Trends in private infrastructure

Structural drivers and investment opportunities

Mansi Patel

2025 posted the highest infrastructure deal volumes on record. Overall infrastructure deal activity increased to US$1.56 trillion, up from US$1.12 trillion in 2024, representing growth of 39% year on year. Infrastructure debt volumes also increased, reaching US$1.05 trillion in 2025 compared with US$790 billion in 2024, an increase of 33%. Prior to 2025, the previous peak occurred in 2022, when overall infrastructure deal volumes totalled US$1.26 trillion and infrastructure debt volumes reached US$603 billion.

Infrastructure debt funds continue to represent a relatively small portion of the market, accounting for just 8.1% of total infrastructure assets under management as at Q1 2025. This dynamic is expected to create attractive opportunities for dedicated credit managers, particularly given that approximately US$322 billion of infrastructure equity dry powder remained as at the end of 2025. Ongoing public infrastructure funding deficits, combined with elevated levels of private equity dry powder, point to continued high levels of activity in 2026 across both private infrastructure equity and debt markets.

Key themes

Several structural themes are expected to underpin investment momentum,

- Sustained demand for artificial intelligence (AI) capacity is expected to continue to drive growth in data centres, power supply, and fibre.
- Acceleration of capital deployment driven by grid modernisation, energy security, and industrial onshoring.
- Urbanisation driving the need for social infrastructure investment in developed and emerging markets.
- Continued growth of private capital and the emergence of asset backed finance as a receptive market for infrastructure execution. (Figure 1).

Figure 1. Private equity capital raised

Sector	2025 global volume	2026 expected deal velocity	2026 expected relative value
Energy	$270.9bn	◕	↑
Power	$618.0bn	●	↔
Digital	$367.3bn	●	↑
Transport	$200.6bn	◑	↔
Social	$100.2bn	◔	↑

KEY: ↑ Increasing ↔ Neutral ↓ Decreasing ● 100% ◕ 75% ◑ 50% ◔ 25%

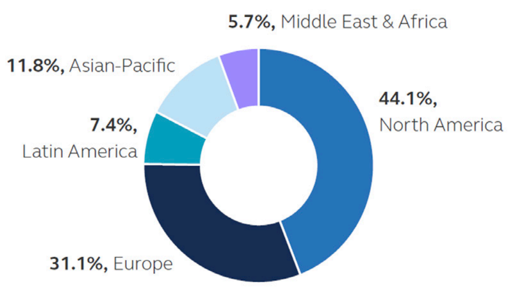
Source: Infralogic, Preqin, and Principal Asset Management, January 2026

Adviser insights:

Private infrastructure reflects a range of long-term structural themes, including artificial intelligence, energy transition, and urbanisation, which can help frame client discussions around diversification and growth drivers beyond traditional asset classes.

The ongoing role of private capital in addressing infrastructure funding gaps also provides useful context for explaining how private markets can complement listed investments within a diversified portfolio.

Figure 2. Global infrastructure investment by region



Source: Infralogic, January 2026

Observations and outlook

- 2025 proved a strong year for private infrastructure, with around $1.56 trillion in global activity, driven by sustained momentum in the power and digital sectors. Investment increased across all major sectors on a year-on-year basis.
- Global infrastructure debt volumes reached approximately $1.05 trillion in 2025, with funding shifting modestly toward capital markets to an estimated 80/20 split between bank lending and capital markets (compared with roughly 85/15 in 2024).
- Investment grade (IG) opportunities continued to see significant activity while attractive high yield (HY) opportunities continued to expand for institutional investors. Infrastructure debt maintained a strong premium to public comparables while offering spreads of +200-250 bps for IG issuances, +325-400 bps for BB issuances, and +425-650 bps in low BB and single B issuances.
- Infrastructure equity investment continued to see high volumes; approximately $510bn (33%) of total global volumes, (Figure 2).
- Infrastructure equity deal flow was largest in core and core-plus strategies, while fundraising was most successful in opportunistic strategics – showing investor appetite for different types of risk-return profiles across the asset class.

Private infrastructure deal flow to maintain levels

- Megatrends across AI and data consumption, digitalization, grid modernisation, energy security, urbanisation, and the emergence of new asset backed financing structures.
- We expect corporates and financial sponsors to continue seeking innovative financing solutions in the private markets that require bespoke structured solutions for capital intensive projects.
- Government deficits are expected to continue to widen the "infrastructure gap" globally, furthering the need for access to flexible private capital.

Infrastructure megatrends to follow are outlined below.

We believe private capital will expand across risk spectrum in infrastructure

- As deal flow increases in 2026 across IG, HY, and equity opportunities, we expect clients to have increased capital allocation appetite towards HY and selective emerging markets.
- As project costs and project valuations continue to rise, there will be a greater need for borrowers to seek out a variety of capital solutions to bridge the funding gap.
- We believe well-structured private capital HY transactions currently provide some of the most attractive risk-adjusted returns. These transactions back mission critical infrastructure assets, with resilient valuations, and are expected to continue to provide opportunities in 2026.

1. Sustained demand for AI capacity to continue to drive growth in data centres, power supply, and fibre

Recent data centre transaction activity reached over $260bn globally, reflecting a rapid pace of growth.

- Average deal size of approximately $1.21bn.
- Global data centre debt issuance expanded to around $202bn, up from $101bn previously.
- Capex spending by large technology corporates was approximately $400bn, representing a significant increase from prior levels.

As average transaction sizes continue to increase, a widening gap between large cap and middle market data centre deal activity is emerging.

- Middle market opportunities are increasingly skewing toward more customised, club style investment structures.
- Large cap transactions are more likely to require participation across the full capital markets spectrum.

The continued expansion of AI, cloud computing and advanced digital infrastructure is fundamentally reshaping electricity consumption patterns in the U.S.

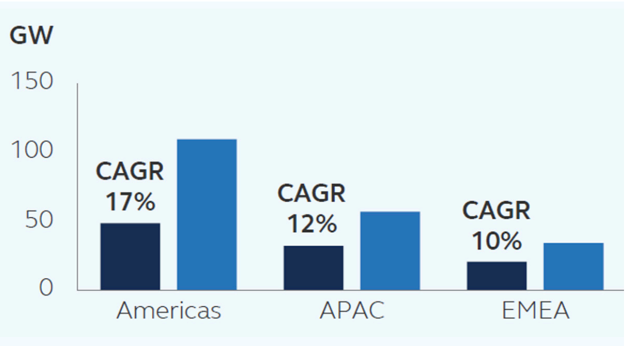
U.S. data centres have been consuming approximately 180 terawatt hours (TWh) of electricity, representing around 4% of total domestic power consumption, with forecasts indicating that this share could rise materially by the end of the decade. Nearly 100 GW of new global data centre capacity is expected to come online between 2026 and 2030, requiring up to $3 trillion in additional investment, (Figure 3).

Mansi Patel, Principal Asset Management

Mansi is a senior managing director and head of Infrastructure Debt at PAM.

- Power infrastructure has emerged as a primary constraint, driven by multiyear grid interconnection, transmission and equipment delays in core markets where speed to market is critical for data centre development.
- Transmission constraints and grid congestion are pushing developers and tenants toward alternative power strategies, creating incremental investment opportunities across power generation, storage and grid supporting assets.
- Behind the meter (BTM) power is increasingly viewed as a preferred solution, particularly in the U.S., where co located generation is being deployed to address both temporary and long-term power needs.
- Renewables paired with battery storage are becoming a core component in managing AI driven load volatility, firming intermittent generation and accelerating grid interconnection timelines, given their relatively faster build profiles.
- We believe longer term solutions will require integrated investment in resilient, efficient power infrastructure to sustainably support ongoing growth in AI related demand.

Figure 3. Growth in data centre capacity (2025-2030)



Source: JLL, January 2026

In our view, private investments will be key to funding this next phase of the AI-driven infrastructure buildout.

- Infrastructure private equity and strategic joint-ventures will play a large role in new development.
- Developers of all sizes will require off-balance sheet financing vehicles and project finance debt solutions provided by private capital investors.
- The role for private markets (across equity and credit) is critical, complemented by continued capital investment from public markets into utilities and Big Tech.

2. Acceleration of capital deployment driven by grid modernisation, energy security and industrial onshoring

The global power system is in the early stages of aging grids and increasing scarcity of capacity relative to forecast growth in electricity demand.

- Grid modernisation and reliability upgrades — including infrastructure hardening and deployment of smart-grid systems — are becoming strategic priorities across many markets, to support rising load demand driven by accelerating AI adoption, electrification and digitisation.

In the U.S., supply constraints are becoming more pronounced:

- Ongoing coal retirements and relatively slow renewable permitting continue to constrain electricity supply, with power regulators warning that large parts of the country could face capacity shortfalls over the coming decade.
- Distribution efficiency remains a challenge, with approximately 30% of transmission lines and 50% of distribution infrastructure approaching end-of-life. Capacity prices in the PJM market have risen sharply in recent years, underscoring the premium being placed on system reliability.

Investment momentum is building globally:

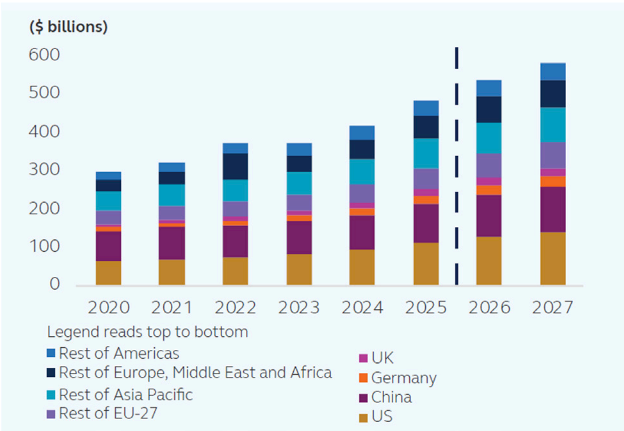
- Global capital spending on grids has been growing at a sustained double-digit pace in recent years, (Figure 4)
- The U.S. represents the largest share of grid investment, with China and Europe also accounting for significant portions of global spend.

Despite this growth, grid investment remains challenging, as projects typically do not generate immediate financial returns and derive much of their value from failure prevention rather than revenue growth.

Broader macro pressures are reinforcing the need for resilient infrastructure, as countries contend with surging power demand, supply-chain disruptions, strained geopolitical relationships, volatile energy commodity markets and the near-shoring of industry to support national security objectives.

Policy-driven reforms addressing grid-related challenges — including interconnection queues, permitting processes and energy security — are critical to accelerating the deployment of private capital in the current infrastructure investment cycle.

Figure 4. Global grid investment (by market)



Source: BloombergNEF, December 2025

Global factors including the growth of power demand, geopolitical uncertainty, and decades of investment neglect have led to increased attention towards grid investment and the need to accelerate capital deployment.

- Investments are being hampered by supply chain, regulatory hurdles, and labour constraints.
- Innovative policy solutions to help ensure speed, efficiency, and replicability will open the doors to private capital investment, much needed in strengthening the global grid.

3. Urbanisation driving the need for social infrastructure investment in developed and emerging markets

More than half of the world's population now lives in urban areas, with cities accounting for approximately 45% of the global population, up from around 20% in 1950. Global population projections through 2050 continue to point to further growth, with around two-thirds of the increase expected to be concentrated in urban areas, driven primarily by emerging and developing regions. The largest increases are expected across Asia and Africa.

As urbanisation intensifies, demand for investment in both new and aging social infrastructure (including hospitals, schools, housing, waste, water and heating) is expected to grow and increasingly outpace available funding. Addressing these pressures is likely to require greater private capital involvement, with a focus on asset quality, operational resilience and the efficient use of existing urban space to support long-term development.

Funding constraints and the role of private capital

Based on projected infrastructure needs and current investment trends, the funding gap is expected to widen through to 2040, increasing the reliance on private capital and public-private partnerships to help bridge the gap. Social infrastructure is particularly exposed to this shortfall, as it typically generates limited direct revenues and remains heavily dependent on constrained public funding sources. (Figure 5).

In developed markets, fiscal constraints are limiting the pace of infrastructure replacement and resilience upgrades. Aging populations, rising healthcare and social spending, and tighter public balance sheets are reducing governments' ability to self-fund large-scale projects, resulting in growing backlogs of deferred investment.

In emerging markets, rapid urban growth is driving the need for new social infrastructure capacity, while funding capacity remains constrained. Cities are expanding faster than public balance sheets can support, with municipal revenues often insufficient to fund large capital programmes. Higher macroeconomic volatility and weaker counterparty credit profiles further limit traditional public-sector financing.

Adviser insights:

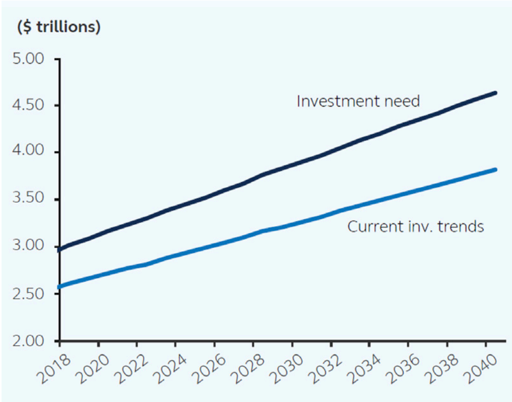
Portfolio considerations:

Infrastructure encompasses a broad set of sectors, including energy, digital, transport and social assets, each with different risk and return characteristics, which can support more nuanced diversification conversations with clients.

The article also highlights the importance of investment access points, noting that exposure to infrastructure is often implemented through private market vehicles or diversified funds, which may influence portfolio construction decisions.

We believe these structural urbanisation trends across both developed and emerging markets will continue to expand the role of private infrastructure capital. Innovative public-private partnership structures, alongside deep pools of private capital — particularly long-duration equity and institutional debt — are well suited to social infrastructure investments that benefit from long asset lives, are mission-critical in nature, and are typically supported by long-term contracted or availability-based revenue frameworks.

Figure 5. Global infrastructure investment at current trends and need



Source: Global Infrastructure Hub 2021

Across both developed and emerging markets, mobilising private capital is becoming central to meeting social infrastructure needs.

- As urbanisation continues to concentrate demand for essential services, the ability to structure investable infrastructure projects and attract private capital will play a key role in determining how narrow the investment funding gap can become.

The quote

We believe private capital will expand across the risk spectrum in infrastructure.

4. Continued growth of private capital and the emergence of asset backed finance as a receptive market for infrastructure execution

Asset backed finance (ABF) refers to lending secured by a diversified pool of receivables, contractual cash flows, or hard assets typically pledged to a newly established funding vehicle.

The ABF market is vast, spanning public and private markets across numerous asset classes. It has become a meaningful component of institutional alternative portfolios amid bank retrenchment and the rise of private capital; historically, rooted in everyday consumer and business activities such as mortgages, credit cards, autos, aircraft, and royalties, it has increasingly expanded into niche financing areas as borrowers and lenders recognise its structural advantages over corporate credit.

ABF solutions for borrowers can vary depending on need:

Securitisation:

Bankruptcy remote financing vehicle set up to own a pool of receivables, contracts, or small assets via a short-term warehouse or long-term asset backed security (ABS).

AssetCo:

Ring-fenced pool of operating assets that tend to be lumpier in size than securitization and more infrastructure like (renewables, transport, digital).

Structured equity:

Corporates may seek to raise cost-effective capital by structuring a solution around hard assets or receivables instead of common equity

Net Asset Value (NAV) facility:

Borrowing base structure linked to asset values rather than cash flows.

Furthermore, many characteristics of ABF are akin to traditional infrastructure debt:

- Secured by hard assets and cash flows; downside protection features through collateral rights and covenants; controlled waterfalls; contractually amortizing; inflation linked; legal separation.

The dynamics of ABF provide a natural evolution to traditional infrastructure debt that is grounded in asset-level risk but shifts the analysis from a single asset to more granular and diversified pools providing several credit enhancements.

- These pools may be dynamic based on borrowing base and/or eligibility criteria.

An increasing number of corporate infrastructure borrowers (fibre, towers, data centres, solar, midstream, transportation) are utilizing different types of ABF structures vs. traditional corporate credit to finance their business models, and we expect the trend to continue.

ABF is expected to emerge as a core funding channel for infrastructure borrowers, providing access to replicable capital at scale, while complementing traditional infrastructure finance.

- The opportunity for investors to participate in new private market ABF structures will continue, as new structures emerge, underpinned by well-known and bankable infrastructure assets.

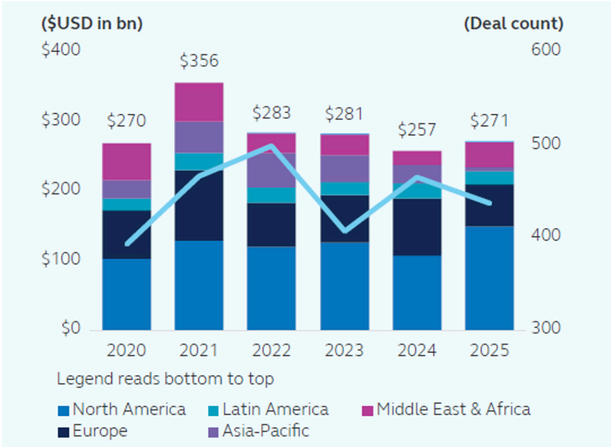
Energy sector overview

- Energy is a broad asset class comprising mainly oil & gas infrastructure across upstream, midstream and downstream subsectors. Midstream includes core assets such as liquefied natural gas (LNG) terminals, pipelines, and storage assets. Adjacent growth areas include carbon capture and sequestration, renewable fuels, hydrogen, and critical minerals.
- In 2025, energy deal flow reached $271bn globally across 437 transactions, (Figure 6).
- Energy security concerns, exacerbated by geopolitical tensions, have prompted countries to diversify their supply chains and prioritise domestic production.
- Natural gas is becoming increasingly viewed as part of a more permanent solution, rather than just seen as a transitional fuel.

Energy sector outlook

- We expect the energy sector to have similar deal velocity in 2026 as well as provide strong high relative value, noting 2025 volume was primarily carried by a ‘smaller’ number of megadeals (compared to other sectors with more deals and less size per deal).
- Increased regional energy security is expected to be a driving force of growth in the energy sector for 2026 and beyond.
- Countries are likely to strengthen energy security by bolstering regional supply chains and growing upstream and midstream infrastructure in particular.
- LNG will remain a key area of focus in the near-term as we’re beginning to see project developments across new jurisdictions with the ability to invest across the capital stack.

Figure 6. Deal trends - energy



Source: Infralogic, January 2026

Energy sector - worth watching

- Geopolitical tensions between leading oil & gas producing nations and the impacts on product volumes.
- Energy sector tailwinds, global policy stances, the dramatic growth in power demand, Western nations’ pivot to further diversify gas inflows, and energy security priorities.
- Continued global demand for LNG driving investment in export terminals and regasification facilities.
- Creation of direct gas supply lines to data centre operators to bridge the gap until permanent pipeline connections are made.
- Investment focus on sustainability continues to vary across the world, with the continued acceptance of natural gas as a transition fuel.

Power sector overview

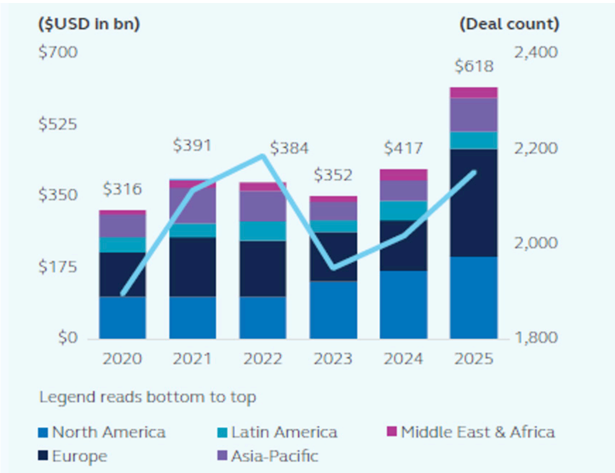
- Power includes thermal and renewable generation, transmission and distribution of electricity. For Principal, thermal power generally includes gas-fired assets as well as district heating and behind-the-meter (BTM) assets. Renewable power mainly includes wind, solar, battery storage, hydro, and geothermal. Distributed generation and microgrids are a key growth area for core power opportunities.
- In 2025, power deal flow reached $618bn globally across 2,152 transactions, (Figure 7).

- Gas-fired capacity remains a primary power source due to its flexibility and reliability, important for both energy security and trends such as AI and digitalization; however, renewables continue to be the fastest growing subsector.
- Traditional centralised power plants (thermal and renewable) are complemented by distributed energy resources such as C&I, community and rooftop solar, battery storage, and microgrids.

Power sector outlook

- We expect the power sector to have increased deal flow in 2026 and remain consistent in relative value compared to recent years.
- AI, digitalization and electrification trends in transportation and heating will add to demand pressures, potentially outpacing infrastructure readiness.
- In the U.S., renewables may continue to dominate new capacity additions along with traditional power picking up momentum in 2026 due to the One Big Beautiful Bill Act (OBBBA) being signed into law and the acceleration of sunset dates for Inflation Reduction Act (IRA) tax credit incentives.

Figure 7. Deal trends - power



Source: Infralogic, January 2026

Power sector - worth watching

- Resurgence in new-build for gas-fired generation including centralised and BTM facilities, largely needed for powering AI data centres.
- The need for new generation is contending with development challenges.
- Newbuild costs for traditional power are rising, which is raising valuations for existing plants (up to 40-50%+ higher per kilowatt than years prior).
- Broadening range of technologies and sponsors being active in the market, with energy storage projects in particular gaining market share alongside established solar and wind deals as well as newly eligible credits from advanced manufacturing, clean fuels, geothermal, and other sectors.
- Increased investment in distributed energy resources (DER) including distributed generation, community solar and microgrids.

Digital sector overview

- Digital infrastructure continues to expand as a subsector, but generally includes core areas of data centres, fibre optic, and cell tower assets. Growth areas include wireless and distributed antenna systems, as well as various internet of things (IoT) applications. Digital infrastructure increasingly intersects with nearly all other infrastructure asset classes due to the digitalization megatrend.
- In 2025, digital deal flow reached $367bn globally across 408 transactions, (Figure 8).
- Digital infrastructure is experiencing exponential growth in 2025, propelled by surging demand for connectivity, cloud computing, and data analytics.
- Operators are increasingly adopting energy-efficient technologies and renewable energy to power their facilities, while surging data centre demand requires immediate and/or bridging solutions such as gas-fired BTM power supply.

Digital sector outlook

- We expect volume in the digital infrastructure sector to continue to increase in 2026 and beyond given current AI and digitalization trends, as well as provide increasingly attractive relative value.
- The average deal size in the space continues to increase and we have begun to see club-style institutional investors transactions in the larger deals in addition to smaller ones.
- In 2026, digital infrastructure is expected to continue underpinning transformative advances across industries, with big data and utilities combining with government, public markets and private capital to solve the most pressing needs of the modern economy (with power supply being the largest obstacle for growth).

Digital sector - worth watching

- The convergence of data centres and power, with potential trends such as:
  - o Renewables being paired with flexible backup sources and energy storage on the same site as the data centre itself.
  - o Sponsors increasingly targeting investment in infrastructure connected to AI computing data centres.
  - o Utility campuses for data centres.
- Reduced reliance on connections to the main power grids, which can be costly and take long periods of time to construct.
- Expanding the search for more alternative power sources (i.e. nuclear, geothermal, and fuel cell).
- Continued investment in fibre networks and towers to support increasing bandwidth demands, particularly in rural and underserved areas.

Transport sector overview

- Transportation infrastructure is a traditional asset class including surface transportation (roads and rail), marine (seaports and terminals) and air (airports and terminals). Growth areas in transport are in essential service providers, expanding logistics such as cold storage and packaging, as well as electrical vehicle (EV) infrastructure, such as charging networks.
- In 2025, transportation deal flow reached $201bn globally across 453 transactions, (Figure 9).

- Transportation infrastructure is essential for both developed and emerging markets and is continually cited as a key problem in the “infrastructure gap” where private capital can help meet demographic needs.
- The integration of multimodal transportation systems is gaining traction to improve connectivity, as well as innovative systems to reduce congestion such as managed lanes.

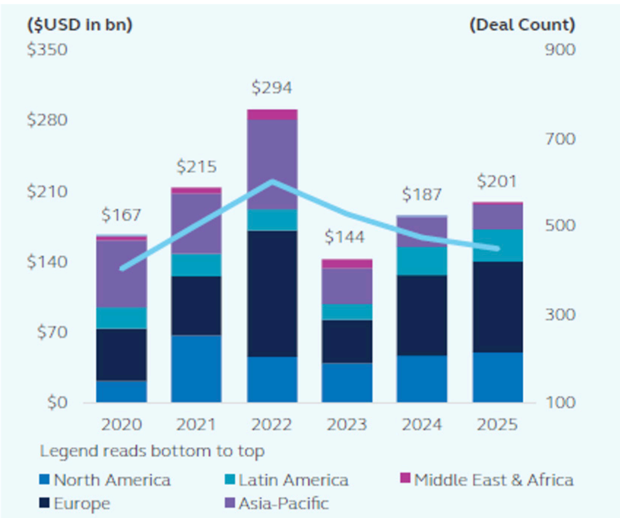
Transport sector outlook

- We expect the transportation sector to see continued growth in Europe given the continuous need for reinvestment, while U.S. deal activity is expected to remain relatively flat given the accessibility of tax-exempt and municipal bond markets; relative value in the sector should remain steady on a global basis.
- Governments and private stakeholders are expected to increase investments in EV charging networks, green logistics corridors, and smart traffic management systems.
- Funding mechanisms, such as public-private partnerships, should play a critical role in addressing infrastructure deficits and enabling transformative growth in the sector.

Transport sector - worth watching

- Continued strong deal flow out of Europe for core transportation investments.
- A revamping of federal caps for public activity bonds (PABs) to catalyse private infrastructure development.
- More local administrations (state and municipal) working together with investors to structure and deliver the next generation of U.S. transportation projects.
- Additional deal flow in service businesses tied to major transportation infrastructure assets such as airports.
- Ongoing procurements of managed lanes programs.
- Additional congestion relief projects in the U.S., following the implementation of New York’s congestion tolling program.

Figure 9. Deal trends – transport

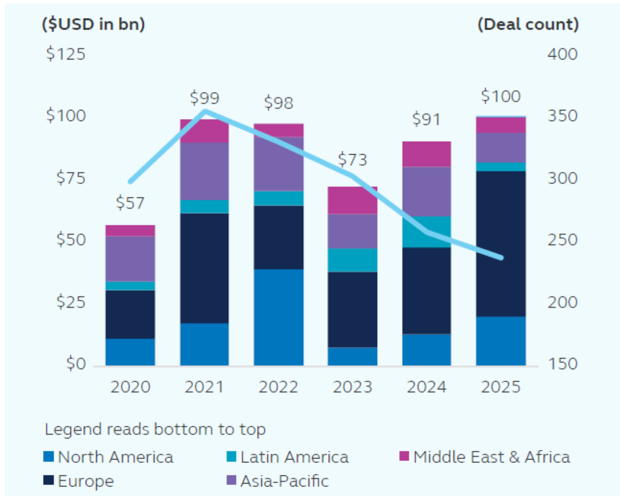


Source: Infralogic, January 2026

Social sector overview

- Social infrastructure is a broad and diverse subsector that spans several different types of assets from civic facilities (state education, healthcare, and military housing) to stadiums and arenas. Water and wastewater are also often considered social infrastructure
- In 2025, social deal flow reached $100bn globally across 237 transactions, (Figure 10).
- Often the biggest driver for social infrastructure deal flow is public-private partnerships or outright privatization (or concession) of civic services
- Growth areas in social infrastructure depend on the expansion of public-private partnerships.

Figure 10. Deal trends – social



Source: Infralogic, January 2026

Social sector - worth watching

- Water utilities across U.S. and Europe could see continued evolving public to private relationships (as well as increased investment in water resources).
- Logistics businesses are benefiting from the acceleration of new digital technologies, global supply chain shifts, and the evolution in how communities live and work.
- Modernisation of stadiums and arenas in Europe and U.S. markets.
- Climate resiliency projects for hospitals, school, district energy and water infrastructure.
- While the university P3 sector, comprised of energy and social projects, continued to show strength in 2025 we remain cautiously optimistic in seeing how the higher education space is turning to P3s for a variety of different asset sectors.

Social sector outlook

- We expect the social infrastructure sector to continue its typical steady deal flow while offering steady relative value to investors.
- Deal flow within social infrastructure has consistently increased in recent years, eclipsing $100bn in 2025 and we expect that trend to continue for the foreseeable future.
- Within social infrastructure, we see short-term opportunities in

the stadium and arena spaces that present uniquely attractive opportunities.

- Longer-term, we continue to see water and wastewater (and other social-environmental services) to be a major area for private capital investment.
- The expanding universe of opportunities in the social infrastructure space and/or more demand-based opportunities (versus more conventional availability-based models) could drive an increase in relative value. **FS**

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