MEKETA

The Spectrum of Infrastructure Assets

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When you hear the word infrastructure, most people imagine highways, power lines, and water utilities. These are the familiar structures of daily life – essential, tangible, ubiquitous, and often taken for granted. However, the investable universe of infrastructure assets is far broader and more nuanced than many people's experiences. Today, it stretches across a vast spectrum from lower-risk "core" investments to a wide range of higher risk, potentially higher returning "non-core" strategies that pursue "value add" approaches. At the upper end, "opportunistic" investments involve greater levels of infrastructure-related risks and may introduce private equity-style playbooks and associated types of risk. For investors, understanding this continuum is vital to navigating the risks and rewards of this asset class.

Key takeaways

- Private infrastructure offers a diverse set of investment opportunities from stable "core" assets to more dynamic, growth-oriented "non-core" ventures, aligning with varying risk and reward profiles.
- The asset class comprises lower risk, yield-generating investments, a multiplicity of medium risk strategies, and higher risk, private equity-like capital appreciation and growth opportunities.
- The risk and return profile can evolve with factors like capital expenditure and construction needs, as well as market uncertainties.

The infrastructure spectrum: core to opportunistic

Meketa's "taxonomy" for equity-focused institutional infrastructure strategies categorizes investments by relative levels of risk and target return, noting that debt is typically considered separately with categories borrowed from the private credit asset class. The categories are very similar to those that are used for private real estate strategy classifications.

Traditionally, core infrastructure includes assets with stable, predictable cash flows, long operating histories, and monopolistic characteristics. Think of regulated water utilities or toll roads with fixed revenues that automatically increase in line with inflation. In contrast, non-core investments may involve construction risk, merchant revenue models, and investment theses based on successful acquisition and/or roll-up strategies. However, these distinctions are not binary. Rather, they reflect a spectrum where many assets blur boundaries.

For example, a midstream energy platform expanding into renewables may start as core-plus and drift toward opportunistic as capital expenditure and demand uncertainty rise. A digital infrastructure asset in an Organization for Economic Co-operation and Development (OECD) country might look core on paper but potentially hide significant market and technology risks.

Characteristic	Core and Core Plus	Value Add	Opportunistic
Asset Stage	Brownfield (operational)	Brownfield with/ expansion	Greenfield or early-stage
Revenue Type	Regulated/ contracted	Mostly contracted	Merchant/ market-based
Unlevered Cash Yield	High (4-7%)	Moderate (2-4%)	Low initially (<2%)
Capital Appreciation	Low	Moderate	High
Inflation Linkage	High	Mixed	Low to Moderate
Leverage	Moderate to High	Moderate	Low to Moderate
GDP Sensitivity	Low	Moderate	High

FIGURE 1
Key Characteristics Across the Infrastructure Spectrum

Source: The data is derived primarily from Meketa's extensive observations and analyses of a broad range of assets and investment funds over time. It reflects experiential insights rather than information from a single, specific source.

These characteristics should map to investor objectives. Core infrastructure often suits those seeking yield and stability, whereas non-core typically appeals to investors targeting capital growth or thematic plays (e.g., digital transformation, energy transition).

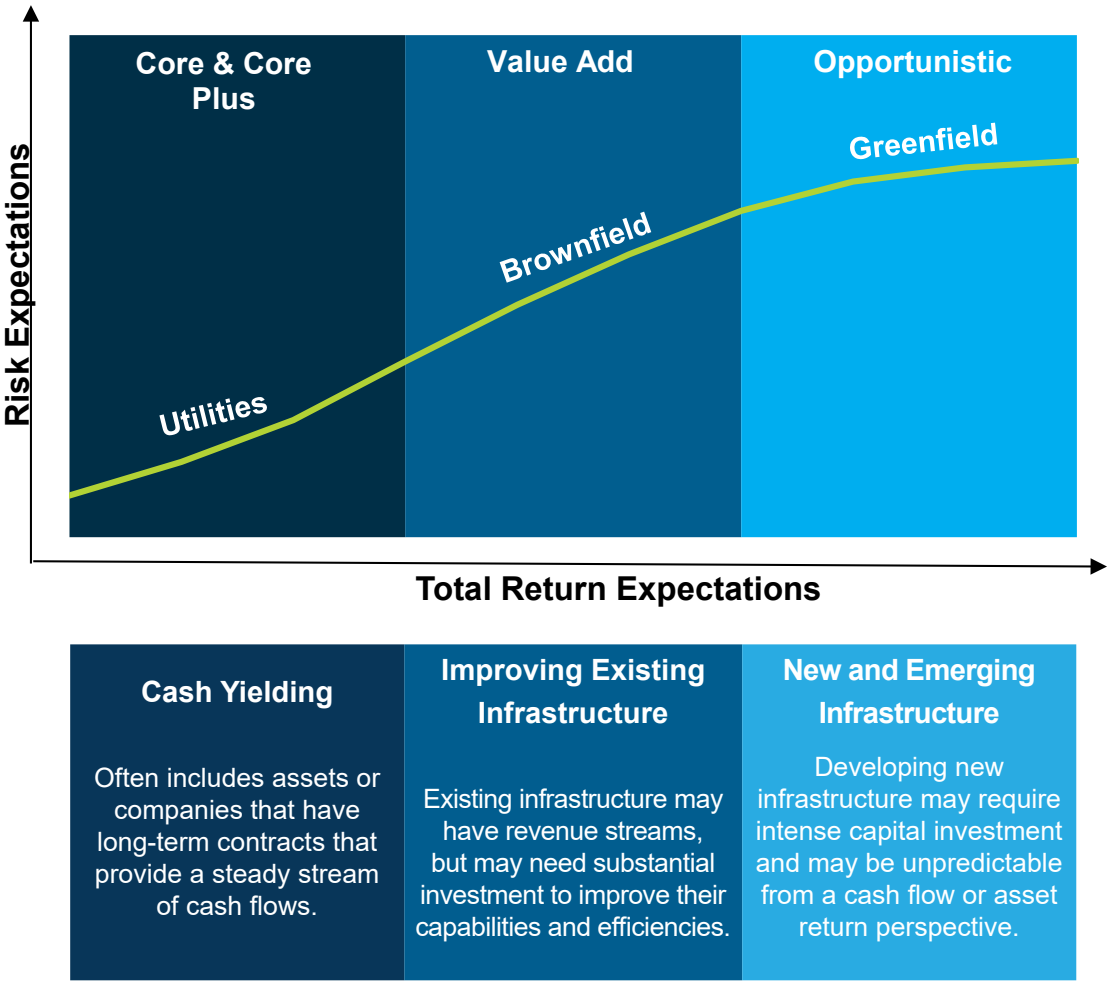

FIGURE 2
Infrastructure Strategies Example

Source: The data is derived primarily from Meketa's extensive observations and analyses of a broad range of assets and investment funds over time. It reflects experiential insights rather than information from a single, specific source.

Risk factors that drive classification

Several dimensions influence whether an asset leans core or non-core. In practice, these risk factors are often interrelated and tend to cluster together in core vs. non-core assets. Investors can think of it as a sliding scale where each incremental risk accepted should come with an incremental expected return.

Asset maturity

Brownfield assets, which refer to assets that are already in operation, tend to carry relatively lower risk due to proven performance and relative certainty related to revenues and costs. Brownfield assets are generally considered core or core-plus since they have an operating history and established cash flow, tending to produce cash yield immediately upon investment. For example, an operational toll road or a functioning water treatment plant are typical brownfield investments.

An intermediate case would be when a brownfield asset has a significant expansion component, such as a capex program to meaningfully increase capacity at a shipping

container terminal. In this case the entire complex and growth projects together could have a non-core value add profile, which could de-risk into an aggregate core-plus profile as the projects are completed and commence operations.

Greenfield investments, which involve new construction or development, inherently carry execution, cost overrun, and demand uncertainty risks. Yet they also offer potentially higher returns as these risks are often mitigated as the asset matures. For instance, the construction of a new airport or the development of a large-scale solar farm exemplify greenfield projects.

Contract structure

Core assets typically have long-term contracts or regulated pricing frameworks that lock in their revenue streams for years, if not decades. This is because long-term take-or-pay or availability-based contracts tend to stabilize revenues.[1] For example, a power project might operate under a 25-year power purchase agreement ("PPA") with a utility, fixing the price of electricity (often with inflation escalation) and thus eliminating market price risk. A pipeline might have take-or-pay contracts with shippers that guarantee revenue regardless of actual volume shipped. "Public-private partnerships (PPPs)-" often have government concession agreements (e.g., availability-based contracts) that pay if the facility is maintained, with no link to (or risk around) usage. These contractual structures shift risk away from the investor, either to customers or to the counterparty, which in core assets is usually highly creditworthy, such as a utility or government.

[1] A take-or-pay contract ensures that the buyer commits to purchasing a fixed amount regardless of demand, thereby providing consistent revenue streams.

In the context of contracts, counterparty risk can also play a role. Higher-quality off-takers increase revenue certainty. For example, government entities or established corporations are less likely to default on long-term contracts, increasing the likelihood of consistent cash flows. In energy projects, a utility company signing a take-or-pay agreement offers far greater financial reliability compared to a smaller, less established private entity. This stability is a cornerstone for core infrastructure investments, particularly those seeking lower risk exposure.

Non-core assets, by contrast, typically involve shorter-term contracts or even "merchant" exposure to unguaranteed revenues. Shorter-term contracts often need to be renewed more frequently and can be subject to higher churn rates than core assets' contracts. Merchant pricing, in particular, introduces volatility, as revenue streams are subject to fluctuations in market demand and price changes. For example, a merchant power plant sells into the spot electricity market, taking price risk. Similarly, toll roads reliant on traffic volumes can experience revenue dips during economic downturns or unforeseen disruptions.

Many core-plus or value add deals sit in the middle, with a mix of some contracted cash flow and some merchant upside. For example, a data center business might have a base case built on long-term contracts, giving it a core or core-plus risk/return profile, but also have extra capacity that if contracted would give it an upside and a value-add risk/return profile.

Regulatory and political risk

Infrastructure is often embedded in a framework of government policy and regulation. Clearer frameworks reduce risk by ensuring predictable and stable operating conditions. Core infrastructure tends to be found in stable, transparent regulatory environments, typically in developed markets with clear rule of law, independent regulators, and well-established property rights. For instance, renewable energy projects in countries with robust regulatory incentives, such as feed-in tariffs or tax credits, often attract investment by offering guaranteed returns. Similarly, infrastructure investments in regions with well-defined permitting processes often mitigate uncertainties related to project delays and compliance hurdles.

Non-core investments often entail greater exposure to regime uncertainty or political risk. Even in developed markets, if an infrastructure asset is in a newly liberalized sector or is deploying a new technology, the regulatory context might be evolving (e.g., consider ride-sharing's impact on urban transport rules).

Moreover, country risk (including currency risk) can make an otherwise core-like asset behave more like a non-core asset in terms of its risk and return profile. An electric utility in a country with volatile inflation and weak rule of law would likely be considered far riskier than an equivalent utility in a politically stable country.

Other risk factors

There are additional nuances that can differentiate between core and non-core assets. Commodity price risk may impact assets in the energy sector. For example, if the revenue for midstream energy infrastructure (e.g., pipelines, storage) depends on oil or gas prices, it adds risk; however, most core infrastructure investors seek to avoid commodity price risk. Investing in an asset that relies on new technology (e.g., battery storage or green hydrogen facilities) might be considered more opportunistic because commercial viability is less proven, whereas core infrastructure typically relies on established technology. The presence of operational turn-around risk (e.g., an underperforming asset that needs new management) can push an investment out of core territory, as can lack of scale as a very small project might have more idiosyncratic risk. Finally, sustainability policy and transition risks may be pertinent for assets with meaningful greenhouse gas exposure (e.g., a coal-fired power plant).

Cash yield vs. capital appreciation

One of the appealing features of infrastructure for investors is that they can provide both a payout (i.e., cash distribution) and the potential for capital appreciation, but the balance of those components varies widely between core and non-core assets.

Historically, core infrastructure returns have largely been driven by steady distributions rather than significant capital gains. These assets typically throw off consistent operating cash flow, much of which is distributed to investors as dividends. A core infrastructure portfolio might target a 4% to 7% distribution. In fact, some core assets might seek to derive practically all their total return from yield, with very little to no growth.

Moving up the risk spectrum, the balance tilts increasingly toward capital appreciation. Core-plus assets still generally produce considerable cash flow, but they may retain more of it for growth or reinvestment, leading to little or no distributions from the individual asset for the end investor during the early to even middle portion of the total hold period. Value-add and opportunistic assets often intentionally sacrifice early income in order to boost the asset's value and achieve a higher return through price appreciation at exit.

Inflation protection

Inflation protection is another oft-cited virtue of infrastructure, and its nature also varies along the spectrum. Infrastructure assets are considered good inflation hedges in theory because they involve real, hard assets often providing essential services – things that generally hold their value or even see revenues rise when prices rise. Many core infrastructure assets have explicit inflation linkage in their revenue model. For example, contracts and concessions in sectors like utilities, transport, and energy frequently include clauses tying tariffs or fees to inflation indices (e.g., CPI).

However, not all infrastructure assets are equally protected from inflation. The more non-core an investment, the more its inflation hedging may rely on indirect or theoretical market factors rather than explicit contract terms. Assets without fixed revenue contracts might still benefit from inflation if they have pricing power. In essence, higher-risk projects tend to provide a more equity-like inflation hedge through long-term growth and real asset appreciation, but these lack the contractual certainty and direct relationship of inflation-linked revenues.

Case study: digital infrastructure - fiber networks

Background: Digital infrastructure (such as fiber-optic networks and telecom towers) has become a significant part of infrastructure investing. Consider a fiber-optic broadband network ("Company X") in two scenarios.

- *Scenario A:* Company X owns an extensive fiber network in major metropolitan areas of Western Europe, leasing capacity to telecom operators on 20-year contracts. The network is largely built out, demand for data has been very stable and growing, and there are no expectations for future capex beyond maintenance and operations.

- *Scenario B:* An infrastructure asset manager (the "General Partner") invests in Company X with plans to expand the current fiber network by adding connectivity to secondary cities or emerging market geographies where broadband penetration is currently low. They have some short-term contracts with local internet service providers, but much of the project involves laying new fiber lines in anticipation of future demand.

Case study: digital infrastructure - fiber networks, continued

Core vs. Non-Core Classification: Scenario A's metro fiber network might initially be viewed as core infrastructure or at least core-plus. Assets such as fiber-optic networks and mobile towers have increasingly come to be seen as core infrastructure due to their essential service nature and steady cash flows. The long-term leases in Scenario A provide contractual revenue, and the asset has quasi-monopoly characteristics in the areas it serves (e.g., high barriers to entry because once a city has an extensive fiber backbone, a competitor would find it costly to overbuild). It is also in a lower-risk country/regulatory setting, resulting in investors seeing it as relatively low risk.

Scenario B's new fiber rollout growth project, on the other hand, is opportunistic by itself. It is a greenfield expansion into secondary cities and emerging markets, with speculative demand. While the upside could be significant (if internet usage surges and they lock in many customers, the network's value could multiply), the risks are numerous: execution risk in construction, uncertain adoption rates (for example if mobile technology leapfrogs fiber in that region, etc.), as well as currency/political risk. In addition, contracts are short or rolling, meaning there is no guaranteed long-term cash flow yet.

The blended risk/return profile of Company X with the growth plan is meant to reflect a definitively non-core profile—where it would fall in the value add to opportunistic classification spectrum at the inception of the private firm's capital investment would depend on the relative valuations of the operating and new asset bases. If the fiber network is successful, Company X could be expected to move to at least the next lower classification over some defined hold period (e.g., if opportunistic at inception it would move to value add, or if value add at inception it would move to core-plus or core). This is a good example of how the same type of underlying infrastructure (digital) and underlying asset (fiber) could have a different classification of core vs. non-core depending on the stage of development and investment strategy of the GP and its investors.

Conclusion

Infrastructure is a dynamic, diverse asset class offering investors multiple entry points along a spectrum of risk and reward. From dependable toll roads to more ambitious green energy platforms, the choices typically reflect investor goals, time horizons, and risk tolerance. Understanding where an asset sits on this continuum – and how that affects yield, appreciation, and inflation protection – is essential to making informed decisions.

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