The GCC AI Data-Centre Boom: A Capital-Deployment Guide for Infrastructure Investors

Where the demand comes from, how capital is deployed across the lifecycle, and how an international infrastructure investor should choose its entry point

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ABSTRACT

Artificial intelligence has turned data centres from a niche real-asset class into one of the largest infrastructure opportunities of the decade, and the Gulf, with cheap power, sovereign ambition and a strategic location, is building at scale. This paper is a capital-deployment guide for an international infrastructure investor weighing the GCC data-centre boom: where the demand comes from, how capital is deployed across the asset lifecycle, what return each entry point offers for what risk, and how to choose a strategy. Drawing on the literature on digital-infrastructure investment, on real-asset returns and development risk, and on offtake and contracted cash flows, it advances five propositions concerning Gulf data-centre capital deployment. Using a stylised, clearly-labelled framework, it characterises the demand drivers, maps the capital deployed across the land, construction, equipment and stabilisation phases, quantifies the return available at each entry point, and shows why offtake quality drives value. The analysis finds that Gulf data-centre demand is large, structural and AI-led rather than cyclical; that the risk and return vary sharply across entry points, from low-risk stabilised assets to high-return greenfield development; that the quality of the offtake, the tenant and the lease, is the single greatest determinant of value; and that an investor should match its entry point and strategy to its risk appetite, capability and capital scale. The paper provides a deployment framework, an entry-point comparison and a glossary, and discusses the limitations and avenues for further research.

JEL Classification: G11, G31, G32, L94, O18

Keywords: data centres, digital infrastructure, artificial intelligence, real assets, infrastructure investment, GCC, offtake, capital deployment

1. INTRODUCTION

Artificial intelligence has changed the economics of computing, and in doing so it has changed the economics of the buildings that house it. Training and serving large AI models requires enormous, dense, power-hungry computing capacity, and that capacity lives in data centres, which have moved in a few years from a specialised corner of the real-asset universe to one of the largest infrastructure opportunities of the decade. The demand for data-centre capacity is now growing faster than the industry can build it, and the constraint has shifted from whether the demand exists to whether the power, land, capital and capability can be assembled to meet it. The Gulf, with abundant and inexpensive energy, sovereign strategies that prize digital infrastructure, and a location between Europe, Africa and Asia, has become one of the regions building most

aggressively, which makes it a natural destination for international infrastructure capital seeking exposure to the AI buildout.

This paper is a capital-deployment guide for an international infrastructure investor weighing the GCC data-centre opportunity. It is written for the investment committee, the head of infrastructure and the deal team of a fund or institution considering how, where and at what risk to deploy capital into Gulf data centres. Its purpose is to map the opportunity in a way that supports a deliberate choice of strategy: to set out where the demand comes from and how durable it is, how capital is deployed across the lifecycle of a data-centre asset, what return each entry point offers for what risk, and how an investor should match its strategy to its appetite, capability and scale. The central message is that the Gulf data-centre boom is a large, structural, AI-led opportunity, but that the risk and return vary so sharply across the lifecycle that the investor's first decision, where to enter, matters more than the decision to participate at all.

The Gulf context is favourable in ways that bear directly on data-centre economics. Power is the largest operating input of a data centre, and the Gulf's abundant, inexpensive energy, increasingly complemented by solar, is a structural advantage over power-constrained markets elsewhere. Sovereign and government-linked demand, for cloud, data sovereignty and national AI ambitions, provides an anchor of demand that many markets lack. And the region's capital, both sovereign and private, is willing to co-invest, which eases the funding of large projects. These advantages do not remove the risks, which the paper addresses, but they make the Gulf a market where the AI data-centre opportunity is unusually well-supported on the supply side.

The paper makes three contributions. First, it characterises the demand for Gulf data-centre capacity and its drivers, showing that it is structural and AI-led rather than cyclical. Second, it maps how capital is deployed across the asset lifecycle, land and powered shell, construction and fit-out, equipment, and stabilisation, and the risk and return of each phase and entry point. Third, it shows why offtake quality drives value and compares the strategies, stabilised-core, build-to-core and greenfield-platform, available to an investor. Throughout, the figures are modelled and clearly labelled; they illustrate the deployment economics rather than forecasting outcomes, and they are not forecasts.

It is worth framing the opportunity against the constraint that defines it, because the two are inseparable. The demand for AI computing is, for practical purposes, unbounded relative to current capacity, so the binding question is not whether there is demand but whether the physical and capital ingredients, power, land, construction capability and patient capital, can be assembled to meet it. This inverts the usual real-asset question: where most property investment worries chiefly about demand, data-centre investment in a market like the Gulf worries chiefly about supply, about whether the asset can be powered, built and connected at all. For the investor, this means the analysis must attend as much to the supply-side ingredients as to the demand, and it is why this paper treats power, offtake and capability as the central variables rather than demand, which it takes as given. The companion papers in this cluster examine the supply constraints in greater depth.

The remainder of the paper is structured as follows. Section 2 reviews the literature on digital-infrastructure investment, on real-asset returns and development risk, and on offtake and contracted cash flows, and develops five propositions. Section 3 describes the data and the stylised methodology. Section 4 presents and discusses the results, covering the demand trajectory and drivers, the capital deployment across the lifecycle, the returns by entry point, the

risk-return map, and the role of offtake quality. Section 5 reports robustness. Section 6 sets out implementation considerations. Section 7 offers concluding comments, including limitations and directions for further research. A statement of disclosures, the references and appendices follow.

2. LITERATURE REVIEW AND PROPOSITIONS

The analysis draws on three strands: the literature on digital-infrastructure investment; real-asset returns and development risk; and offtake and contracted cash flows. This section reviews each and develops the propositions the analysis examines.

The infrastructure-investment literature also documents the strong institutional appetite for digital infrastructure, which bears on the exit and financing environment a Gulf investor faces. Pension funds, sovereign funds and infrastructure managers have raised substantial capital for digital infrastructure, attracted by its blend of contracted cash flows and structural growth, and this capital provides a deep pool of potential buyers for stabilised assets and co-investors for development. For a Gulf data-centre investor, this institutional appetite is favourable on both sides: it deepens the eventual exit market for stabilised assets, supporting value and liquidity, and it provides potential partners and co-investors for large projects. The investor should be aware, however, that strong institutional appetite can also compress entry yields, as competition for assets bids up prices, which is one reason the analysis favours entering earlier in the lifecycle, where the investor creates value through development rather than paying a full price for stabilised assets in a competitive market.

2.1 Digital-Infrastructure Investment

A growing literature treats digital infrastructure, data centres, fibre, towers, as a distinct infrastructure class with its own demand drivers and return characteristics (Weisdorf, 2007; OECD, 2021). The consistent finding is that digital infrastructure combines infrastructure-like contracted cash flows with growth driven by structural demand for data and computing, and that the AI wave has sharply accelerated the demand for the most power-intensive segment, data centres. The literature establishes that data-centre demand is driven by durable structural forces, cloud migration, digitisation and now AI, rather than by the economic cycle, which makes it a structural rather than cyclical opportunity. This underpins the first proposition: that Gulf data-centre demand is large, structural and AI-led.

The digital-infrastructure literature also distinguishes data centres from older infrastructure classes in a way that bears on the investor's expectations. Traditional infrastructure, roads, utilities, ports, offers stable, regulated, low-growth cash flows; data centres combine infrastructure-like contracted cash flows with technology-like demand growth and obsolescence risk. This hybrid character means a data-centre investor earns more growth than a traditional infrastructure investor but bears more risk that the asset or its technology becomes outdated, that a facility designed for one generation of computing is less suited to the next. The implication is that the investor should weigh not only the contracted income but the asset's adaptability and the durability of its demand, favouring designs and locations that can serve successive generations of computing. This obsolescence dimension is one reason offtake quality matters so much: a long lease to a strong tenant transfers much of the obsolescence risk to the tenant and secures the investor's return regardless of how the technology evolves.

2.2 Real-Asset Returns and Development Risk

A second literature examines the returns to real assets across the development and ownership lifecycle, and the way risk and return vary with the stage at which an investor enters (Peng, 2016). The findings are that greenfield development carries the highest risk and return, that risk falls and return moderates as an asset moves through construction to stabilisation, and that the investor's entry point therefore determines the risk-return profile as much as the asset itself. The literature establishes that an infrastructure investor must choose its entry point deliberately, matching it to its risk appetite and capability, because the same asset offers very different propositions at different stages. This underpins the second and fifth propositions, on returns by entry point and the choice of strategy.

The offtake literature also clarifies the financing consequence of contract quality, which matters for the whole capital stack. A data centre with a strong, long offtake can be financed with substantial, low-cost debt, because lenders will advance against the contracted cash flow, which raises the equity return through leverage and lowers the overall cost of capital. A speculative or weakly-let asset cannot, so it must be funded largely with expensive equity, which depresses returns and concentrates risk. The quality of the offtake therefore drives not only the asset's value but its financeability and its capital structure, a theme the companion paper on the capital stack develops. For this paper, the point reinforces Proposition 3: securing a strong offtake is the master move that unlocks both value and efficient financing, and an investor that neglects it forfeits both.

2.3 Offtake and Contracted Cash Flows

A third strand concerns the role of offtake, the contracts that commit customers to pay for capacity, in determining the value and risk of an infrastructure asset (Yescombe, 2014). For data centres, the offtake is the lease or service contract with the tenant, and the literature establishes that the quality of that offtake, the creditworthiness of the tenant and the length and terms of the contract, is the principal determinant of the asset's value and financeability, because contracted cash flows from a strong tenant convert a speculative development into a bond-like asset. This underpins the third proposition, on offtake quality driving value, and informs the analysis of entry points and financing.

2.4 Synthesis and Propositions

Taken together, these literatures imply that data-centre demand is structural and AI-led, that risk and return vary sharply across the lifecycle, and that offtake quality drives value. From this the paper develops five propositions:

Proposition 1. Gulf data-centre demand is large, structural and AI-led, driven by AI, cloud migration, data sovereignty and digitisation rather than by the economic cycle.

Proposition 2. Risk and return vary sharply across the asset lifecycle, from high-risk, high-return greenfield development to low-risk, lower-return stabilised assets; the entry point sets the profile.

Proposition 3. The quality of the offtake, the tenant covenant and the lease, is the single greatest determinant of a data centre's value and financeability.

Proposition 4. The Gulf's power, sovereign demand and co-investing capital are structural supply-side advantages that support the buildout, though they do not remove project risk.

Proposition 5. An investor should match its entry point and strategy, stabilised-core, build-to-core or greenfield-platform, to its risk appetite, capability and capital scale.

3. DATA AND METHODOLOGY

This study is analytical, using a transparent, stylised framework whose assumptions are stated explicitly rather than estimated from a proprietary dataset, which suits a question about how to deploy capital into an emerging opportunity. The figures are modelled and clearly labelled; they illustrate the deployment economics an investor can apply to its own strategy, and they are not forecasts.

The framework is built around the investor's decisions rather than around the asset's engineering, because the questions it answers are investment questions: how large and durable is the demand, what does each entry point offer and require, what determines value, and which strategy fits this investor. The engineering of a data centre, its power, cooling, design and operation, matters enormously to the asset, but the investor engages it as diligence inputs to the investment decisions rather than as the subject of the analysis. This orientation keeps the framework useful to the capital allocator who must decide where and how to deploy, and it complements rather than replaces the technical and project diligence that the asset itself requires and that specialist advisers and the companion papers provide. The division of labour is deliberate: this paper frames the capital decision, and the technical and project work fills in the inputs that decision needs.

3.1 The Deployment Framework

The framework has three components: a demand analysis characterising the growth and drivers of Gulf data-centre capacity; a lifecycle analysis mapping the capital deployed and the risk and return at each phase and entry point; and an offtake analysis showing how the quality of the tenant contract drives value. Together these address whether, how and where an investor should deploy capital.

3.1a What the Framework Does and Does Not Do

It is important to be clear about the framework's scope. It is a strategic tool for reasoning about how to deploy capital into Gulf data centres, the demand, the lifecycle, the entry points, the role of offtake, and how to choose a strategy; it is not a project-underwriting model, and it does not value any specific asset. The figures should be read as illustrations of the deployment economics, the way demand grows, the way risk and return vary across the lifecycle, the way offtake drives value, rather than as numerical predictions. The detailed underwriting of a specific asset, its offtake, its power, its capital stack, is the subject of the companion papers; this paper situates those decisions within the strategic choice of where and how to deploy. The value of the framework is that it makes that strategic choice explicit before the investor descends into project-level diligence.

The framework is deliberately strategic rather than computational because the first error in a booming asset class is usually not a modelling error but a positioning error, entering at the wrong point on the risk-return spectrum for one's capability, or chasing the demand without securing the supply. A precise project model cannot correct a strategy that targets greenfield development without development capability, or that assumes power and offtake the investor has not secured. By keeping the strategic choices explicit, the framework guards against the positioning errors that

a project model, however precise, would not catch, and it prepares the investor to use the project-level tools of the companion papers within a sound overall strategy.

The choice to express the analysis through indicative figures rather than precise market data also reflects the pace at which this market is moving. Capacity, pricing and demand in Gulf data centres are changing quickly, and any specific figure cited today would be stale before long, whereas the structural relationships the framework illustrates, demand growth, the lifecycle of risk and return, the primacy of offtake and power, are durable and will outlast the particular numbers. An investor should therefore take from the framework its structure and its relationships, and populate them with current, project-specific data at the time of its decision, rather than relying on any figure here as a current market reading. This is the appropriate way to use a strategic framework in a fast-moving market: as a durable way of organising the decision, refreshed with live data at the point of action.

3.2 Assumptions and Their Justification

The stylised inputs, the demand growth, the capex shares by phase, the returns by entry point, and the value uplift from offtake, are calibrations informed by the digital-infrastructure and real-asset literature (OECD, 2021; Peng, 2016) and by the general characteristics of the data-centre market; they are indicative rather than precise estimates and are recorded in Appendix A. The return and offtake assumptions are treated as the central uncertain inputs and are tested in Section 5. The base-case assumptions are set out in Table 1.

Table 1. Base-Case Assumptions for the Deployment Framework

Parameter	Assumption
Demand growth	Structural, AI-led, double-digit annually
Land & powered-shell capex share	~20%
Construction & fit-out share	~55%
Equipment & IT share	~20%
Greenfield target gross IRR	~18%
Stabilised-asset yield	~8%
Offtake value uplift (spec to IG lease)	~75%
Power	Abundant, inexpensive; solar-complemented

Indicative, forward-looking assumptions used to illustrate deployment economics; not forecasts. See Appendix A.

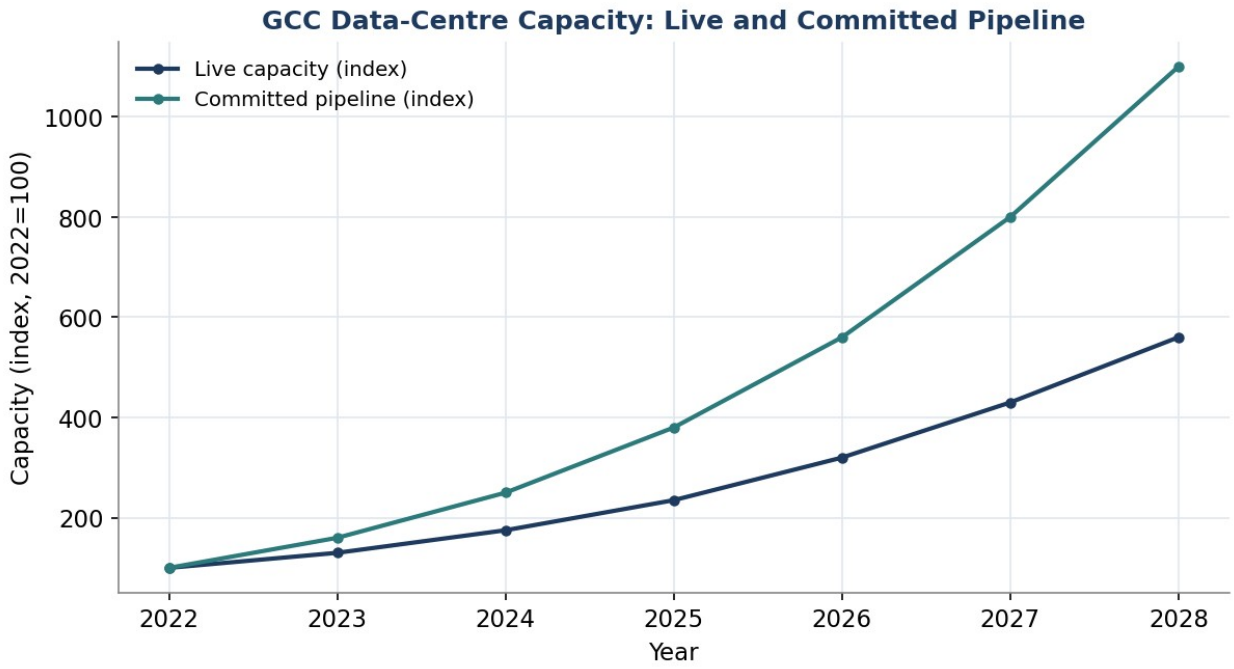
4. RESULTS AND DISCUSSION

This section presents the framework in the order of the propositions: the demand trajectory and drivers (Proposition 1); the capital deployment and returns across the lifecycle (Propositions 2 and 4); the offtake quality (Proposition 3); and the comparison of strategies (Proposition 5).

4.1 The Demand Trajectory

The opportunity begins with demand. Figure 1 shows the trajectory of Gulf data-centre capacity.

Figure 1. GCC Data-Centre Capacity: Live and Committed Pipeline



Indicative; both live capacity and the committed pipeline are growing rapidly, with the pipeline outpacing live capacity.

The figure supports Proposition 1. Both the live data-centre capacity in the Gulf and the committed pipeline of projects under development are growing rapidly, and the pipeline is growing faster than live capacity, which signals that the industry expects demand to continue rising and is building ahead of it. The crucial point is that this growth is driven by structural forces rather than by the economic cycle: the demand for AI computing, cloud capacity and sovereign data infrastructure does not ebb and flow with the business cycle but rises with the secular adoption of these technologies. For an infrastructure investor, this means the opportunity is a structural growth theme rather than a cyclical play, which supports a deliberate, multi-year capital-deployment strategy rather than an opportunistic entry. The scale and durability of the demand are the first part of the case for committing capital to the Gulf buildout.

The Gulf's position in this demand picture has a distinctive feature worth drawing out: a substantial part of the demand is sovereign or sovereign-linked, which changes its character. National AI strategies, government cloud programmes and data-sovereignty mandates generate demand that is both large and unusually durable, because it is driven by state priorities rather than commercial cycles, and it often comes with strong, long offtakes from government-linked entities. For an investor, sovereign-anchored demand is attractive because it provides creditworthy, long-term tenants and a degree of political alignment that supports the project through development, but it also requires the investor to understand the sovereign's priorities and to structure for the particular characteristics of government-linked counterparties. The presence of this sovereign demand is one of the features that distinguishes the Gulf data-centre opportunity from purely commercial markets, and it is part of why the region's demand is treated as especially durable.

A complementary demand consideration is the locational concentration of the buildout, because data-centre demand is not uniform across the Gulf but clusters where power, connectivity and tenant demand coincide. The major hubs attract the bulk of the pipeline, benefiting from established connectivity and tenant presence, while secondary locations may offer cheaper land

and power but thinner demand and connectivity. For the investor, this means the demand diligence must be locational as well as sectoral: a project in an established hub with deep connectivity and tenant demand is better-supported than one in a location chosen for cheap inputs alone, however attractive its cost base. The interplay of land cost, power availability, connectivity and tenant demand across locations is part of the supply-and-demand map the investor must read, and it reinforces that the opportunity, while large in aggregate, must be assessed project by project and place by place rather than as a single regional bet. The companion paper on power and land examines these locational constraints in greater depth.

Underlying the whole demand picture is a structural shift in computing that the investor should understand, because it explains why this boom differs from earlier data-centre cycles. Previous waves of data-centre demand were driven chiefly by the migration of existing computing from on-premise to cloud, a large but ultimately bounded transition. The AI wave is different in kind: it creates entirely new computing demand, the training and serving of models that did not previously exist, at densities far above traditional workloads, and this demand grows with the capability and adoption of AI rather than being capped by the stock of computing to be migrated. This is why the analysis treats the demand as structural rather than cyclical and why the industry is building so far ahead: the AI wave represents not a one-time migration but an open-ended expansion of what computing is used for. The investor should hold this distinction in mind, because it is the basis for treating the opportunity as a durable, multi-year theme rather than a cyclical surge, while remaining alert, as the scenarios counsel, to the possibility that the trajectory moderates.

4.1a Why the Pipeline Outpacing Live Capacity Matters

The observation that the committed pipeline is growing faster than live capacity deserves interpretation, because it carries both an opportunity and a caution. The opportunity is that the industry, which sees the demand more closely than any outside observer, is voting with its capital to build ahead of current capacity, a strong signal that the demand is expected to persist and grow. The caution is that a pipeline growing faster than live capacity is also where the risk of localised oversupply, of too much capacity arriving in one place or one segment at once, would first appear, and an investor must judge whether the pipeline is matched to genuine, contracted demand or is partly speculative. The resolution, once again, is offtake: pipeline capacity that is pre-let to strong tenants is genuine demand made concrete, while speculative pipeline capacity built on the expectation of future demand carries the oversupply risk. An investor reading the pipeline should therefore distinguish contracted from speculative capacity, treating the former as evidence of durable demand and the latter as a signal to watch for oversupply in the relevant segment and location.

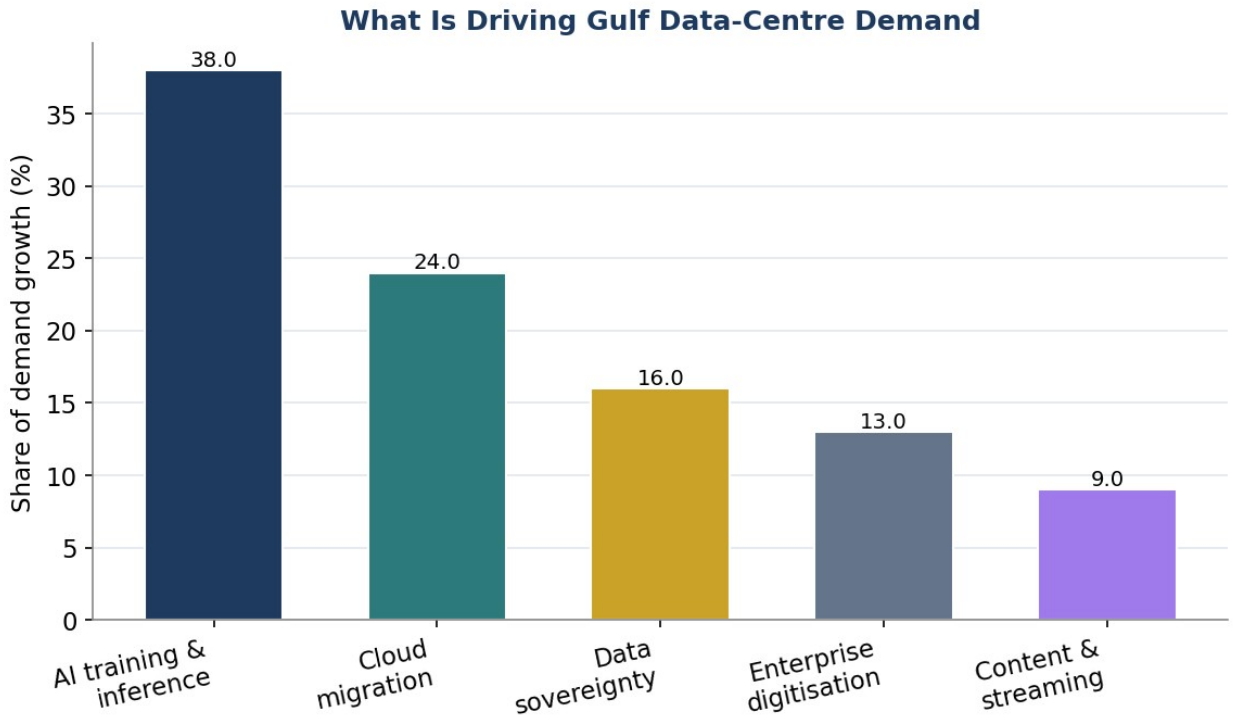
This distinction also guides where in the market an investor should look. Segments and locations where the pipeline is largely pre-let to creditworthy tenants are where demand is most firmly established and the oversupply risk lowest; those where speculative capacity is accumulating warrant more caution. Because the Gulf’s demand is substantially sovereign-anchored and pre-committed, much of its pipeline is of the firmer, contracted kind, which is part of why the region’s buildout is better-supported than a purely speculative boom. But the investor should verify this for the specific segment and location it is considering rather than assuming it across the market, because even in a well-anchored region pockets of speculative overbuilding can

occur. Reading the pipeline with this discrimination is part of the demand diligence that precedes any commitment.

4.2 What Is Driving Demand

The durability of the demand depends on its drivers. Figure 2 shows them.

Figure 2. What Is Driving Gulf Data-Centre Demand



Indicative; AI training and inference is the largest driver, ahead of cloud migration, data sovereignty and digitisation.

The figure reinforces Proposition 1 by decomposing the demand. AI training and inference is the largest and fastest-growing driver, as organisations build and deploy AI models that require dense, power-intensive computing. Cloud migration, the continuing shift of enterprise computing to cloud providers who house it in data centres, is the next largest. Data sovereignty, the requirement that certain data reside within national borders, is a particularly strong driver in the Gulf, where governments prize control of strategic data and mandate local hosting. Enterprise digitisation and content and streaming make up the remainder. The breadth of the drivers matters: even if AI demand were to moderate, the other drivers would sustain substantial demand, which makes the overall demand resilient rather than dependent on a single trend. For the investor, this diversity of demand is reassuring, because it means the opportunity does not rest on any one forecast of AI adoption being correct.

It is worth noting how the capital intensity of the construction phase interacts with the financing strategy. Because construction and fit-out absorb the largest share of the capital, and because that capital is committed before the asset generates any income, the construction phase is where the investor’s funding must be most carefully arranged, through committed equity and, where the offtake supports it, construction debt that converts to long-term financing on completion. An investor that begins construction without fully-arranged funding risks a stalled project, the worst outcome in data-centre development, because a half-built, unpowered, unlet facility has little value and consumes carrying cost. The discipline is to arrange the full construction funding before breaking ground, matching the funding to the construction timeline and to the offtake that

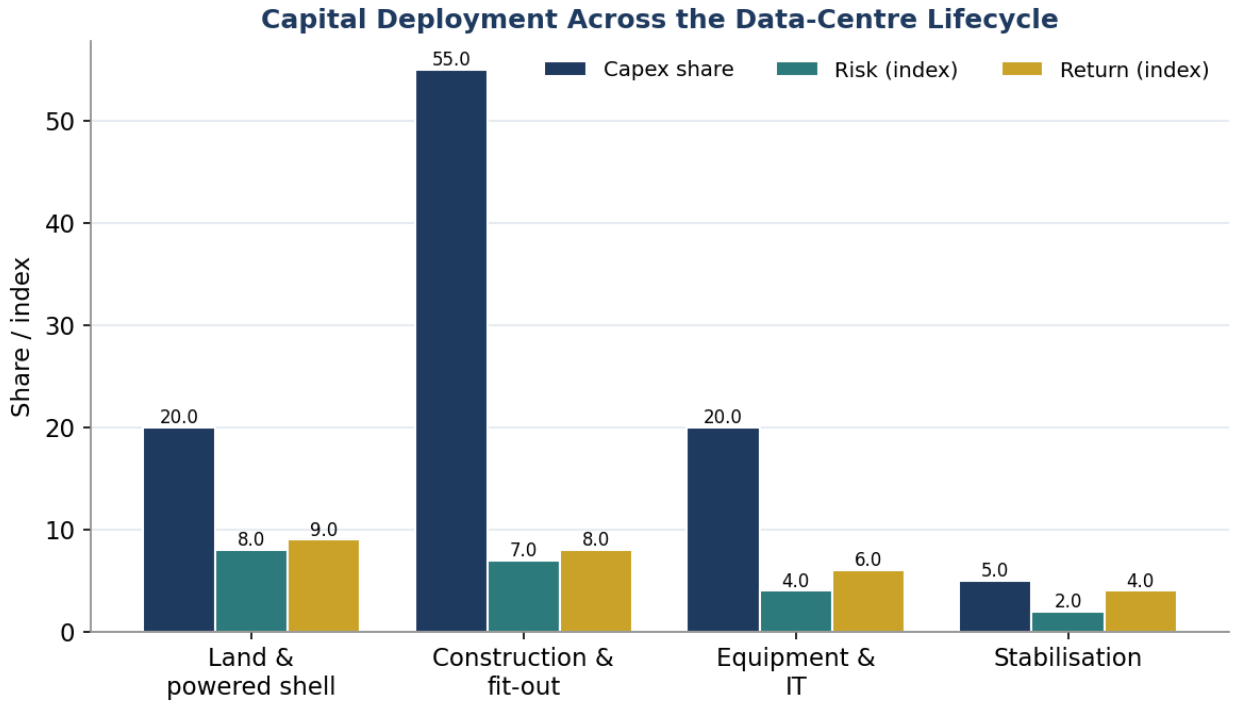
will support the take-out financing. The companion paper on the capital stack develops this financing architecture; here the point is that the capital intensity of construction makes funding certainty a precondition of starting, not a problem to solve along the way.

The lifecycle view also clarifies how value is created at each phase, which is distinct from the return earned. Value is created at the early phases by resolving uncertainty, by securing power, permits and offtake, and by building the asset, so that a powered, permitted, let and completed data centre is worth far more than the land and plans from which it began. The investor that bears the early-phase risk is paid for creating this value by resolving the uncertainty, while the investor that buys a stabilised asset pays for value already created and earns only the asset's ongoing yield. Understanding value creation as the resolution of uncertainty explains why the early entry points offer higher returns: they are compensated for the value they create by de-risking the project, not merely for waiting. It also clarifies the investor's edge: an investor with the capability to resolve a particular uncertainty better than others, to secure power, to lease the asset, to execute construction, earns its return by deploying that specific capability, which is why matching the entry point to the investor's genuine capability is the route to a real, defensible return rather than a borrowed one.

4.3 Deploying Capital Across the Lifecycle

Capital is deployed across the asset lifecycle in distinct phases. Figure 3 maps them.

Figure 3. Capital Deployment Across the Data-Centre Lifecycle



Indicative; construction and fit-out absorb the most capital, while risk and return are highest in the early phases.

The figure supports Proposition 2. The lifecycle of a data-centre asset runs from acquiring land and a powered shell, through construction and fit-out, to installing equipment and IT, to stabilisation as the asset is leased and generates income. Construction and fit-out absorb the largest share of the capital, while the early phases, land and powered shell, carry the highest risk and the highest potential return, because that is where the development risk, will the project be built, powered and leased, is borne and rewarded. As the asset moves toward stabilisation, the

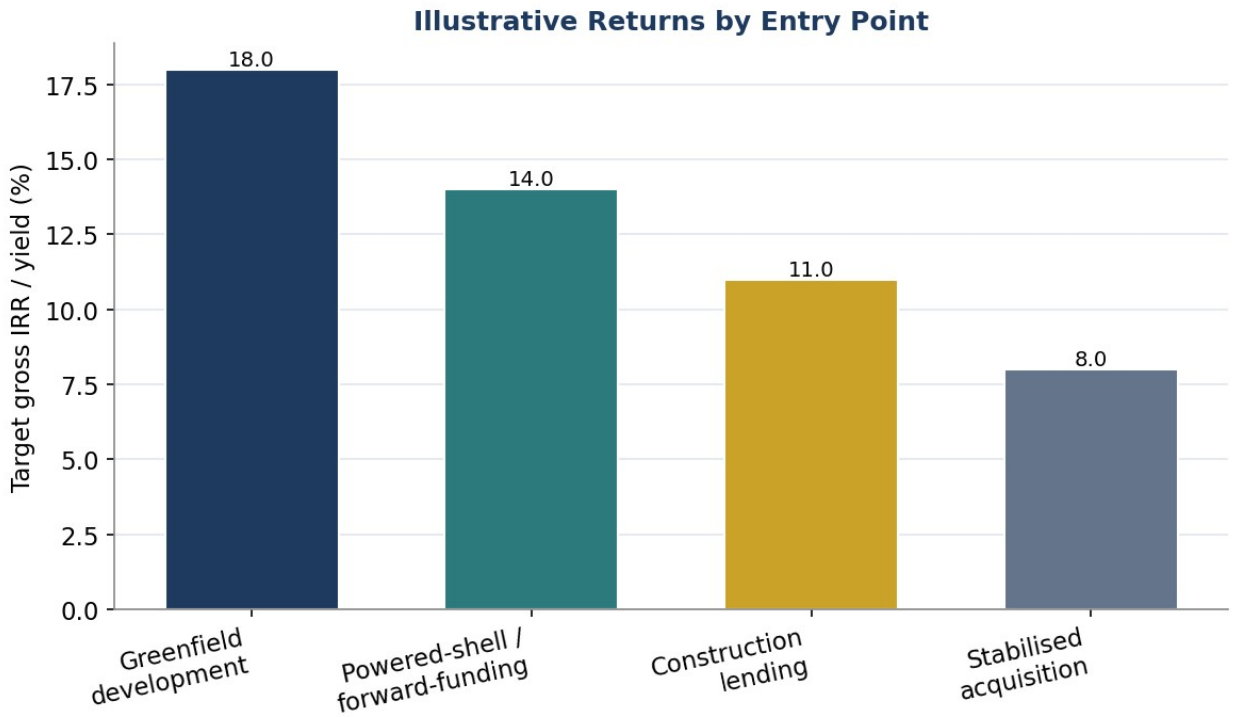
risk falls and the return moderates, because the uncertainties resolve and the asset becomes a contracted, income-producing piece of infrastructure. The investor's choice of where in this lifecycle to deploy capital is therefore the choice of how much development risk to bear for how much return, which is the central strategic decision the framework addresses.

A practical point about the lifecycle is that the phases are not merely sequential stages of one investment but distinct products an investor can buy or sell. An asset can change hands at any phase, a developer may sell a powered shell to a build-to-core investor, who sells the stabilised asset to a core buyer, so that each phase is a market in its own right with its own participants and pricing. This means an investor need not own an asset through its whole lifecycle; it can specialise in the phase that matches its capability, buying at the start of that phase and selling at the end to the next specialist. Understanding the lifecycle as a chain of markets, rather than as a single hold, opens strategies such as developing to sell, or acquiring stabilised assets others have built, and it lets an investor concentrate where its edge lies. The framework's lifecycle view is therefore not only a map of one investment's risk over time but a menu of the points at which an investor can enter and exit, which widens the strategic choices available.

4.4 Returns by Entry Point

The return depends on where the investor enters. Figure 4 shows the pattern.

Figure 4. Illustrative Returns by Entry Point



Indicative; returns fall from greenfield development through construction lending to stabilised acquisition.

The figure quantifies Proposition 2. Greenfield development, taking the land and building the asset from scratch, offers the highest return, compensating for the development, construction and leasing risk borne. Forward-funding a powered shell, committing capital to a partly-de-risked project, offers a lower return for lower risk. Construction lending, providing debt rather than equity to a project under construction, offers a still lower, debt-like return with the protection of security and seniority. Acquiring a stabilised, leased asset offers the lowest return, an infrastructure-like yield, for the lowest risk. The spread between the highest and lowest entry

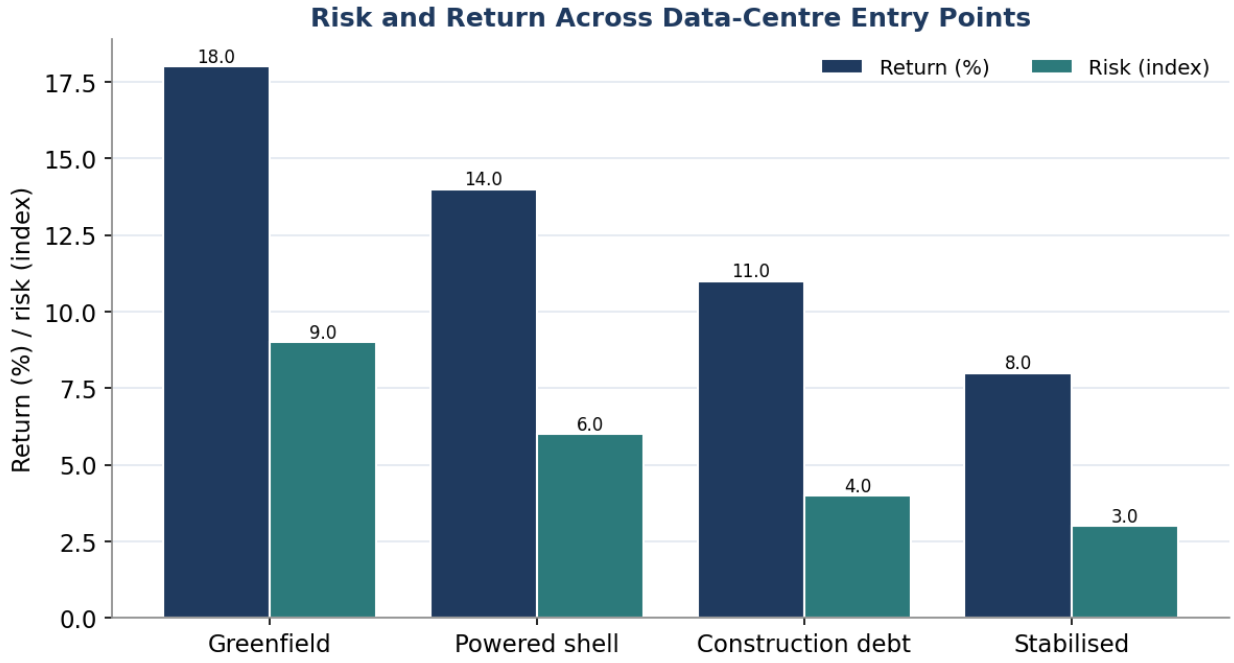
points is wide, which is the practical heart of the matter: an investor can access the Gulf data-centre theme at a risk-return profile of its choosing, from a bond-like stabilised yield to a private-equity-like development return, simply by choosing where to enter. The decision is not whether to participate but where, and the wide spread means that decision dominates the outcome.

The risk-return map also frames how an investor should think about diversifying across entry points rather than choosing only one. A large investor need not confine itself to a single point on the map; it can build a portfolio spanning entry points, some stabilised assets for income and ballast, some build-to-core for growth, perhaps some construction lending for debt-like return, so that the portfolio as a whole has a blended risk-return profile and a diversified exposure to the theme. This portfolio approach lets the investor participate across the lifecycle, capturing income, development upside and debt returns from the same structural demand, while diversifying the project-specific risks that any single asset carries. The discipline is to construct the portfolio deliberately, sizing each entry point to the investor's appetite and capability, rather than accumulating an unintended mix. For a large infrastructure investor, a deliberately blended portfolio across the data-centre lifecycle may be a more robust way to capture the Gulf theme than concentrating at any single entry point, and the risk-return map is the tool for designing that blend.

4.5 The Risk-Return Map

Return must be read against risk. Figure 5 maps the two together.

Figure 5. Risk and Return Across Data-Centre Entry Points



Indicative; higher returns at the greenfield end come with proportionately higher risk.

The figure places the entry points on a common risk-return view. The higher returns at the greenfield end come with proportionately higher risk, the risk that the project is not built on time or budget, that power is delayed, or that the asset is not leased; the lower returns at the stabilised end come with correspondingly lower risk, because those uncertainties are resolved. The map makes clear that no entry point is simply better than another; each offers a return commensurate with its risk, and the right choice depends on the investor's appetite and capability. An investor

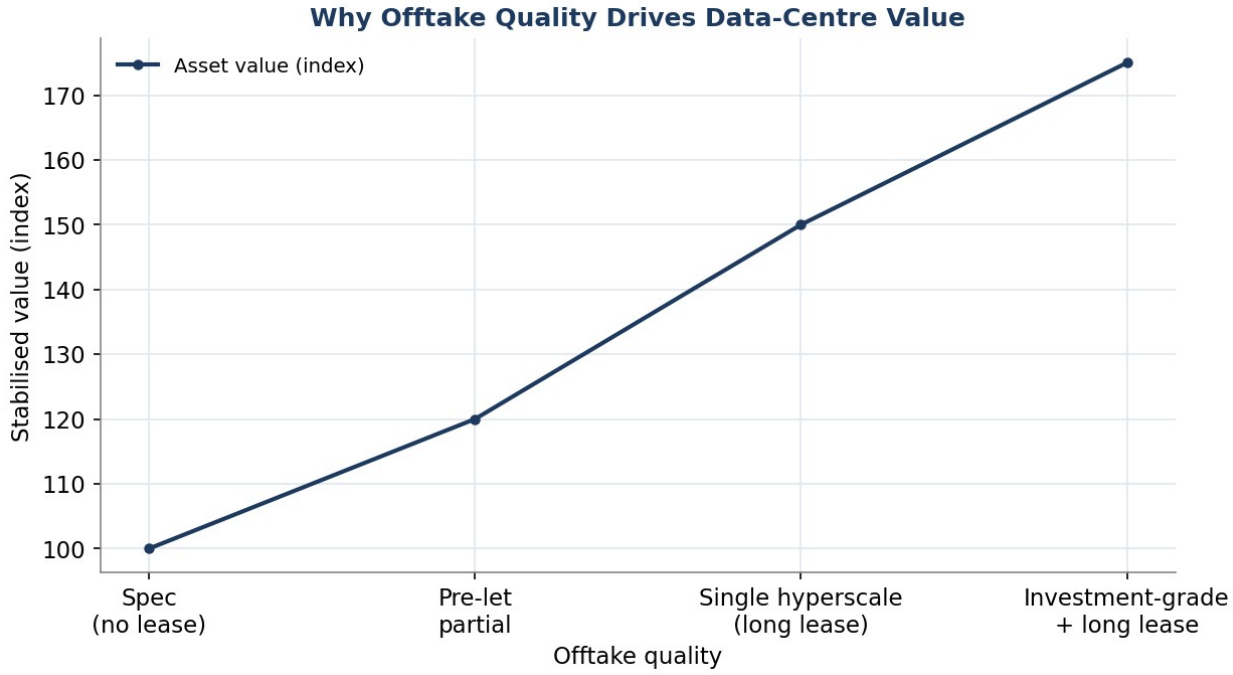
seeking stable, contracted income should enter at the stabilised end; one seeking and able to manage development returns should enter earlier; one wanting debt-like exposure should lend rather than own. The discipline is to choose the point on the map that matches the investor's objectives and abilities, rather than to reach for the highest return without the capability to manage its risk, which is the error the framework guards against.

It is worth connecting the offtake point to the obsolescence risk noted earlier, because a long offtake addresses both income security and technology risk at once. A data centre faces the risk that its design becomes less suited to future computing, denser, hotter, differently cooled, but a long lease to a strong tenant transfers much of that risk to the tenant, who has contracted to pay regardless of how the technology evolves and who bears the cost of adapting or replacing the equipment within the shell. The investor that secures a long, strong offtake therefore protects itself not only against vacancy but against obsolescence, because the contracted income is owed whatever happens to the technology. This is a further reason the analysis ranks offtake quality first: it is the single structuring choice that most reduces the two principal risks of data-centre ownership, demand and obsolescence, simultaneously, converting a technology-exposed development into a contracted, infrastructure-like asset.

4.6 Why Offtake Quality Drives Value

Across all entry points, the offtake determines value. Figure 6 shows the relationship.

Figure 6. Why Offtake Quality Drives Data-Centre Value



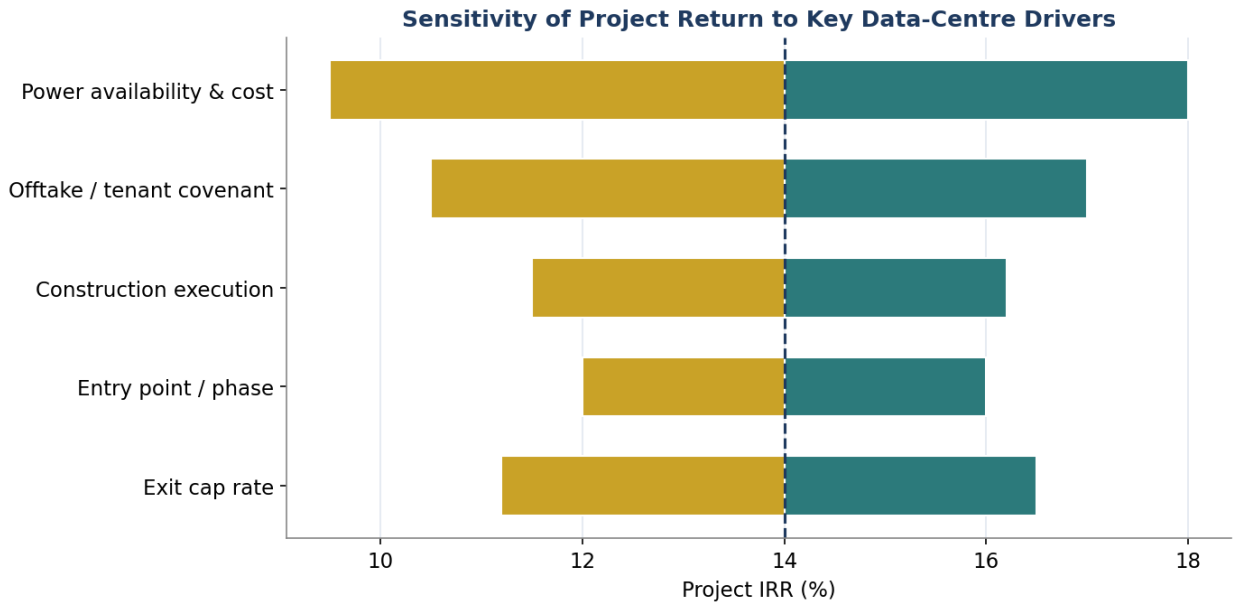
Indicative; value rises sharply with the quality and length of the tenant contract.

The figure supports Proposition 3. A speculative data centre built without a lease is worth the least and the most risky, because its income is uncertain; a partly pre-let asset is worth more; an asset leased to a single hyperscale tenant on a long lease is worth more still; and one leased to an investment-grade tenant on a long lease is worth the most, because its income is both secure and durable. The quality of the offtake, the creditworthiness of the tenant and the length and terms of the lease, converts a speculative development into a contracted, bond-like asset, and the value uplift from securing a strong, long offtake is large. The practical implication runs through every

entry point: the investor's return depends not only on building or buying the asset cheaply but on securing a strong offtake, and a greenfield developer that builds well but leases to a weak tenant on a short lease has not captured the value its construction created. Securing the offtake is therefore as important as building the asset, and the analysis treats it as the single greatest determinant of value.

Figure 7 places the sensitivity of the project return to the key drivers in a single view.

Figure 7. Sensitivity of Project Return to Key Data-Centre Drivers

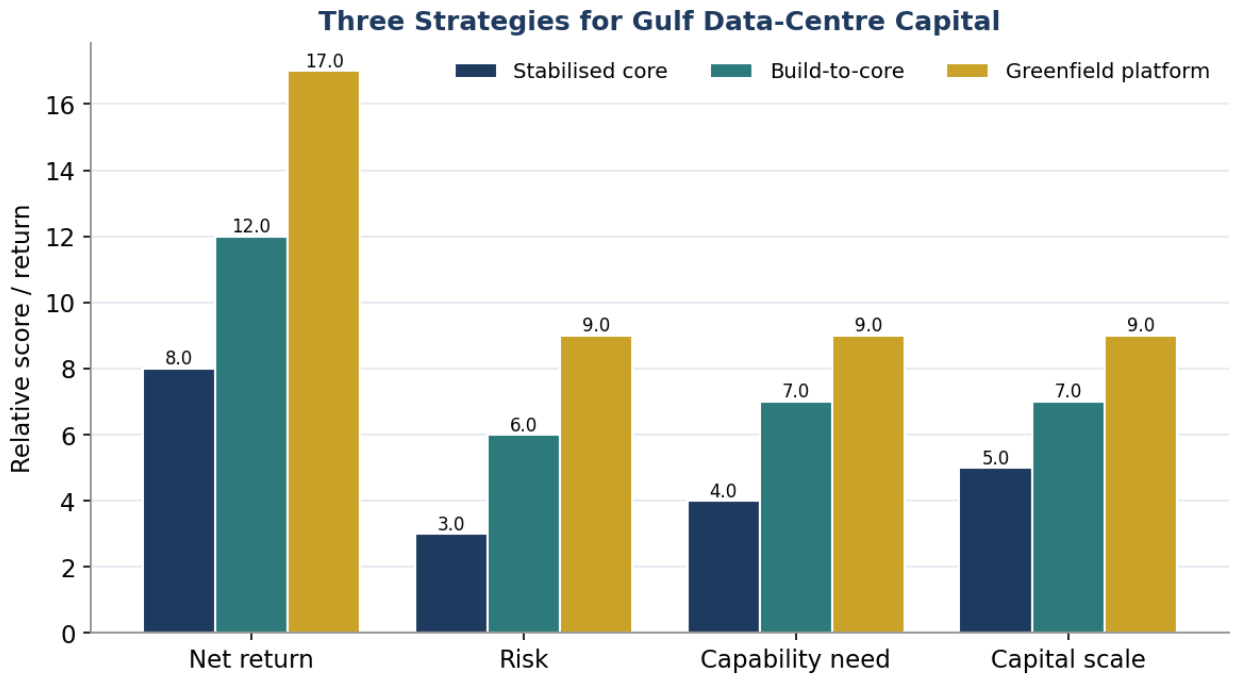


Indicative; power availability and offtake quality dominate the project return.

The sensitivity analysis confirms the hierarchy of what matters. Power availability and cost, and the quality of the offtake, have the largest effect on the project return, ahead of construction execution, the entry point and the exit cap rate. This ordering is the central practical message: a data-centre investment in the Gulf is, above all, a bet on securing power and a strong tenant, and an investor should concentrate its diligence and its structuring on those two factors before all others. The next paper in this cluster examines the underwriting of the offtake and tenant in detail; here the point is that power and offtake, not construction or financial engineering, are where the return is principally made or lost.

Figure 8 compares three deployment strategies on a common set of measures.

Figure 8. Three Strategies for Gulf Data-Centre Capital



Indicative; each strategy trades return against risk, capability and the scale of capital required.

The comparison supports Proposition 5. A stabilised-core strategy, buying leased, income-producing data centres, offers the lowest return with the lowest risk, capability requirement and capital scale, suiting an investor seeking infrastructure-like income. A build-to-core strategy, developing or forward-funding assets to hold once stabilised, offers a higher return for more risk, capability and capital. A greenfield-platform strategy, building a portfolio of data centres from the ground up, offers the highest return but demands the most risk appetite, development capability and capital scale, suiting only large, specialised investors. There is no single best strategy; the right one depends on the investor's objectives and abilities, and the framework's contribution is to make the trade-offs explicit so the investor can choose deliberately. For many international infrastructure investors entering the Gulf, a build-to-core or forward-funding strategy, partnering with an experienced local developer, captures much of the growth while sharing the development risk and capability, which is often the pragmatic middle path.

4.7 A Worked Illustration of an Entry Decision

To make the framework concrete, consider an international infrastructure fund deciding how to enter the Gulf data-centre market. It has infrastructure capability and a moderate risk appetite but no regional development platform. Applying the framework, it rules out pure greenfield development, which would demand local development capability it lacks, and pure stabilised acquisition, which would offer too low a return for its objectives. It chooses a build-to-core strategy executed through a forward-funding partnership with an experienced local developer: it commits capital to projects that already have secured power and a strong, long offtake, releasing funds in stages as construction milestones are met, and intends to hold the stabilised assets for their contracted income with development-level upside. This entry captures much of the growth and return of the buildout while sharing the development risk and capability with a partner, and it matches the fund's appetite, capability and scale, exactly the deliberate matching the framework counsels.

The illustration shows the framework guiding a real decision. The fund did not simply decide to participate and then take whatever deals appeared; it chose its point on the risk-return spectrum, identified the capability gap, and structured an entry, forward-funding with a local partner, that bridged the gap while delivering the profile it wanted. It made power and offtake preconditions of its commitment and staged its capital to the de-risking of each project. Another investor, with development capability and a higher appetite, might rationally choose greenfield; one seeking pure income might choose stabilised assets. The framework does not prescribe a single answer; it ensures the answer follows deliberately from the investor's own position, which is the discipline that distinguishes a sound entry from an opportunistic one.

4.8 Bringing the Deployment Choices Together

The elements of the framework, the structural demand, the lifecycle of risk and return, the entry-point choice, the primacy of offtake and power, and the matching of strategy to capability, form a single connected decision rather than separate considerations. The demand establishes that the opportunity is worth pursuing; the lifecycle and entry points establish the range of ways to pursue it; offtake and power establish what determines success at any entry point; and the matching of strategy to capability establishes which way a particular investor should pursue it. An investor that attends to one and neglects the others, that chases the demand without securing offtake, or reaches for greenfield returns without development capability, leaves a gap that the project will find. The value of treating the choices as one connected decision is that it aligns the investor's ambition with its abilities and the asset's economics, producing an entry that is both attractive and within the investor's capacity to execute. This integrated decision is the contribution of a strategic framework, and it precedes and frames the project-level underwriting of the companion papers.

5. ROBUSTNESS AND SCENARIO ANALYSIS

Because the framework is stylised, its value lies in whether its conclusions hold under different assumptions. This section varies the central inputs.

5.0a Reading the Scenarios Together

The scenarios that follow, slower AI demand, power constraints and cap-rate expansion, stress different parts of the investment, but they share a common antidote that is worth stating before they are taken in turn: a strong, long offtake. A leased asset with a creditworthy tenant is protected against a demand slowdown, because its income is contracted; against the obsolescence that a technology shift might bring, because the tenant bears it; and against cap-rate expansion, because contracted income supports value and gives the investor the option to hold rather than sell into a weak market. Power constraints are the one stress the offtake does not directly cure, which is why the analysis treats power as the co-equal priority alongside offtake. Read together, the scenarios confirm that an investment built on secured power and a strong offtake is resilient across the principal risks, while a speculative, under-let asset is exposed to all of them, which is the central practical lesson the framework delivers to the investor.

5.1 Slower AI Demand

If AI demand grows more slowly than expected, the demand for data-centre capacity moderates, and the risk of overbuilding rises. The conclusion is conditioned rather than overturned: the breadth of demand drivers, cloud, sovereignty, digitisation, sustains substantial demand even if AI moderates, and an investor protected by strong offtake is insulated, because its income is

contracted regardless of the broader demand. The robustness implication is that offtake quality is the investor's defence against a demand disappointment: a leased asset with a strong tenant is paid whether or not the wider market softens, while a speculative asset is exposed. The analysis's emphasis on securing offtake is therefore precisely the protection a slower-AI scenario calls for.

A related dimension of the power question is the growing importance of clean and renewable power to the offtake itself, because the largest tenants increasingly require it. The hyperscale and AI tenants who anchor the strongest offtakes frequently have their own commitments to powering their operations with renewable energy, so a data centre that can offer abundant, low-cost, increasingly-solar Gulf power aligned with those commitments is more attractive to exactly the creditworthy tenants whose offtakes drive value. This links the power question to the offtake question: securing not just any power but power of the kind the best tenants want strengthens the project's ability to attract a strong, long offtake. The Gulf's combination of abundant conventional power and rapidly-growing solar capacity positions it well to meet this requirement, which is a further structural advantage, and an investor should weigh the renewable profile of a project's power not only as a cost and sustainability matter but as a factor in its ability to secure the premium offtakes the analysis prizes.

5.2 Power Constraints

If power proves harder or costlier to secure than assumed, project returns fall and timelines lengthen, because power is the largest operating input and the binding constraint on capacity. This is the more dangerous stress, and it is why the sensitivity analysis places power first. The Gulf's structural power advantage mitigates it relative to power-constrained markets, but it does not eliminate project-level power risk, which the investor must diligence specifically. The conclusion is reinforced: securing firm, affordable power is a precondition of a sound data-centre investment, and an investor should treat power availability as a gating diligence item rather than an assumption. The next-but-one paper in this cluster examines the power and land bottlenecks in detail.

A further benign-case caution mirrors the warnings on the adverse scenarios: if the boom continues strongly and returns are good, an investor should resist concluding that the risks have disappeared and that it can relax its discipline on power, offtake and entry-point matching. Booms reward the bold for a time and then test whether their boldness was matched by discipline, and the data-centre boom will eventually separate the investors who secured power and offtake and entered at points they could manage from those who rode the demand without those protections. The disposition the analysis counsels in good times is therefore the same as in bad: secure the binding inputs, match the strategy to capability, and protect each asset with a strong contract, enjoying the favourable conditions without mistaking them for the permanent absence of risk. An investor that holds this discipline through the boom is the one best placed to endure whatever follows it, which is the ultimate test of a capital-deployment strategy in a fast-growing asset class.

It is also worth acknowledging the macro and policy risks that sit above the project level and that no single-asset structuring fully addresses. Data-centre development depends on supportive government policy, on power and land allocation, on permitting, on data and connectivity regulation, and a material adverse shift in any of these could affect the whole opportunity in a jurisdiction. The Gulf governments are currently strongly supportive, treating digital infrastructure as a strategic priority, which is a tailwind, but an investor should recognise that

policy support, while durable, is a factor it does not control and should weigh in sizing its exposure to any single jurisdiction. Diversifying across jurisdictions within the region, and favouring those with the clearest and most stable policy commitment to the buildout, mitigates this macro-policy risk. The honest position is that the opportunity rests partly on continued supportive policy, which is presently strong but is a dependency the prudent investor notes and diversifies against rather than assumes away.

5.4 When the Investor Should Not Enter

A candid analysis should identify when an investor should stay out, because not every investor should pursue every entry point and some should not enter at all. An investor without infrastructure or development capability, without access to local partnership, and without patient, long-horizon capital is poorly placed for greenfield or build-to-core data-centre development, and would do better to access the theme through stabilised assets, listed vehicles, or funds managed by specialists, rather than attempting direct development it cannot execute. Similarly, an investor unable to secure or verify firm power and a strong offtake for a specific project should not proceed with that project, however attractive the theme, because those are the factors on which the return turns. Recognising these limits honestly is part of using the framework well: the Gulf data-centre opportunity is large and real, but it rewards investors matched to their chosen entry point and punishes those who reach beyond their capability or proceed without the binding inputs secured. The framework's value is as much in telling an investor where and whether to refrain as in showing it how to proceed.

This caution applies with particular force to the most attractive-looking, highest-return entry points, because their returns are precisely the compensation for risks that an under-equipped investor cannot manage. The greenfield development return is high because the development risk is real, and an investor drawn to that return without the capability to manage that risk has misread the return as a free reward rather than as payment for a job it cannot do. The disciplined posture is to enter at the point the investor can genuinely manage, accepting the corresponding return, and to access the higher-return points only by acquiring the capability or partnering with those who have it. An investor that holds to this discipline participates soundly across cycles; one that reaches for returns beyond its capability is the one most likely to suffer the development losses that the high greenfield return exists to compensate.

5.3 Cap-Rate Expansion at Exit

If exit cap rates expand, because interest rates rise or investor appetite cools, the value of stabilised assets falls and development returns compress. This is a market risk common to all real assets, and it bears most on strategies that depend on selling stabilised assets at a low cap rate. An investor can mitigate it by securing long, strong offtakes that support value through a cycle, by not over-paying at entry, and by being willing to hold the contracted income rather than being forced to sell into a weak market. The conclusion is that the contracted, infrastructure-like income of a well-let data centre is itself the defence against cap-rate risk, because it supports both value and the option to hold, which again points to offtake quality as the central protection.

6. IMPLEMENTATION CONSIDERATIONS

Translating the framework into practice involves choosing the entry point and strategy, securing power and offtake, partnering for local capability, and governing the deployment over time.

A foundational sequencing point is that the strategy choice should precede deal sourcing, not follow it. An investor that begins by looking at available deals and then rationalises a strategy around them tends to drift toward whatever is on offer, which may not match its capability or appetite; one that first fixes its strategy, the entry point, the risk profile, the role of partnership, and then sources deals that fit, retains control of its risk-return profile. This is especially important in a booming market where many deals are offered and the temptation to participate broadly is strong. The discipline is to let the strategy filter the deal flow rather than letting the deal flow set the strategy, so that the investor builds the portfolio it intended rather than an accidental collection of whatever the market presented. The strategy-first sequence is the practical expression of the deliberate matching the framework counsels.

6.1 Choosing the Entry Point and Strategy

The first and most consequential decision is where to enter and with what strategy, which should follow from the investor's risk appetite, capability and capital scale rather than from the headline return. An investor seeking stable income should target stabilised assets or construction lending; one seeking and able to manage development returns should target build-to-core or greenfield; one wanting debt exposure should lend. The decision should be made explicitly and at the outset, because it sets the risk-return profile of everything that follows, and an investor that drifts into a higher-risk entry point without the capability to manage it will find the development risk it underestimated.

A practical refinement on power is to understand the difference between contracted power capacity and merely-anticipated power, because the distinction is as consequential for power as offtake quality is for demand. A project with a firm, contracted power supply agreement, ideally with a clear path to the additional capacity it will need as it scales, has secured the binding input; one relying on anticipated grid capacity that has not been firmly allocated bears a real risk that the power arrives late, costs more, or falls short, delaying or impairing the whole project. The investor should therefore treat power with the same contractual rigour it applies to offtake, seeking firm commitments rather than expectations, and should understand the project's power roadmap as it scales, since AI workloads are driving power densities ever higher. In the Gulf the structural abundance of power eases but does not remove this project-level diligence, and an investor that secures contracted power alongside a contracted offtake has locked down the two variables the sensitivity analysis identifies as decisive.

6.2 Securing Power and Offtake

Because power and offtake dominate the return, the investor should treat both as gating items. It should confirm, before committing, that firm, affordable power can be secured on the timeline the project needs, taking nothing for granted even in the power-rich Gulf. And it should prioritise securing a strong, long offtake, an investment-grade tenant on a long lease, since that is what converts the asset into contracted, financeable income. An investor that secures power and offtake has de-risked the two largest drivers of return; one that proceeds without them is exposed to the two factors most likely to disappoint.

In structuring a development partnership, the investor should pay particular attention to the alignment of incentives through the project lifecycle, because the interests of a capital partner and a developer can diverge at key moments. A developer paid largely on completion may be tempted to prioritise speed over quality or to optimise for its fee rather than the asset's long-term value,

while a capital partner holding the asset cares about its durability and its offtake. The partnership should therefore align the developer's rewards with the outcomes the investor values, through completion and performance milestones, retained interests, or shared upside on the stabilised asset, so that the developer is motivated to build the durable, well-let asset the investor wants to hold. A well-aligned partnership combines the developer's local capability with the investor's capital and long-term perspective to the benefit of both; a poorly-aligned one can leave the investor holding an asset built to the developer's priorities rather than its own. Getting this alignment right is among the most important structuring decisions in a partnered entry, and it deserves as much attention as the financial terms.

6.3 Partnering for Local Capability

Data-centre development in the Gulf requires local capability, relationships with power providers and authorities, knowledge of the land and permitting, and construction execution, that an international investor may not possess. Partnering with an experienced local developer or operator, through a joint venture or forward-funding arrangement, lets the investor access the opportunity while sharing the development risk and capability, which is often the pragmatic route for an investor without its own regional platform. The partnership should align incentives and allocate risk clearly, but the principle is that local capability is a precondition of development-stage entry, to be built or partnered for rather than assumed.

A further governance discipline is to plan the exit, or the long-term hold, at the point of entry, because the strategy is incomplete without it. An investor pursuing build-to-core should be clear whether it intends to hold the stabilised asset for its contracted income or to sell it to a core buyer at a lower cap rate, and should structure and finance the project accordingly. One pursuing greenfield development for sale should understand the depth and pricing of the buyer market into which it will sell. Planning the exit at entry guards against the common error of developing or buying an asset without a clear view of how the capital will eventually be returned, which can leave an investor holding an asset it cannot profitably exit. In a maturing but still-developing market like the Gulf, the depth of the eventual exit market is itself a consideration the investor should weigh, favouring assets and offtakes that will be attractive to the broadest range of future buyers.

6.4 Governance and Staged Commitment

The deployment should be governed with staged commitment, releasing capital as development milestones, power, permits, offtake, construction, are achieved, so that the investor's exposure rises only as the risk falls. This staging, common in infrastructure, protects the investor from committing fully to a project before its key risks are resolved, and it aligns the capital deployment with the de-risking of the asset. Combined with clear governance of the partnership and active monitoring of the project, staged commitment keeps the investor's risk controlled through the development, which is the discipline that makes higher-return entry points manageable.

A last implementation theme is the importance of building, or buying, genuine operating capability for the stabilisation and operating phase, not only the development phase. A data centre is not a passive asset like a let office; it is an operating facility whose performance, uptime, efficiency, security, affects tenant satisfaction, lease renewals and ultimately value. An investor that develops or acquires a data centre must ensure it has, through an operator or its own capability, the means to run the facility to the standard its tenants require, because operational

failures can impair the offtake the whole investment rests on. For an international investor, this typically means partnering with or retaining an experienced operator, and ensuring the operating arrangements are sound before relying on the contracted income. The operating dimension is easy to underweight relative to the glamour of the development and the security of the lease, but a strong offtake is only as durable as the operation that keeps the tenant satisfied, and the prudent investor attends to the operating capability as part of protecting the contracted income that justifies the whole investment.

6.5 Aligning Capital, Horizon and the Asset

A final implementation theme is the alignment of the investor's capital and horizon with the nature of the asset. Data centres, especially those held for their contracted income, are long-duration infrastructure assets whose returns accrue over many years, and they are best funded with patient, long-horizon capital that will not be forced to exit before the asset matures or at a bad moment in the cycle. An investor financing a long-duration, development-and-hold strategy with short-horizon capital creates a mismatch that can force a premature or value-destroying exit, while one matching long capital to the long asset can hold through cycles and capture the full contracted income. The investor should therefore ensure that the capital it deploys, and the expectations of those who provide it, match the horizon the chosen strategy requires: stabilised income strategies and development-and-hold strategies need patient capital, while development-for-sale strategies can use shorter capital but bear the exit-market risk. This alignment of capital, horizon and asset is part of building the data-centre exposure soundly, and a mismatch here can undermine even a well-chosen entry and a well-secured asset.

The same alignment applies to the investor's expectations about liquidity. Data-centre infrastructure is illiquid; positions cannot be quickly sold, particularly at the development stage, and an investor must be prepared to hold through the development and stabilisation period before any exit is realistic. An investor that understands and accepts this illiquidity at entry is well-placed; one that enters expecting liquidity the asset class cannot provide may be disappointed or forced into a poor exit. The companion analyses on liquidity management in illiquid programmes apply directly here, and an investor building data-centre exposure should fold it into its broader illiquid-asset liquidity planning rather than treating it in isolation. Recognising the asset's illiquidity and planning for it is the last element of the deliberate, well-aligned approach the framework recommends.

7. CONCLUDING COMMENTS

The Gulf AI data-centre boom is one of the largest infrastructure opportunities of the decade, supported by structural, AI-led demand and by the region's power, sovereign ambition and co-investing capital. This paper has set out a capital-deployment guide: where the demand comes from, how capital is deployed across the lifecycle, what return each entry point offers for what risk, and how to choose a strategy.

The evidence and analysis support five conclusions. First, Gulf data-centre demand is large, structural and AI-led, not cyclical. Second, risk and return vary sharply across the lifecycle, so the entry point sets the profile. Third, the quality of the offtake is the single greatest determinant of value. Fourth, the Gulf's power, sovereign demand and co-investing capital are structural supply-side advantages. Fifth, an investor should match its entry point and strategy to its appetite, capability and scale.

It is also worth being candid about what could go wrong with the opportunity as a whole, beyond the project-level scenarios. The data-centre boom is, in part, a bet on the continued, rapid growth of AI computing demand, and while the breadth of demand drivers cushions this, a broad, sustained disappointment in AI adoption, or a step-change in computing efficiency that sharply reduced the capacity required per unit of AI output, would moderate the whole opportunity. An investor should hold this possibility in mind, size its overall exposure to the theme accordingly, and rely, as throughout, on contracted offtakes to protect individual assets against a demand disappointment. The honest position is that the opportunity is large and well-supported but not certain, and that the prudent investor participates with conviction tempered by diversification and protected by contracts, rather than betting the portfolio on an uninterrupted continuation of the current trajectory. This measured conviction, large enough to matter, protected enough to endure a disappointment, is the disposition the analysis recommends toward the theme as a whole.

Before turning to the limitations, it is worth situating this paper within the cluster it opens. This is the strategic, capital-deployment view of the Gulf data-centre opportunity; it establishes that the opportunity is large and structural and that the investor's key decision is where and how to enter. The companion papers descend from this strategic view into the project-level disciplines: how to underwrite the offtake and tenant, how to price the power and land bottlenecks, and how to assemble the capital stack of debt, mezzanine and equity. Read together, they take an investor from the decision to participate through the choice of strategy to the execution of a specific project. This paper's role is to ensure that the investor enters the cluster with a clear, deliberate strategy, so that the detailed disciplines that follow are applied in service of a sound overall plan rather than in isolation. The strategic frame and the project disciplines together constitute a complete approach to the Gulf data-centre opportunity.

These conclusions are subject to limitations that also mark out the avenues for further work. The framework is stylised and illustrative, and actual demand, returns and offtake terms will differ; the value is in the structure, not the specific numbers. The analysis treats the Gulf as a whole, whereas the jurisdictions differ in their power, land, regulatory and demand characteristics, which further work could examine. The demand projection rests on the continued growth of AI and cloud, which is probable but not certain, and the breadth of drivers mitigates but does not eliminate the risk of a slowdown. And the analysis treats the asset class at a strategic level; the detailed underwriting of the offtake and tenant, the power and land bottlenecks, and the capital stack are addressed in the companion papers in this cluster. These are extensions rather than corrections: the central message, that the Gulf data-centre boom is a large, structural opportunity whose risk and return an investor can tailor through its choice of entry point, and whose value turns on power and offtake, is robust. An international infrastructure investor that chooses its entry point deliberately, secures power and offtake, partners for local capability and commits in stages can deploy capital into the Gulf buildout at a risk-return profile of its choosing, and so participate in the AI infrastructure wave on terms it controls.

DISCLOSURES

This paper is provided for general information and educational purposes only. It does not constitute investment, financial, legal, tax or other professional advice, nor an offer or solicitation to buy or sell any security or to pursue any investment strategy. The figures and scenarios are stylised, forward-looking illustrations used to convey deployment economics; they are not forecasts, do not represent the past or expected performance of any actual asset or fund, and should not be relied upon as such. Data-centre development carries construction, power, leasing and market risks that can result in loss. The author is an

independent researcher; the views are his own and do not represent those of any institution. Readers should obtain professional advice tailored to their circumstances before making any decision.

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APPENDIX A. BASE-CASE ASSUMPTIONS

The table below records the stylised assumptions used in the framework. They are indicative, forward-looking calibrations chosen to illustrate deployment economics, informed by the digital-infrastructure and real-asset literature; they are not forecasts and not estimates from a proprietary dataset.

Table A1. Full Base-Case Assumptions

Parameter	Base case	Rationale
Demand growth	Structural, double-digit	AI, cloud, sovereignty, digitisation
Land & shell capex	~20%	Early-phase share
Construction & fit-out	~55%	Largest capex phase
Equipment & IT	~20%	Powering the asset

Greenfield IRR	~18%	Development-risk return
Stabilised yield	~8%	Contracted-income return
Offtake uplift	~75%	Spec to investment-grade lease
Power	Abundant, low-cost	Gulf structural advantage

Indicative assumptions; see Section 3.

APPENDIX B. DATA-CENTRE DEPLOYMENT CHECKLIST

The following checklist distils the framework into the questions an infrastructure investor should answer when deploying capital into Gulf data centres.

1. Have we chosen our entry point and strategy deliberately, matched to our risk appetite, capability and capital scale?Is the demand for the specific asset structural and supported by multiple drivers, not dependent on AI alone?Have we confirmed that firm, affordable power can be secured on the project's timeline?Have we prioritised securing a strong, long offtake from a creditworthy tenant?Do we understand how value changes across the lifecycle and where our return is made?Have we assessed construction execution risk and the developer's track record?Do we have, or have we partnered for, the local capability to develop and operate in the jurisdiction?Are we committing capital in stages as development milestones de-risk the project?Have we stress-tested the project against slower demand, power constraints and cap-rate expansion?Is our return commensurate with the risk of our chosen entry point, not borrowed from a riskier one?Have we structured the partnership to align incentives and allocate risk clearly?Do we monitor the project and the offtake actively through development and operation?

APPENDIX C. GLOSSARY OF KEY TERMS

The following glossary defines the principal technical terms used in this paper for readers who may be less familiar with data-centre investment.

Data centre. A facility housing computing and storage equipment, providing the power, cooling and connectivity that AI and cloud computing require.

Hyperscale. A very large data centre or operator, typically a major cloud or AI provider, that leases or builds capacity at scale.

Offtake. The contract under which a customer commits to pay for data-centre capacity; for data centres, the tenant lease or service agreement.

Tenant covenant. The creditworthiness of the tenant under an offtake, which determines how secure the contracted income is.

Powered shell. A built data-centre structure with power and connectivity provisioned but not yet fitted out with IT equipment.

Greenfield development. Building an asset from scratch, bearing the development, construction and leasing risk for the highest return.

Build-to-core. Developing or forward-funding an asset with the intention of holding it once stabilised as a core, income-producing investment.

Stabilised asset. A completed, leased, income-producing data centre, the lowest-risk, lowest-return entry point.

Forward funding. Committing capital to a project under development, partly de-risked relative to greenfield, for a moderate return.

Construction lending. Providing debt to a project under construction, a debt-like return protected by security and seniority.

Capital lifecycle. The phases through which a data-centre asset and its capital pass: land, construction, equipment, stabilisation.

Capex. Capital expenditure, the investment required to acquire land, build and equip a data centre.

Cap rate. The capitalisation rate, the ratio of an asset's income to its value, used to value and price stabilised assets.

Stabilisation. The point at which a developed asset is leased and generating stable income, resolving the development uncertainties.

Data sovereignty. The requirement that certain data reside within national borders, a strong driver of local data-centre demand.

Inference. The use of a trained AI model to generate outputs, a growing and continuous source of computing demand.

Training. The computationally intensive process of building an AI model, a major driver of dense data-centre demand.

Entry point. The stage in the asset lifecycle at which an investor deploys capital, which sets its risk-return profile.

Contracted cash flow. Income secured by a contract such as a lease, which converts a speculative asset into a bond-like one.

Digital infrastructure. The class of assets, data centres, fibre, towers, that supports data and computing, a distinct infrastructure segment.

Staged commitment. Releasing capital as development milestones are achieved, so exposure rises only as risk falls.

Platform strategy. Building a portfolio of assets from the ground up, the highest-return, highest-capability strategy.