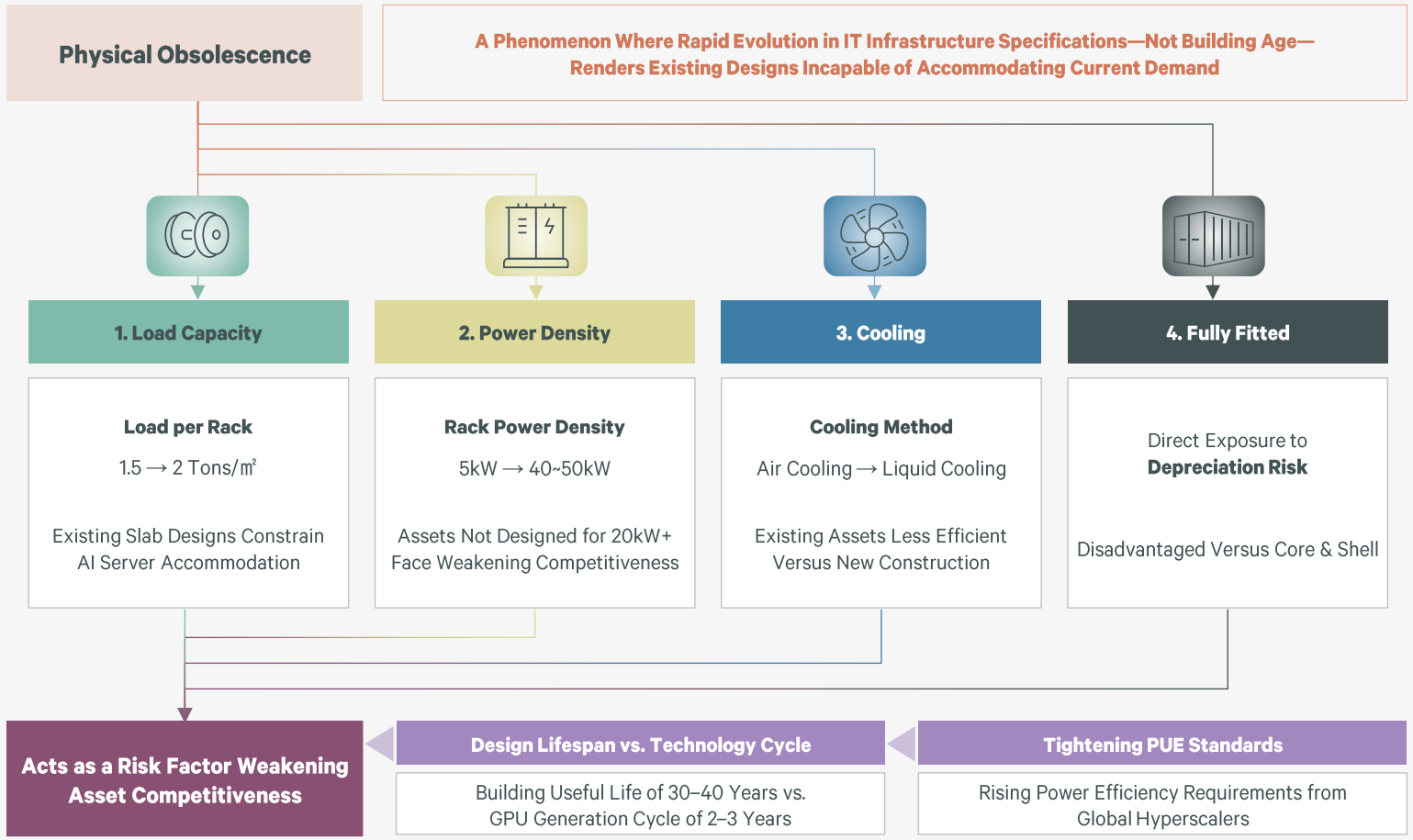
The third core risk investors must carefully evaluate is the physical obsolescence of data centers. Unlike traditional real estate, which depreciates gradually through physical wear and tear, data centers face rapid obsolescence driven by the evolution of IT infrastructure. Even cutting-edge facilities at completion can lose market competitiveness within five to 10 years solely due to shifting technological standards.

This obsolescence materializes in four areas: floor load capacity, power density, cooling systems, and facility configuration. Rising demand for AI servers have increased floor load requirements, making legacy slab designs inadequate. Power density also impacts competitiveness, as facilities unable to support high-performance GPU servers per rack face limitations. Furthermore, while transitioning to liquid cooling is becoming inevitable, retrofitting operational assets involves prohibitive costs.

In Korea, the allocation of risk under local lease structures warrants particular attention. While a building's operational lifespan usually lasts 30 to 40 years, GPU generation cycles repeat every two to three years. In global markets, occupiers bear IT equipment investment and obsolescence costs under Core & Shell, triple-net structures. Conversely, Korea predominantly utilizes Fully Fitted structures, where infrastructure is delivered fully equipped. Consequently, domestic landlords absorb the equipment depreciation and substantial reinvestment (CapEx) risks driven by technological changes.

As global hyperscalers tighten power usage effectiveness (PUE) standards and avoid legacy facilities, domestic investors must factor in infrastructure reconstruction costs from the outset. Long-term value preservation demands a precise asset management strategy that accounts for the lifecycle of technology assets.

Figure 32: Four Pillars of Physical Obsolescence and Asset Competitiveness Risk Structure



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GPU Generational Shifts Widen Infrastructure Gap; Pricing Reflection and Buyer Pool Warrant Scrutiny

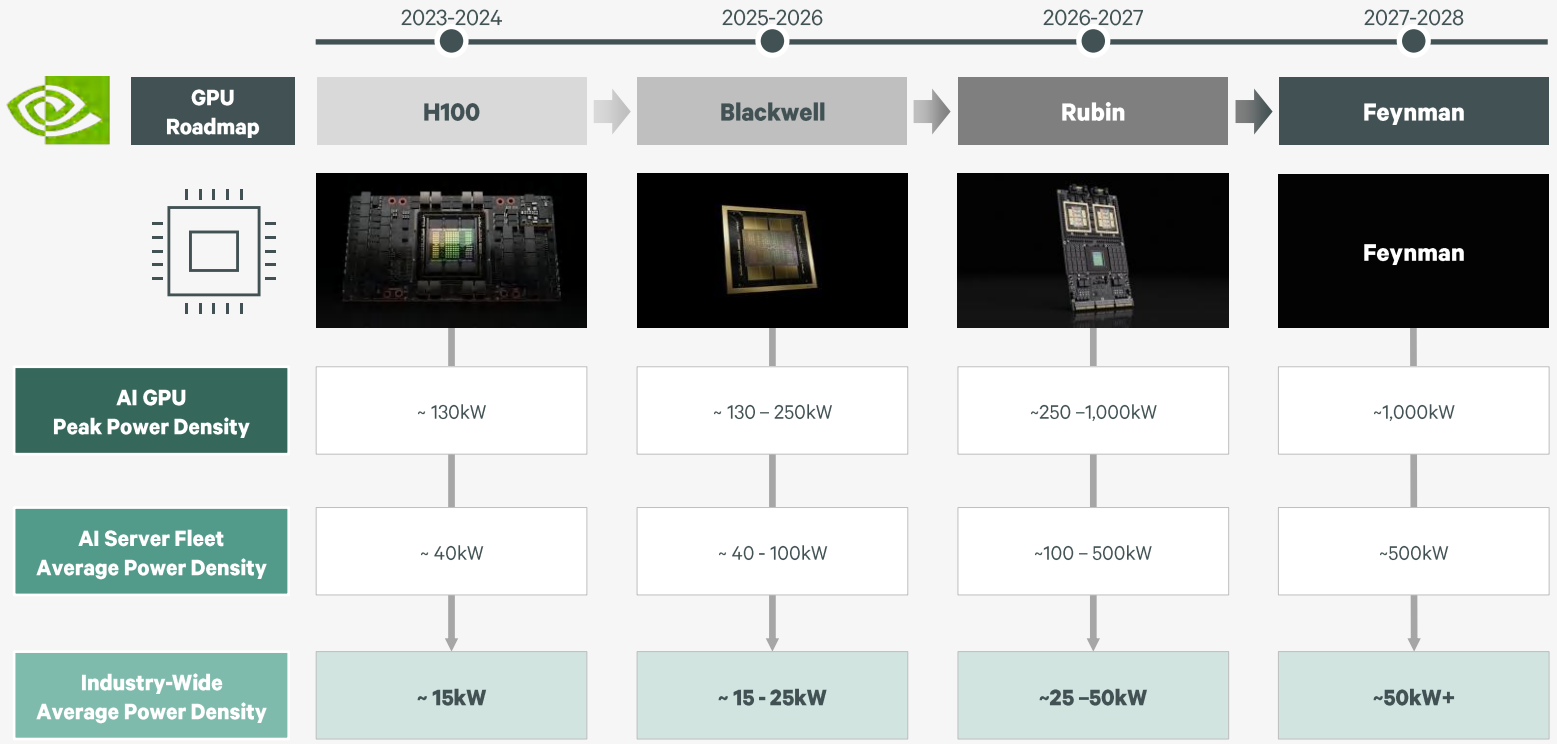
The primary catalyst accelerating asset obsolescence to unprecedented rates is the GPU. Specifically, the rapid evolution outlined in NVIDIA's product roadmap is forcing a fundamental paradigm shift in data center design standards.

Most existing data centers currently operate at an industry average power density of 15 to 25 kW per rack. However, operational power requirements for the already deployed Blackwell-generation AI servers reach 40 to 100 kW, and the industry average is projected to surpass 50 kW with the introduction of the Rubin and Feynman generations between 2026 and 2028. As peak AI GPU power requirements surge past 250 to 1,000 kW, legacy assets failing to meet these hyperscaler specifications risk being marginalized by market demand.

With the technology lifecycle outpacing a building's physical lifespan, infrastructure conversions to accommodate multiple generational shifts during the holding period are now a prerequisite. Investors must therefore address two critical questions. Firstly, are these rapid obsolescence risks and subsequent upgrade costs sufficiently factored into asset underwriting? In the domestic transaction market, precedents where such technical debt explicitly discounts asset pricing remain extremely rare.

Secondly, which prospective buyers possess both the capital strength and operational expertise required to absorb the massive capital expenditures that will follow acquisition? Under Fully Fitted lease structures where the burden of equipment replacement falls on the landlord, securing a qualified buyer capable of inheriting these infrastructure reconstruction risks at exit will be the decisive factor determining fund performance.

Figure 33: NVIDIA GPU Architecture Roadmap and Power Demand Outlook by Generation



- **AI GPU Peak Power Density (Peak Basis) -** Theoretical Max Power and Heat Dissipation Specifications of Next-Generation GPU Chipsets at Full Load, Marking the Technical Ceiling
- **AI Server Fleet Average Power Density (Operational Basis) -** Average Power Consumption of Currently Operating AI Clusters
- **Industry-Wide Average Power Density (Installed Basis)** - Average Power Density Across the Entire Data Center Industry, Including AI-Dedicated Facilities

Source: Vertiv, CBRE Research, July 2026.

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Greater Seoul's Power Constraints Create New Opportunities for Development Outside Capital Region

Despite complex structural risks within the data center investment market, regional power supply imbalances and government policy directions are creating new investment opportunities.

Domestic power generation is concentrated in non-capital regions, whereas consumption remains heavily skewed toward Greater Seoul. While power self-sufficiency rates in Gyeongbuk and Jeonnam exceed 200%, Seoul stands at 12% and Gyeonggi at 62%. Even Incheon transmits half of its generation to Seoul and Gyeonggi, pushing the capital region's grid capacity to its limit. Consequently, non-capital regions with reliable power procurement are drawing attention as structural alternatives.

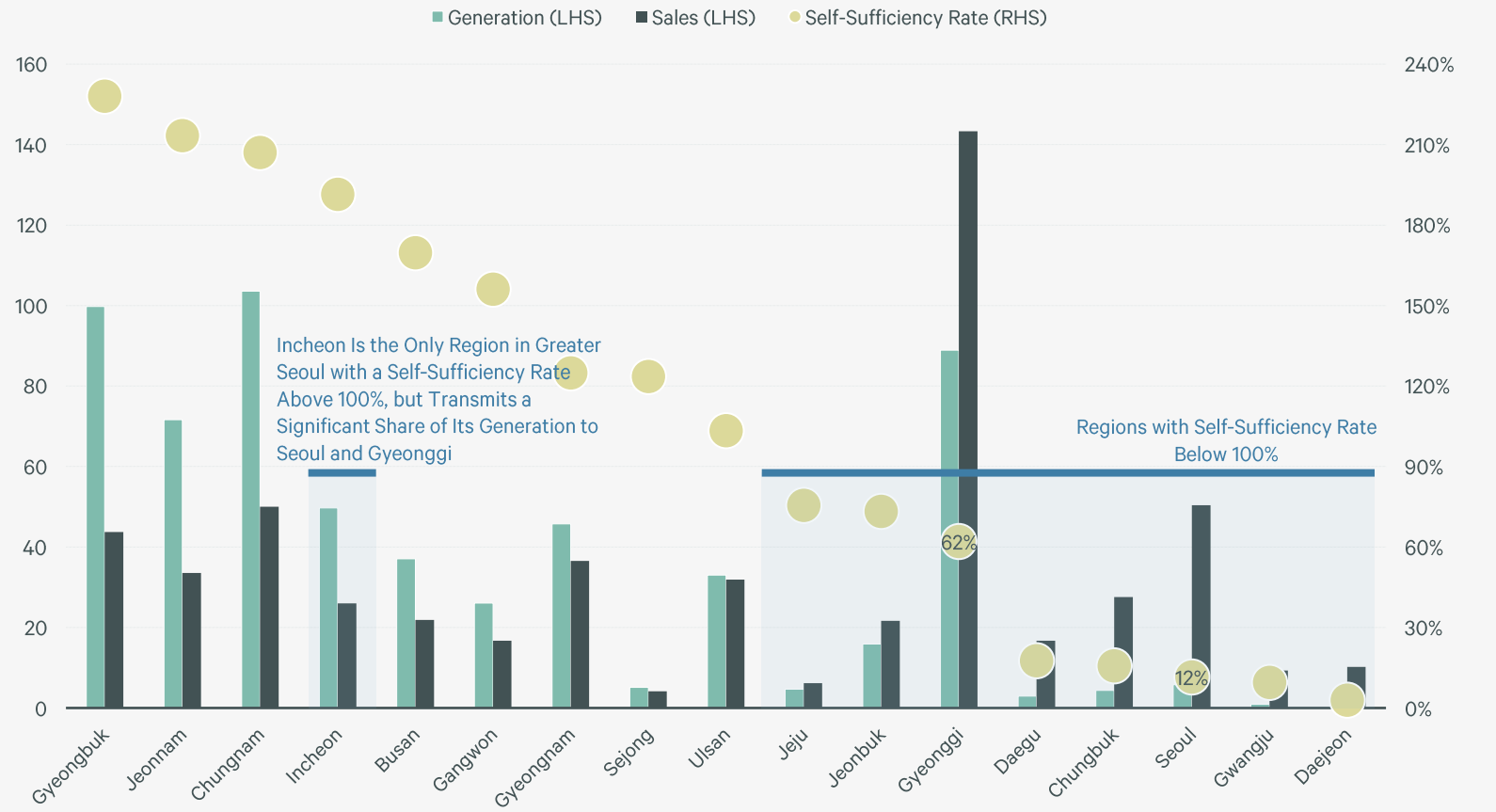
A variety of non-capital projects are already materializing, including enterprise data centers by Naver (Sejong) and Samsung (Gumi), big tech partnership facilities such as SK and AWS in Ulsan, and government-backed initiatives in Haenam and Jangseong. Following the implementation of the AI Basic Act in January 2025, government policy has become more defined. Driven by industry feedback that existing frameworks cannot resolve complex permitting hurdles, discussions to enact a special law are gaining momentum to bypass capital region power constraints and safeguard national competitiveness.

The power ceiling in Greater Seoul enhances the scarcity value of operational assets, while opening new development avenues in non-capital regions where regulatory relief and government support are concentrated. Investors can capture long-term growth by preemptively securing promising non-capital projects aligned with national AI infrastructure expansion policies.

*AI Basic Act: A national framework law for fostering the AI industry and establishing a foundation of trust, which sets out the government's support system for AI technology development and use, defines safety and ethics standards, and serves as the legal basis for national AI infrastructure policy.

Figure 34: Regional Power Generation, Sales, and Self-Sufficiency Rate Comparison

Unit: MWh



*Self-sufficiency rate is calculated as generation divided by sales, and is not an officially published government statistics.
Source: CBRE Research, July 2026.

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AIDC Special Act – Reinforcing Greater Seoul Scarcity, Easing Barriers to Non-Capital Region Development

The passage of the AIDC Special Act serves as a key policy breakthrough following the regional power imbalance, acting as a critical variable that will reshape the future market landscape.

This legislation simultaneously reinforces Greater Seoul asset values while lowering non-capital market barriers for permitting and power procurement. Because the exemption from the Power System Impact Assessment applies strictly to non-capital regions, the scarcity premium of pre-secured power assets in Greater Seoul becomes structurally reinforced.

Furthermore, the integration of six special exemptions vastly improves development predictability. These include streamlined permitting via a consolidated application process through the Ministry of Science and ICT, direct renewable energy sourcing via third-party PPA exemptions, and relaxed facility standards. For designated non-capital AIDC Special Zones, the government will directly install or subsidize power, water, and renewable infrastructure, while granting exemptions for land preservation and traffic impact fees to optimize development costs.

However, institutional uncertainty will persist during the nine-month window post-promulgation while enforcement decrees are finalized, and special zone designations require National AI Strategy Commission approval. Investors must re-evaluate the exclusive value of core assets in Greater Seoul while simultaneously targeting non-capital special zones to address global big tech's RE100 requirements through direct renewable energy sourcing exemptions.

*AIDC Special Act: Refers to the Special Act on the Promotion of the AI Data Center Industry, which provides for integrated permitting and licensing, exemption from Power System Impact Assessments outside Greater Seoul, direct supply of renewable energy, and the designation of AI Data Center Special Zones, among other provisions.

Figure 35: Key Provisions of the Special Act on the Promotion of the AI Data Center Industry

① Integrated Permitting and Licensing (Article 18)

- Single Application to the Minister of Science and ICT
- Following Deliberation and Resolution by the National AI Strategy Committee, Requests Are Routed to Relevant Agencies
- Processing Timeline: Power System Impact Assessment — 150 Days / Building Permit — 40 Days
- Permit Deemed Approved If No Rejection Notice Is Issued Within the Deadline (Sunset/Timeout Provision)

② Exemption from Power System Impact Assessment (Article 19)

- Exempted for New Construction, Expansion, or Conversion of AIDCs Outside Greater Seoul — Exempted Power Capacity to Be Set by Presidential Decree
- Excluded from Application of Article 23 of the Special Act on Activating Distributed Energy — Greater Seoul Not Eligible for Exemption

③ Direct Supply of Renewable Energy (Article 20)

- Renewable Energy Operators May Supply Power Directly to Businesses Without Going Through the Electricity Market
- Special Provisions Under the Electric Utility Act Apply

④ Relaxed Facility Installation Standards (Article 21)

- Elevators, Charging Facilities, Dedicated Parking Areas, Attached Parking Lots
- Relaxed Standards for Public Art Installation Requirements
- Scale and Other Calculation Criteria to Be Applied Differently Per Presidential Decree

⑤ Special Provisions Under Industrial Sites and Harbor Acts (Articles 22–23)

- Recognized as ICT-Related Facilities Within Industrial Complexes
- Designated as Industrial Cluster Support Infrastructure
- Eligible for Occupancy in Type 1 Port Hinterland Complexes

⑥ AI Data Center Special Zones (Articles 24, 26)

- Designated Outside Greater Seoul, Linked to Distributed Energy Specialized Zones
- Government to Directly Install or Provide Cost Support for Power, Water, and Renewable Energy Facilities
- Eligible for Reduction or Exemption of Farmland Conservation Charges, Traffic Inducement Charges, etc.
- Priority Support from the Korea Credit Guarantee Fund and Korea Technology Finance Corporation

Source: CBRE Research, July 2026.

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Buyer Pool Expands in Stages, from Domestic Institutional Capital Toward Global Permanent Capital

The diversifying player base within the data center market serves as another powerful opportunity, expanding liquidity. The potential buyer pool and exit pathways for Korean data centers are classified into three distinct categories based on capital characteristics.

- Domestic Institutional Capital (Short-term): Centered on project funds with five-to-seven-year maturities. These buyers can maintain current Fully Fitted and short-term lease structures, as demonstrated by the Epoch Anyang Center. However, this pool consists primarily of domestic Asset Management Companies (AMCs), making them highly sensitive to transaction timing.
- Global Infrastructure Capital (Short-to-Medium/Long-term): Preferring holding periods of 10 years or more, representative players include Macquarie Infrastructure, KKR, and Blackstone. While both Fully Fitted and Core & Shell structures are acceptable, this group tends to assign higher valuations to assets where lease restructuring offers meaningful NOI improvement potential.
- Global Specialized Data Center Capital (Medium/Long-term to Perpetual): Represented by players like Keppel DC REIT and Equinix, whose purpose is perpetual asset inclusion. Entering this segment requires a triple-net structure and a long Weighted Average Lease Expiry (WALE) of over six years. This group will provide a robust exit route once current domestic listed REIT vacancy is resolved.

While short-term transactions will remain driven by domestic institutions, the medium-to-long-term will see expanded entry from global infrastructure and specialized DC REITs, contingent on lease restructuring. Locally, Koramco and Pacific Asset Management are pursuing data center REIT listings. Once this gap is bridged, a pathway to perpetual capital will be established within the domestic capital market.

This expansion of the buyer pool enhances asset liquidity and serves as a safeguard to preserve value at exit. Consequently, investors must design asset structures matching these buyer guidelines from the acquisition stage. Assets that preemptively secure core locations and power capacity will successfully attract prime capital and ensure stable exit opportunities.

Figure 36: Buyer Analysis by Capital Type — Investment Horizon, Lease Structure, and Transaction Characteristics

Category	Domestic Institutional Capital	Global Infrastructure Capital	Global Data Center-Specialist Capital
Investment Horizon	Short-Term	Short to Mid/Long-Term	Mid/Long-Term to Permanent
Holding Period	Five to Seven Years	10+ Years	Permanent
Lease Structure	Current Structure Maintainable	Prefers Restructuring	Triple Net
Preferred Asset Type	Fully Fitted	Fully Fitted / Core & Shell	Shell & Core Preferred
Deal Size	Approx. KRW 1 Trillion	Large-Scale Single-Asset Acquisition	Portfolio Inclusion
Transaction Precedent	Epoch Anyang Center (Ongoing)	Hanam Data Center	-
Potential Buyers	Domestic and Foreign AMCs	Macquarie Infrastructure, KKR, Blackstone, Brookfield, Actis, GIC, CPP Investments	Keppel DC REIT, Equinix, Digital Realty,

- In the Near Term, **Repeat Transactions by Domestic Institutional Capital** Are Expected to Dominate, Alongside **Intermittent Evaluation by Global Infrastructure Capital**
- Over the Mid-to-Long Term, **Inclusion by Global REIT Capital Is Anticipated**, Contingent on Meeting Permanent-Capital Entry Guidelines Such as Lease Restructuring

Source: CBRE Research, July 2026.

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Keppel DC REIT's 6x Growth Over Decade Cements Korea as Core Asia Pacific Hub

The most appropriate benchmarks for assessing the exit viability of Korean data center investment are Singapore and Tokyo. While sharing similar characteristics with Korea—such as urban concentration, power constraints, and high-density digital economies—both markets are a step ahead in terms of exit ecosystem maturity.

Keppel DC REIT, a leading global specialized data center capital vehicle, grew its AUM sixfold over a decade, from SGD 1.0 billion at its 2014 IPO to approximately SGD 6.3 billion in 2025. This expansion reflects the continuous acquisition of prime data center assets across Asia and Europe.

As of Q1 2026, Keppel DC REIT maintains a stable portfolio occupancy of 95.6% and a WALE of 6.5 years, showing a clear preference for long-term contracts, annual escalations (or CPI-linked adjustments), and Shell & Core structures.

Keppel DC REIT identified Korea, alongside Japan and Europe, as a core Asia Pacific data center hub in its 2025 official announcements. The REIT highlighted power constraints and tightening regulations as growth limiting factors, proving that global specialized capital already recognizes the scarcity premium of pre-secured power assets in Greater Seoul.

Should domestic assets meet their required long WALE and structural guidelines, Korea is projected to become a prime acquisition target for Singaporean REIT capital and a robust global exit pathway.

Figure 37: Keppel DC REIT AUM and Y-o-Y Growth Since IPO

Unit: SGD Billion

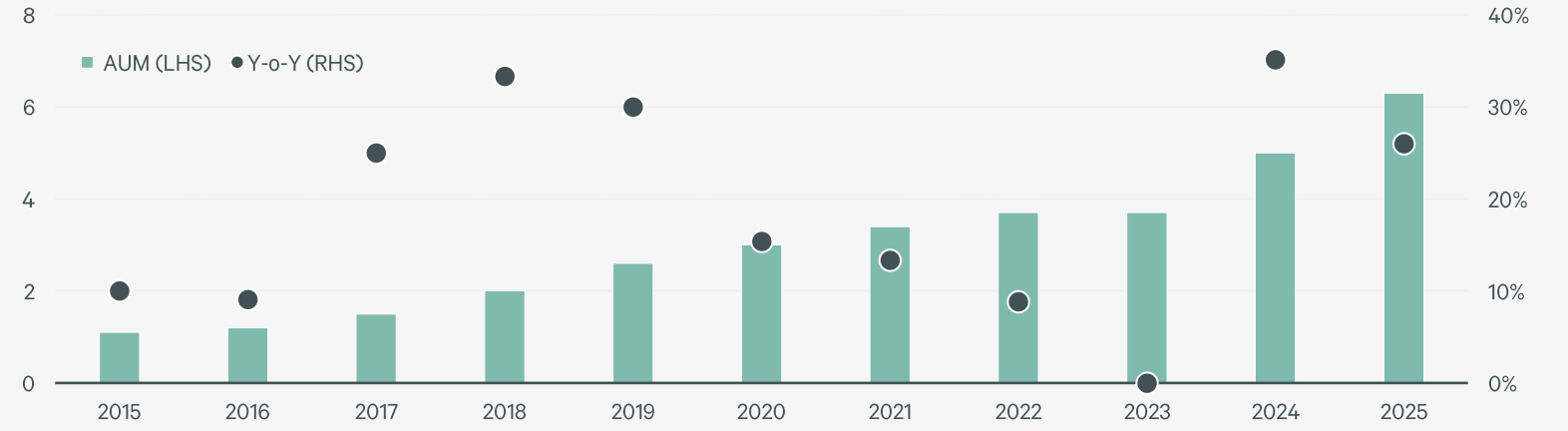
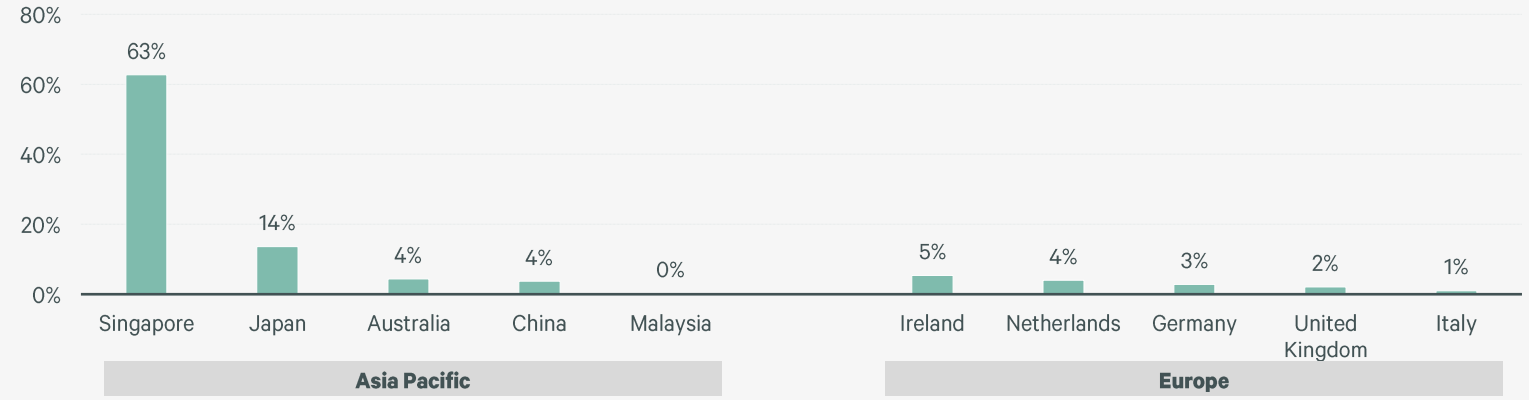


Figure 38: Keppel DC REIT Investment Allocation by Country (Q1 2026)



Source: Keppel DC REIT Q1 2026, CBRE Research, July 2026.

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Keppel's Fund-to-REIT Pipeline Signals First Potential Activation in Korea via Ansan Investment

Keppel has consistently utilized a strategy of developing and stabilizing data centers through private equity funds, subsequently transitioning them into listed assets by selling them to the public market vehicle, Keppel DC REIT.

Keppel's first fund (Alpha DC Fund) sequentially sold KDC SGP 4 (approx. KRW 460 billion) followed by KDC SGP 7 and 8 (approx. KRW 1.6 trillion) in Singapore. The latter deal achieved an LP-level IRR of approximately 50% and an equity multiple of 3x, demonstrating the strong profitability of migrating assets to perpetual capital. KDC SGP 9, currently under joint development, is slated for inclusion in the REIT via the same pathway.

This proven model is now materializing in Korea. The Ansan Data Center (60MW incoming power, 40MW IT load), in which Keppel Fund III is the anchor investor, became Keppel's first data center investment in Korea following the execution of an SPA in May 2026. The equity interest acquisition price stood at approximately KRW 100 billion—including land, power, and permitting premiums—out of a total project cost exceeding KRW 1 trillion (approx. KRW 370 billion in equity). With Hyundai Engineering & Construction, Shinyoung, and a lender group participating jointly, the project aims to transition to a main PF in September and break ground by October or November.

Upon securing a hyperscale tenant and completing development and stabilization, the Ansan Data Center is structured to allow for potential inclusion into Keppel DC REIT. This serves as the most direct precedent demonstrating that exits for domestic data center assets are moving beyond short-term trading between local institutions, establishing an advanced market exit pipeline that bridges into global perpetual capital.

Figure 39: Keppel Data Center Fund REIT Inclusion Structure and Domestic Case Study

Precedent Cases

KDC SGP 4	KDC SGP 7, 8
2019 REIT Disposal (SGD 388.8 Million, Approx. KRW 460 Billion)	**2024 REIT Disposal** (SGD 1.38 Billion, Approx. KRW 1.6 Trillion)

Potential Domestic Case for Inclusion

Ansan Data Center: Wonsi-dong 726-4, Banwol National Industrial Complex, Gyeonggi Province

Share Purchase Agreement Signed with the Development PFV in May 2026	Utilizing Keppel Data Center Fund III
40MW IT Capacity, Total Project Cost of KRW 1 Trillion	Hyundai Engineering & Construction to Participate as Contractor, Targeting Service Launch in 2030

Source: Keppel DC REIT IR, CBRE Research, July 2026.

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Equinix and Digital Realty: Global Operators With Potential to Deploy an Asset Acquisition Strategy

Another critical axis of global specialized data center capital—and a powerful potential buyer that will absorb prime domestic assets over the medium to long term alongside REIT capital—is the global hyperscale operator.

Equinix and Digital Realty are expanding their market share in Korea through self-development, land-lease-linked development, and joint ventures. Historically, during the initial phases of market entry, these global operators have favored risk-mitigation strategies like master leases or strategic joint ventures over direct asset acquisitions.

However, as physical supply constraints in Greater Seoul render new development increasingly unfeasible, a pivot toward acquiring stabilized Core & Shell assets in the capital region—where power and anchor tenants are already secured—is becoming a likely course of action.

For instance, while Equinix directly owns 79% of its assets in the Americas and Europe, its direct ownership ratio in Asia Pacific—where land-lease structures are prevalent—stands at just 37%. Digital Realty similarly identifies land-lease structures as an official risk factor in its disclosures. As these operators seek to overcome the limitations of land-lease structures and accelerate their Asia Pacific expansion, acquisition demand for prime, stabilized assets in Greater Seoul—where both land ownership and power are already secured—is expected to grow.

Consequently, capital region assets currently under development are well-positioned to serve as attractive exit targets for global operators' portfolio expansion. Investors should leverage the scarcity value of their pre-secured power assets to preemptively capture this expanding global buyer pool.

Figure 40: Equinix and Digital Realty Portfolio Overview (Unit: No. of Assets)

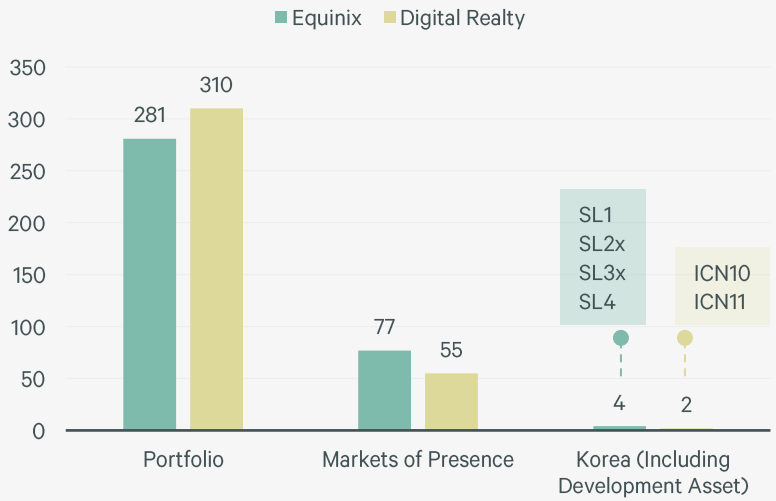

Figure 41: Equinix Revenue Share by Ownership Type

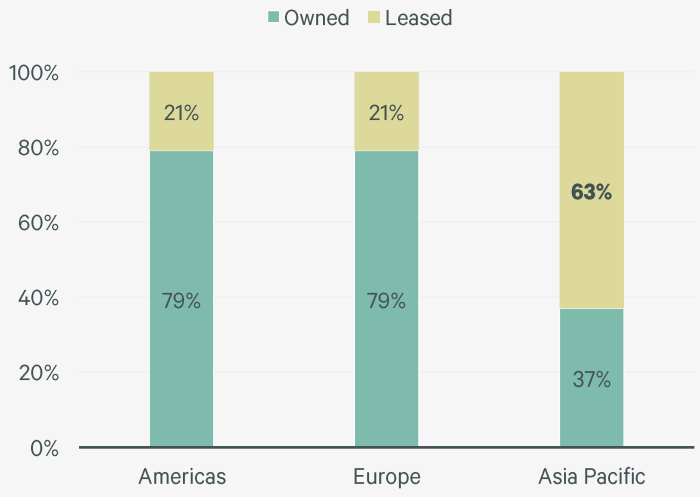

Figure 42: Lease Structure Risk Perception Among Global Data Center Operators — The Equinix Case

Lease Structure Limitations	**The failure to obtain favorable terms when we renew our IBX data center leases, or the failure to renew such leases, could harm our business and results of operations.**
A Significant Portion of Asia Pacific Assets Are Leased → The Company Discloses and Manages the Risk of Renewal Uncertainty and Sharp Rent Increases Upon Lease Expiry	Most of our IBX data center leases have renewal options available to us. However, many of these renewal options provide for the rent to be set at then-prevailing market rates. In the event that an IBX data center lease does not have a renewal option, or we fail to exercise a renewal option in a timely fashion and lose our right to renew the lease, we may not be successful in negotiating a renewal of the lease with the landlord. **- Equinix 10-K (FY2024)**

Source: Equinix, Digital Realty IR, CBRE Research, July 2026.

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Counterarguments Amid Structural Constraints: Five Checkpoints for Korea Data Center Investment

The primary risks and opportunities analyzed in this report highlight both the structural constraints and the corresponding counterarguments for Korean data center investment.

Firstly, the cap rate compression cycle has effectively concluded. While achieving dramatic capital gains through additional compression is no longer feasible, this transition confirms that domestic data centers have established their credibility as institutional-grade assets.

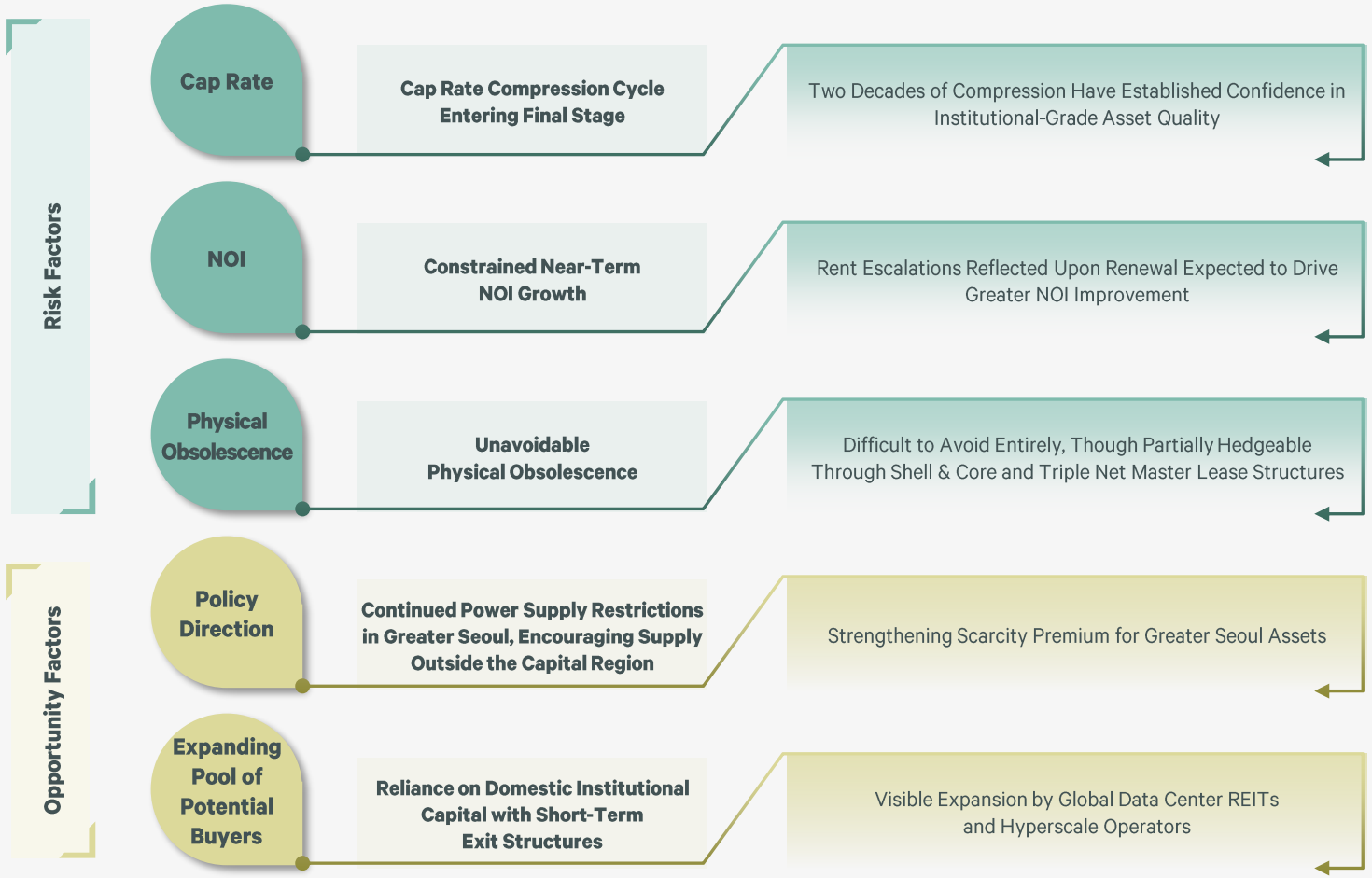
Secondly, short-term NOI growth remains constrained by ramp-up structures, long leases, and modest escalations. That said, recent dynamics in Greater Seoul—including the immediate absorption of large-scale floor space without ramp-up discounts, long-term lease commitments, and rising annual escalation rates—are gradually offsetting the risks that have historically suppressed NOI growth.

Thirdly, physical obsolescence presents the most unpredictable risk. Unlike advanced markets where costs are transferred to occupiers, Korean landlords bear the primary burden. Proactive post-acquisition lease restructuring will underpin technical risk management.

Fourthly, government policies offer a powerful catalyst. Grid constraints in Greater Seoul reinforce the scarcity premium of pre-secured power assets in the capital region, while providing a strategic breakthrough for new developments in non-capital areas.

Fifthly, the entry of global specialized capital validates exit strategies. Global data center REITs and hyperscale operators—such as and Digital Realty—are expanding direct ownership within Asia Pacific, establishing a robust global buyer layer for capital region assets under development.

Figure 43: Investment Checklist Summary — Risk/Opportunity Factors and Counterarguments



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04

Outlook and Recommendations

Convergence of Demand, Supply, and Capital: Korea's Data Center Market Reaches Structural Inflection Point

The Korean data center market is moving toward a clear structural transition driven by the interplay of key market variables.

Demand is structurally expanding on the back of AI acceleration, whereas supply remains heavily constrained by power availability. While caps on new permits in Greater Seoul are elevating the scarcity premium of pre-secured assets, government policies are opening strategic entry points in non-capital regions. Amid this shift, continuous hyperscale demand is serving as a robust floor for the market.

Within this imbalance, investment metrics present concurrent risks, including the conclusion of the cap rate compression cycle, near-term NOI growth constraints, and technical obsolescence. However, the scarcity value of capital region assets under strict grid regulations largely mitigates these pressures, and investor expectations for premium appreciation remain valid through strategic asset structuring.

The potential buyer pool is expanding. While short-term domestic institutional capital and global infrastructure funds continue to anchor transactions, maturing entry conditions for global specialized capital are enhancing medium-term exit viability, provided appropriate lease structures are implemented.

In conclusion, the scarcity premium of pre-secured assets in Greater Seoul has become a structural reality. In an environment with elevated entry barriers, core facilities that preemptively secure locations and power supply will achieve valuations that override underlying risks. Strategic alignment with global capital will subsequently ensure stable, premium exit opportunities.

Figure 44: Korea Data Center Market at a Structural Inflection Point — Synthesis of Market Conditions, Investment Market, and Buyer Pool

Source: CBRE Research, July 2026.

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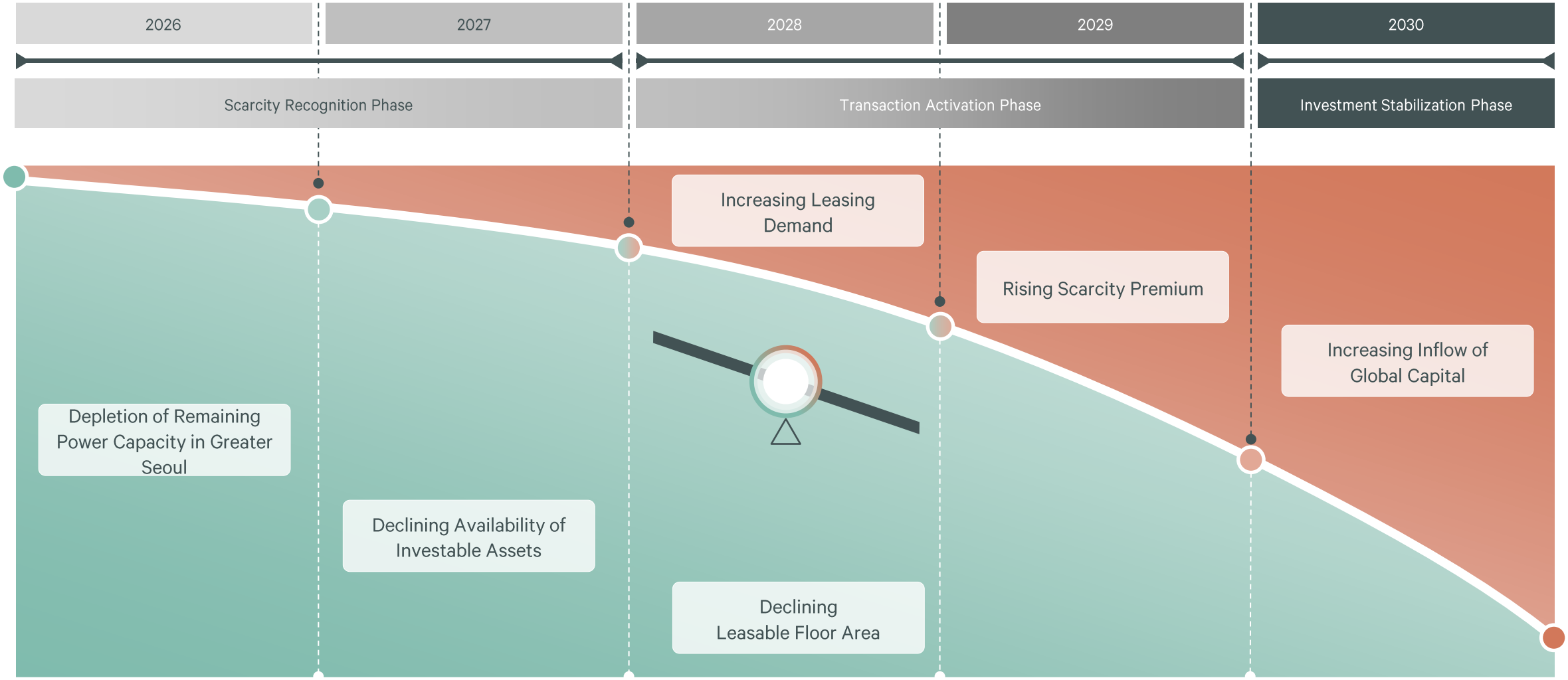
Deepening Supply Scarcity and Capital Diversification: The Phased Unfolding of a Structural Transition



Source: CBRE Research, July 2026.

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Recommendations

For Potential Sellers (Domestic Developers)

Korea's data center market is entering a structural transition phase amid intensifying supply scarcity and accelerating inflows of global capital. Potential sellers (domestic developers) should proactively address the following considerations to respond to market shifts.

① Incorporate Global Technical Standards at the Design Stage

Failure to incorporate global operators' technical standards at the design stage can result in substantial post-acquisition CapEx requirements for future buyers, placing sellers at a disadvantage in sale price negotiations. The adoption of a Core & Shell structure should likewise be noted as a key variable in global buyers' asset eligibility assessments.

② Strategic Lease Term Design Aligned with Fund Holding Period and Exit Timeline

To bridge the mismatch between short-term exit horizons and long-term lease requirements, sellers should coordinate renewal cycles and rent review dates to fall immediately ahead of the exit timeline. Positioning the lease renewal window in close proximity to the sale date allows sellers to present prospective buyers with a structural upside proposition—one that captures the full extent of surging market rents and updated contract terms as an embedded component of asset value.

③ Pursue a Dual-Track Portfolio Strategy Leveraging Government Policy

For existing Greater Seoul assets, value should be maximized through renewal coordination, while a parallel pipeline of joint ventures with global operators—leveraging non-capital region incentives such as the AIDC Special Act—should be developed to diversify portfolio risk and improve mid-to-long-term exit prospects.

From Potential Buyers (Global REITs and Infrastructure Capital)

Amid a structurally entrenched environment of supply scarcity, the scarcity of leasable assets in Korea's data center market is intensifying. Potential buyers (global REITs and infrastructure capital) can optimize their investment decisions by closely examining the following considerations.

① Price in Realistic Limitations on Expected Lease Restructuring

Under current domestic leasing practice, unilateral structural changes during the contract term are effectively difficult to achieve, and underwriting NOI upside on the assumption of rapid term improvements—such as conversion to Triple Net—is an overly optimistic assumption at the pricing stage. The structural drag imposed by a 2.0% annual escalator on near-term NOI growth must be explicitly priced into any acquisition valuation.

② Closely Verify OpCo Contract Structure and Operational Continuity

Assets developed by non-ICT-affiliated asset managers depend on master leases or management contracts with external operators. The remaining term of the OpCo contract, whether tenants hold direct contracts, and the potential for operational disruption upon operator replacement are key diligence items directly affecting NOI stability and warrant careful examination.

③ Independently Verify Whether Obsolescence Risk Is Reflected in Current Pricing

There is no precedent in domestic data center transactions of physical obsolescence costs being explicitly discounted. CBRE believes it is essential to independently assess whether the power density, cooling method, and slab load capacity of fully fitted assets meet current AI server requirements, and to reflect remaining CapEx needs in pricing.

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