

Infrastructure Investment Outlook 2024

A turning tide?



Roland
Berger

Management summary

2023 was a challenging year for the infrastructure segment of the alternatives universe. After a resilient performance in 2022, infrastructure deal activity suffered a blow in 2023. Challenging financing conditions led to a more pronounced decline in deal count and deal size than was anticipated by fund managers and advisors. This decline is still less pronounced and delayed when compared to the decline seen in private equity buyouts. A wave of consolidation that started in 2022 continued well into 2023 and 2024 reaching a peak with BlackRock acquiring GIP and General Atlantic acquiring Actis. Notwithstanding the headwinds to deal count and fundraising continuing into the first quarter of 2024, the near-term outlook appears more optimistic than what we saw a year earlier. The need for capital to develop long term sustainable infrastructure is larger than ever, and fund managers are responding in many ways. Thematic investments in energy transition, transport decarbonization, and circular economy are expected to continue, and so is the focus on hybrid infrastructure assets. In this report we start at a macro level, dissecting the broader investment and fundraising trends, before moving to sector-level analysis, where we address key frontier topics by sector.

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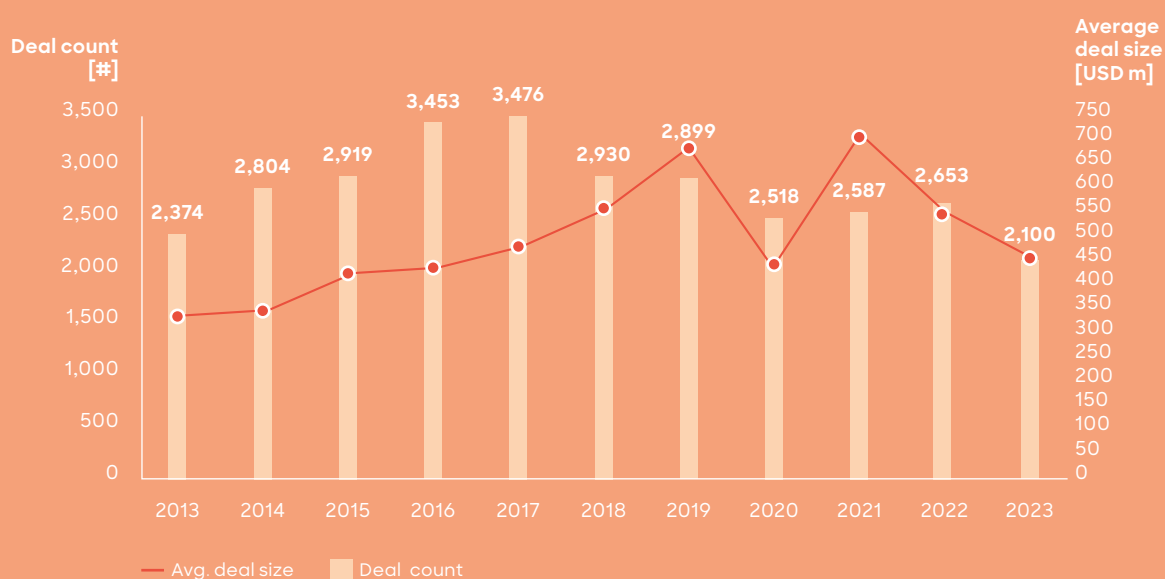
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Infrastructure M&A development and fundraising

Macro headwinds that started blowing in 2022 continued well into 2023 significantly affecting infrastructure M&A activity. In 2023, global infrastructure M&A deal count declined 21% y-o-y, while average deal size dropped 16%. This decline is stronger than what most respondents of our Infrastructure Investment Outlook 2023 survey expected as of Jan 2023. Worsening macroeconomic situation as the year 2023 progressed was the reason. It is also the first time since 2013 that average deal size declined for two years in a row (2022 and 2023). ► **Figure 1**

1 Global infrastructure deal count and average size¹



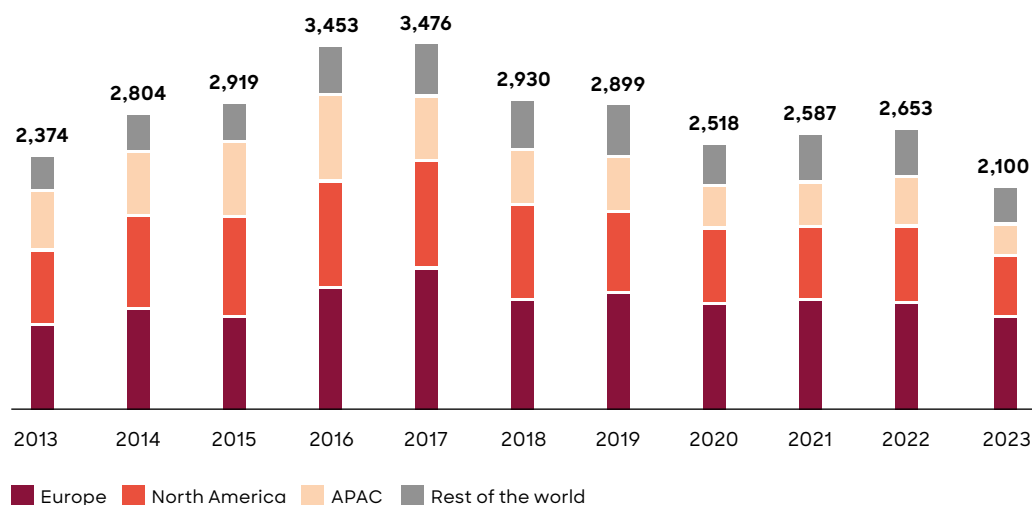
1. Average deal size for deals with a known value

Source: Preqin

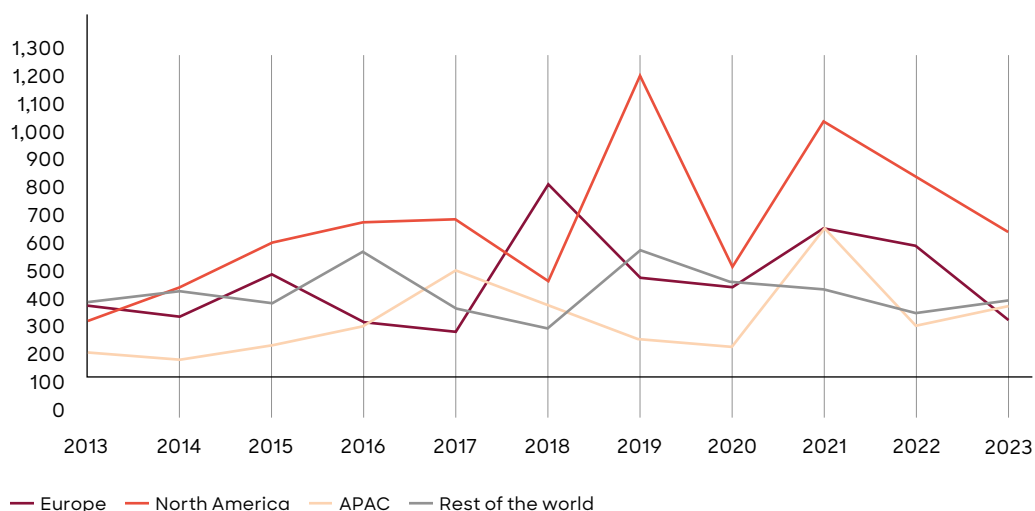
Europe and North America continued to account for over two-thirds of the global deal count. In fact, their share in the global deal count grew by 5 pp over 2022 as M&A activity declined more rapidly in APAC and the Rest of the World. This excludes 2019 and 2021, where a few mega deals skewed the picture; average deal size in 2023 in North America was still higher than what was seen historically. ► **Figure 2**

2 Infrastructure deal count and average size by geography

Deal count [#]



Average deal size¹ [USD m]



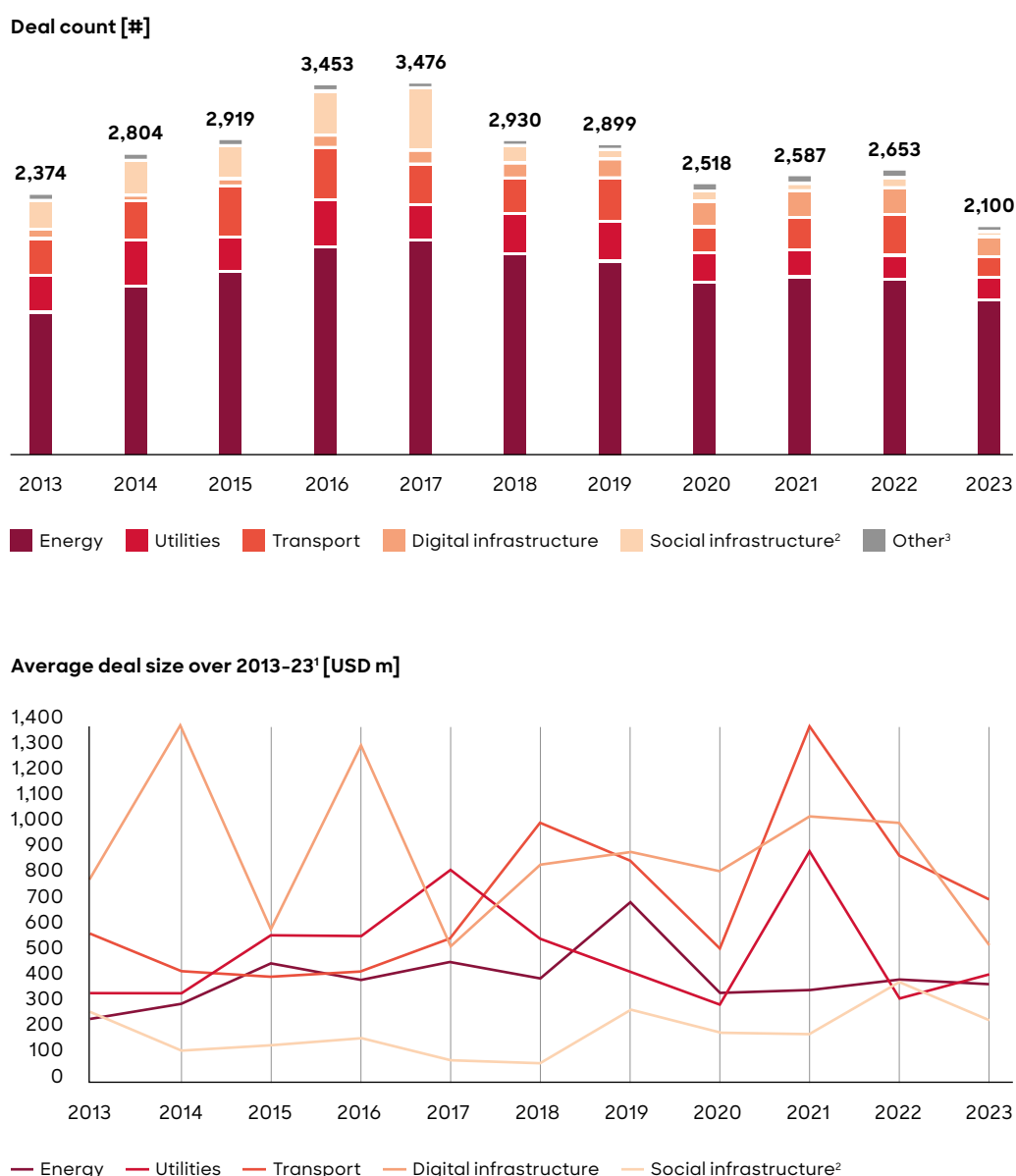
1. Average deal size for deals with a known value

Source: Preqin

Energy continues to be the largest infrastructure sector, despite a decline in deal count in 2023. No sector was immune to the macro headwinds, but M&A activity declined steepest in Transport and Social infrastructure (-48% and -73%, respectively). One segment not covered in this data is Hybrid infrastructure – the crossover space between business services and infrastructure assets – and it has been gaining a lot of attention from infrastructure investors.

► **Figure 3**

3 Infrastructure deal count and average size by sector

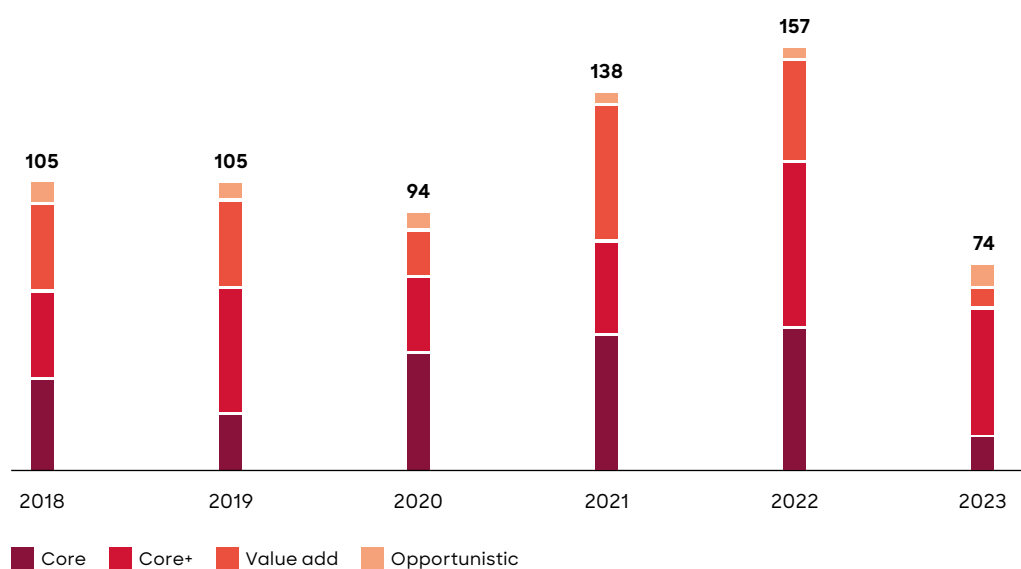


1. Average deal size for deals with a known value; 2. Includes healthcare and education; 3. Includes diversified, defence, government buildings and unassigned deals

Source: Preqin

The most pronounced impact of the slowdown has been on new capital. Infrastructure fundraising declined by >50 % in 2023 from its 2022 peak of USD 157 bn. Fundraising for the Core strategy experienced the steepest decline, while that for the Opportunistic strategy doubled, albeit from a small base. Allocation to the Core+ strategy declined in 2023 y-o-y, but remains significantly above historical levels. Since 2018, the share of North America in global fundraising has grown significantly, especially for the Core+ strategy. ► **Figures 4 & 5**

4 Infrastructure fundraising by fund strategy, 2018-23 [USD bn]



Source: Preqin

5 Infrastructure fundraising by geography and fund strategy, 2018-23 [USD bn]



Notes: Percentages may not add up to 100% due to rounding

Source: Preqin

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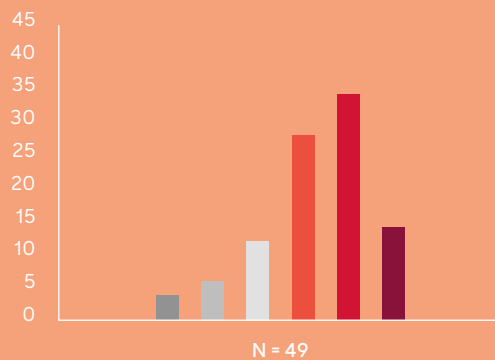
Current sentiment and outlook for 2024

To gauge investors' expectations for infrastructure investments in 2024, we surveyed experienced investment bankers and fund managers. 60% of the respondents expect infrastructure deal count in 2024 to grow slightly or moderately compared to 2023, while 14% expect it to grow strongly. This sentiment is strongest for deals below USD 2 bn. The outlook for larger deals is less optimistic but has improved when compared to that from our 2023 survey results. ► **Figure 6**

6 Outlook for infrastructure deal count – 2024 vs. 2023

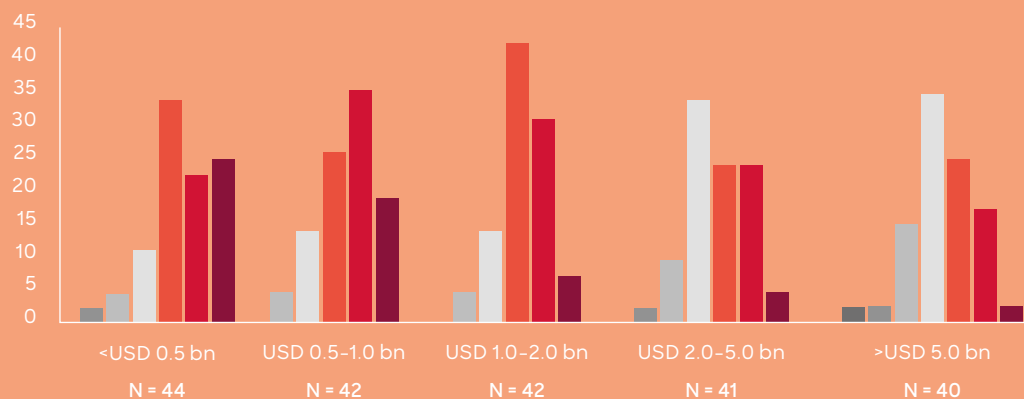
Investment outlook – Overall [% of respondents]

Most respondents expect infrastructure deals to grow up to 10% y-o-y in 2024



Investment outlook – By asset size [% of respondents]

The positive sentiment persists across all deal size brackets, but is stronger for deals under USD 2 bn in value

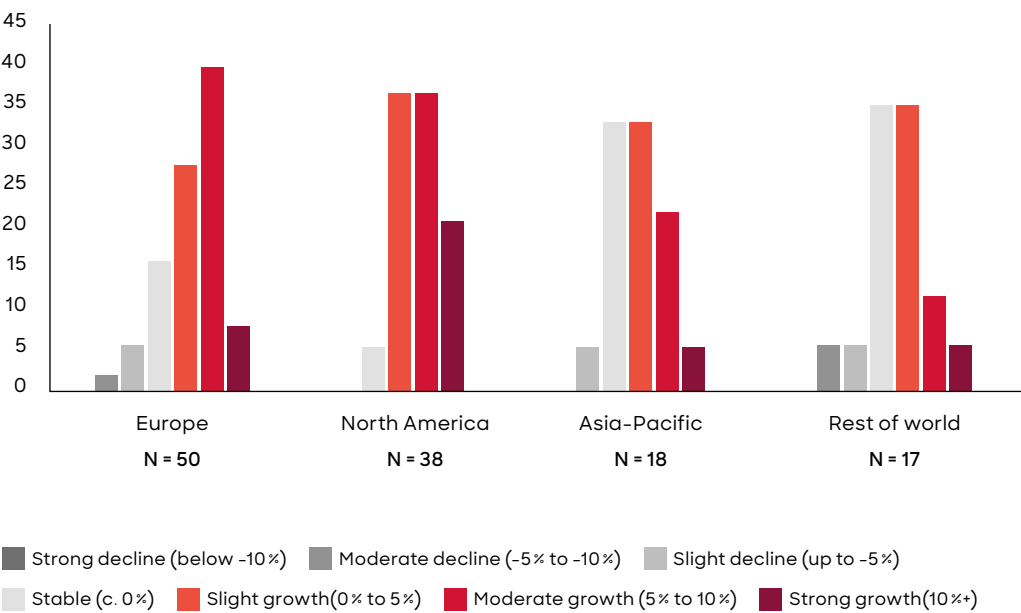


■ Strong decline (below -10%) ■ Moderate decline (-5% to -10%) ■ Slight decline (up to -5%)
 ■ Stable (c. 0%) ■ Slight growth (0% to 5%) ■ Moderate growth (5% to 10%) ■ Strong growth (10%+)

Source: Preqin

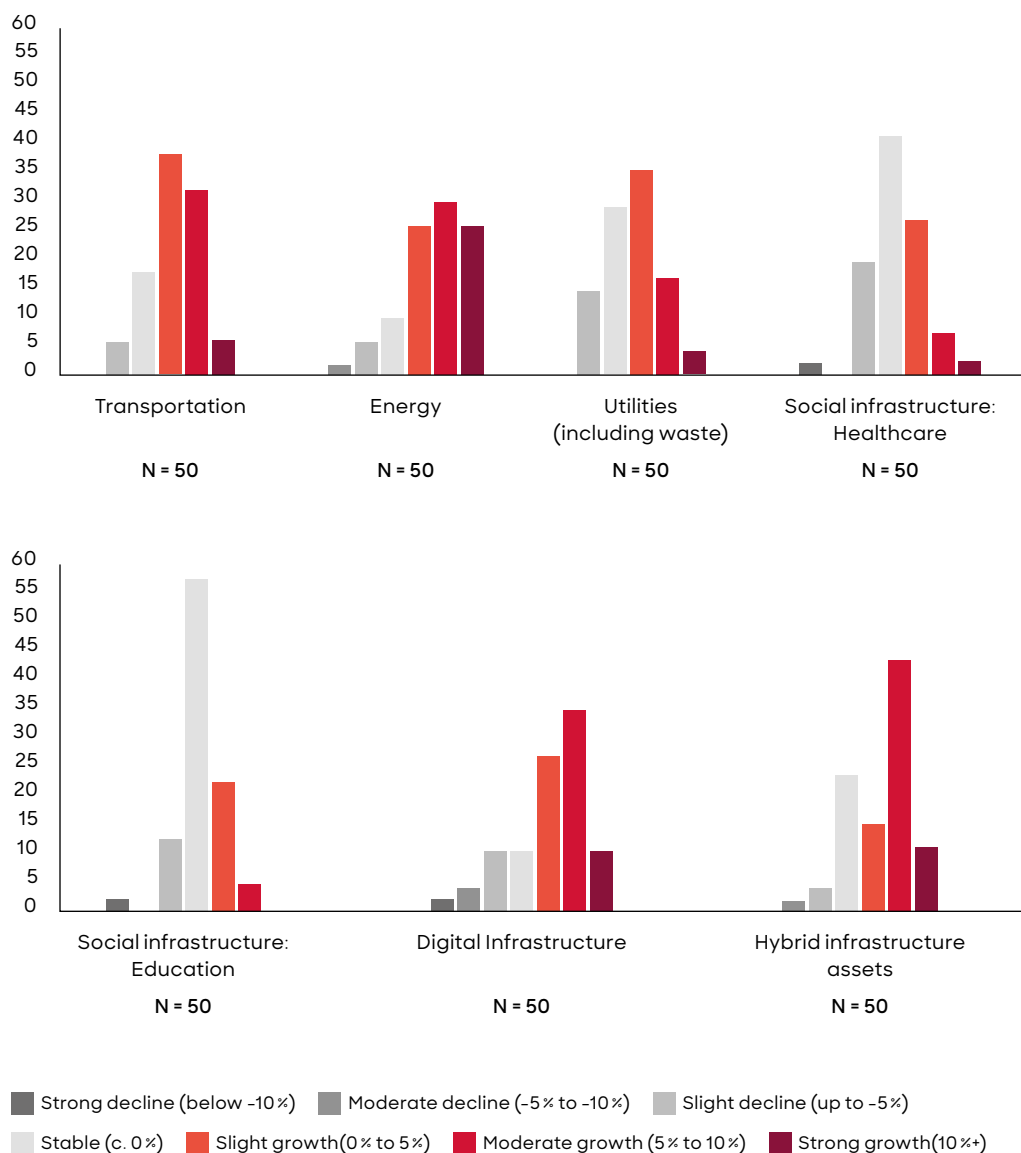
Respondents were most optimistic about North America, where the majority expect moderate-to-strong growth in infrastructure deal count in 2024, with none of the respondents expecting a decline. Comparatively, there is a reasonable distribution of responses for Europe, where, consensus optimistic outlook notwithstanding, a quarter of the respondents expect deal count to remain flat or even decline. The sentiment differs significantly across sectors, being more upbeat for Transport, Energy, Digital and Hybrid Infrastructure than for Social Infrastructure and Utilities. ▶ **Figures 7 & 8**

7 Outlook for infrastructure deal count by geography – 2024 vs. 2023, [% of respondents]



Source: Roland Berger Infrastructure Investment Outlook Survey 2024

8 Outlook for infrastructure deal count by sector – 2024 vs. 2023 [% of respondents]



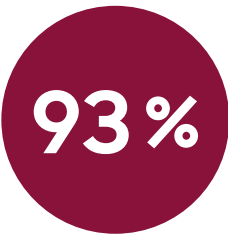
Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Respondents specified several macroeconomic and geopolitical factors responsible for their outlook for infrastructure investments in 2024. On the two most crucial factors affecting infrastructure investments; 1. Financing availability and interest rates and, 2. Macroeconomic situation, vast majority of respondents expect the situation to improve in 2024. As a result, 46 % of the respondents expect fundraising in 2024 to be easier than in 2023.

► **Figure 9**

9 Factors influencing infrastructure investments and fundraising in 2024

Development of factors influencing infrastructure investments - 2024 vs. 2023
[% of respondents]



A vast majority of respondents believe it will be easier (46 %) or take the same effort (48 %) to fundraise in 2024 relative to 2023



More than four-fifths of the respondents believed that value-creation will become more important in 2024 vs. 2023

■ Worsen ■ Improve ■ Remain stable

Source: Roland Berger Infrastructure Investment Outlook Survey 2024

3

Sector outlook analysis

We further surveyed the participants on various infrastructure sectors to understand two key aspects:

1. **Investment focus:** Given the current macroeconomic environment, how do participants expect their investment focus to change across the Core, Core+, and Value-add strategies. At a broader level, most respondents considered Core+ and Value-add assets as more attractive in 2024 than in 2023. There were nuances in some sub-sectors which we address in the respective sections.

2. **Future attractiveness:** In addition, we wanted to understand which infrastructure assets are deemed more attractive in 2024 than they were in 2023. We also gathered interesting insights into each of the sub-sectors and asset types which investors expect to focus on in 2024. We delve into each of the sectors, presenting the output of the survey and Roland Berger's views on investment activity in these sectors.

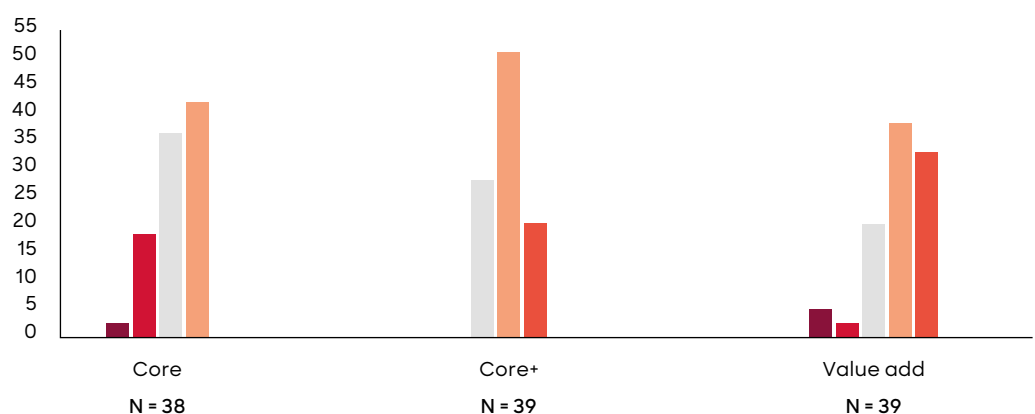
3.1 Energy

In 2023, deal making momentum in the Energy sector continued to be underpinned by secular tailwinds – decarbonization, energy transition and sustainability. The sector in general suffered less than other infrastructure sectors as deal count dropped ~11% y-o-y.

► **Figure 10**

10 Factors influencing infrastructure investments and fundraising in 2024

Relative focus by asset type – 2024 vs. 2023 [% of respondents]

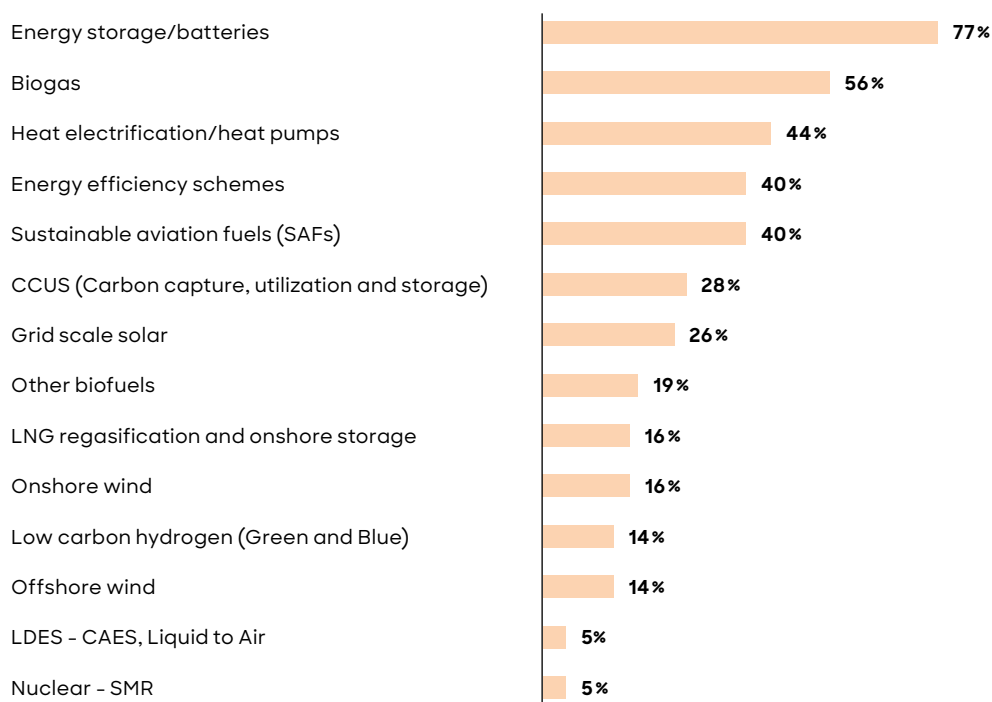


■ Decrease significantly ■ Decrease slightly ■ No change ■ Increase slightly ■ Increase significantly

Source: Roland Berger Infrastructure Investment Outlook Survey 2024

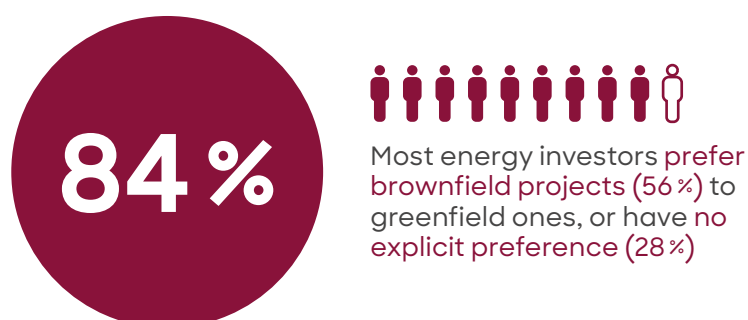
10 Factors influencing infrastructure investments and fundraising in 2024 (continued)

Most attractive assets (N=43) [% of respondents]



Energy storage and battery assets are highly attractive to investors, as energy distribution continues to be a key challenge

Low carbon fuels, such as biogas and SAFs are increasing in attractiveness as both use cases and feedstock options expand



Respondents to our survey overwhelmingly highlighted a stable and improving outlook for deal making in the sector in 2024, with a focus on Core+ and Value-add strategies. ~55% of the respondents also indicated a preference for brownfield investment opportunities.

Energy Storage (BESS) continues to be the most attractive asset type according to ~77% of the respondents, with batteries playing a crucial role in flexible and dispatchable power systems characterized by growing penetration of renewables. While the UK and the US continue to be the leading markets, investors are increasingly looking into new growth markets such as Germany, Italy and Greece.

Biogas and biomethane have also garnered significant interest, driven by the role of biomethane in decarbonizing heat and transport. In addition to various government incentives, a key impetus is RePower EU with a target of 35 bcm of sustainable biomethane production by 2030. Buoyant investor sentiment is supported by offtake agreements and the opportunity to build scalable platforms with diverse revenue streams.

Not surprisingly, electrification of heat (heat pumps) and energy efficiency schemes are top 5 constituents for two consecutive years. Rounding off the top 5 asset category is Sustainable Aviation Fuels (SAF) – the primary decarbonization lever for the aviation sector – with 60-70 % of major global airlines now targeting ~10% SAF uptake on average by 2030.

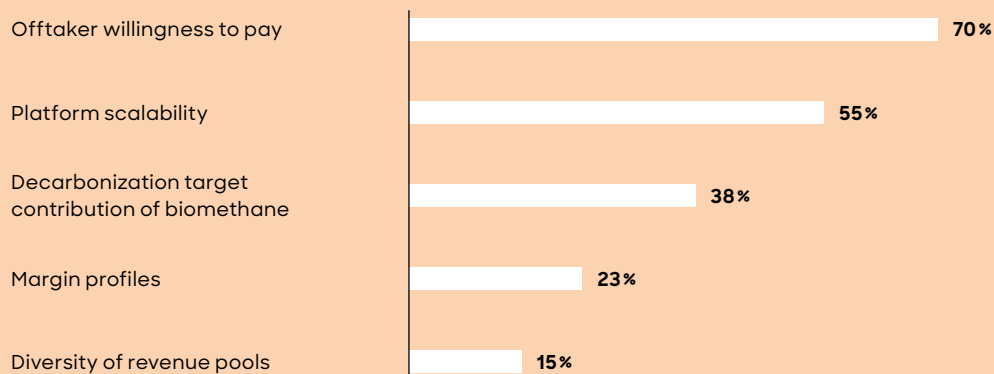
CCS also continues to be of interest, albeit the opportunities to invest in large scale transport and storage infrastructure are currently limited. There is considerable interest, however, in capture technologies/solutions – both new and existing.

Asset categories that appear to be relatively less appealing to investors in 2024 include offshore wind, low carbon hydrogen, long duration energy storage (excl. BESS) and nuclear (SMR).

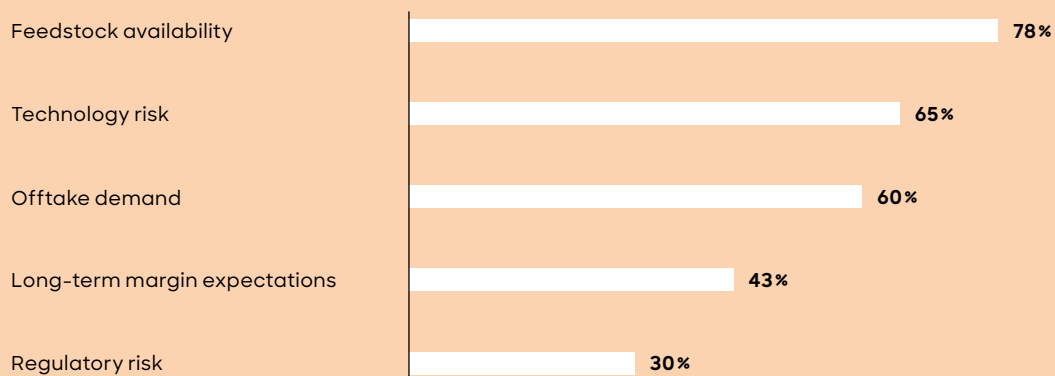
- The offshore wind sector has been subject to a series of negative press – failed auctions, impairments, and headwinds such as supply chain challenges, cost inflation, bureaucratic hurdles, and inefficient leasing. While long-term fundamentals remain intact for offshore wind, there is understandable nervousness regarding near-term greenfield investments.
- While hydrogen continues to intrigue investors, they recognize the nascency of offtake agreements which can adversely impact the investment thesis. Opportunities to co-invest with energy and utility companies (involved in production and offtake) can be explored further.
- Other LDES technologies (mechanical and thermal) are selectively of interest to investors as they are yet to reach BESS proliferation levels driven by their unique applications, scalability limitations, and exit considerations.
- Investors are also cautiously intrigued by novel nuclear reactor technologies (e.g., SMR), but are fully cognizant of the timeline to large scale commercialization and strong potential for cost and time overruns.

11 Biomethane deep dive – survey results

Most appealing aspects of investing in biomethane assets (N=40) [% of respondents]



Key concerns regarding investing in biomethane assets (N=40) [% of respondents]



Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Zoom in: Biogas

The advent of biogas/biomethane as a Top 5 asset category for 2024 necessitates a closer look at the underlying European market dynamics.

Europe has strategically positioned biomethane as a crucial component of its decarbonization and sustainability agenda. In addition to being a valuable commercial product emanating from anaerobic digestion, biomethane helps with curtailing greenhouse gas emissions and embraces the principles of a circular economy.

Biomethane production in Europe is intricately tied to three primary feedstocks – energy crops, organic waste, and animal manure. The European Union's Renewable Energy Directive (EU RED II) strategically incentivizes feedstocks with high greenhouse gas saving potential – animal manure being notably prized over energy crops and organic waste due to its low carbon intensity. Feedstock sourcing strategies need to consider factors such as feedstock availability, transportation costs, and local policies, all of which impact the economic feasibility of biomethane production.

Biomethane offtake primarily falls into two categories – transport and generation. The transport sector, fuelled by RED II, presents a compelling offtake market for biomethane (bio-CNG or bio-LNG) for hard-to-electrify transport applications such as long-haul heavy-duty trucks. From a generation perspective, biomethane is a valuable drop-in substitute for natural gas in terms of grid injection for decarbonizing residential and commercial heat applications.

The attractiveness of these offtake segments varies across countries in the EU. While Germany places a strong emphasis on decarbonizing the transport sector, the Netherlands leans more towards the role of biomethane in district heating.

Beyond these offtake streams, new opportunities are emerging. Of particular importance is the potential for biogenic CO² (byproduct during the upgrade of biogas to biomethane) in the production of e-fuels and SAF.

The European biomethane market is currently experiencing pricing disparities driven by differing national regulations and subsidy systems. Notably, the price for biomethane guarantees of origin (GO) is ~1-2 EUR/MWh in France, compared to ~10 EUR/MWh in the Netherlands and Denmark. The lack of Standardized regulations currently impedes cross-border biomethane trade in Europe. However, there is a clear desire to move towards harmonization via a European biomethane trading system involving certification schemes such as EU UDB (Union Database for Biofuels), ERGaR (European Renewable Gas Registry). Bilateral trading agreements between countries such as Austria, Denmark, Germany, and the UK are also under consideration.

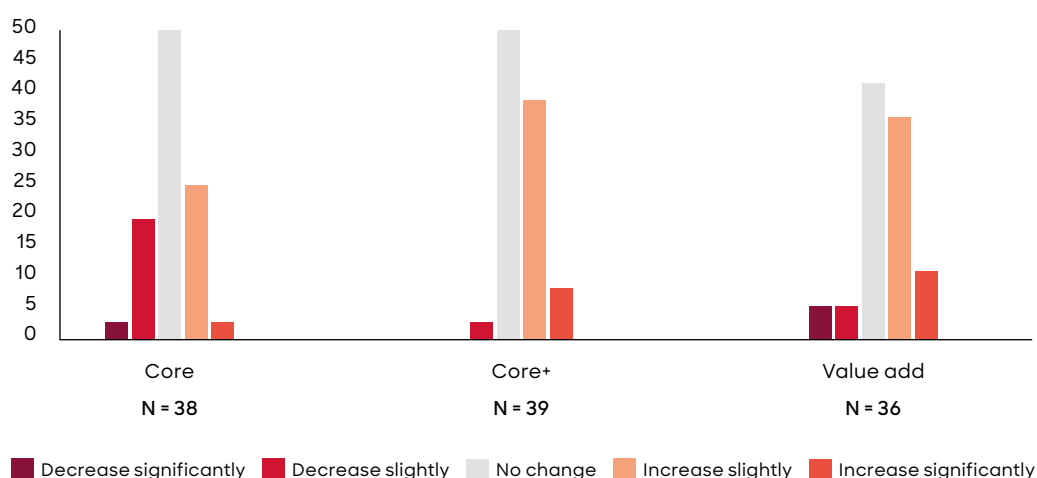
As the secular tailwinds of Energy Transition and decarbonization gain further momentum spurred by national targets and NDCs, we envisage the Energy sector to remain a favorite with investors.

3.2 Utilities

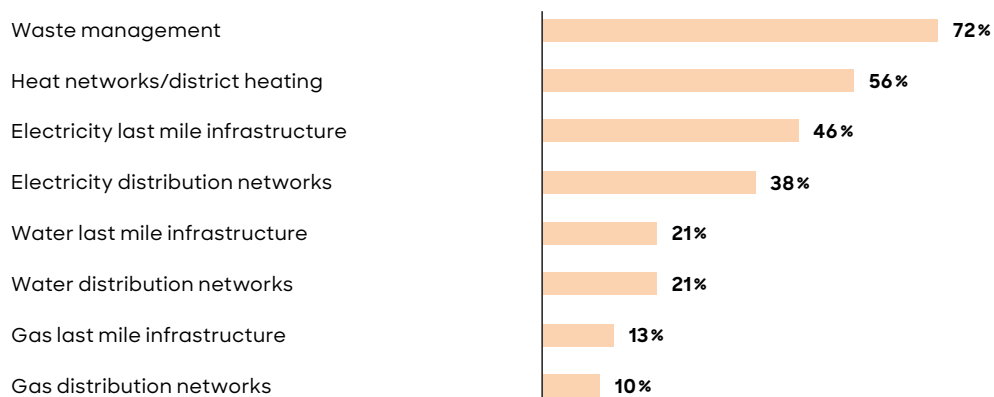
Investment in global utilities, perhaps one of the most mature core infrastructure asset classes, is facing material change due to the weakening fiscal positions in the OECD and the demands of energy transition. This is depressing deal volume, particularly for large deals but simultaneously creating new Core+ opportunities. ► **Figure 12**

12 Biomethane deep dive – survey results

Relative focus by asset type – 2024 vs. 2023 [% of respondents]



Most attractive assets within utilities infrastructure (N=39) [% of respondents]



Waste management continues to be the most attractive segment within utilities

District heating networks are gaining prominence as high energy prices drive the push for efficiency

Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Some of the early-mover markets like the UK are seeing a step change in risk associated with Utilities infrastructure. Gradually growing populations, historical regulatory underinvestment, early impacts of climate change, falling living standards, and rising interest rates are conspiring to distress water utilities at a time when demands for investment in pollution reductions are at an all-time high. Waste management businesses are mulling the gradual emergence of carbon pricing. Gas distribution utilities are facing the dual headwinds of reducing heat loads and increasing electrification, the latter providing a strong tailwind for electricity DSOs. None of this change is necessarily conducive to a market for which extreme predictability has attracted some of the lowest hurdle-rate investment in the world.

Where this change is, however, producing a growing investment thesis is in utility-adjacent sectors; this is clearly visible in our survey in the anticipated growth of smaller Core+ deal flow. An example of this is in private networks and other last mile infrastructure.

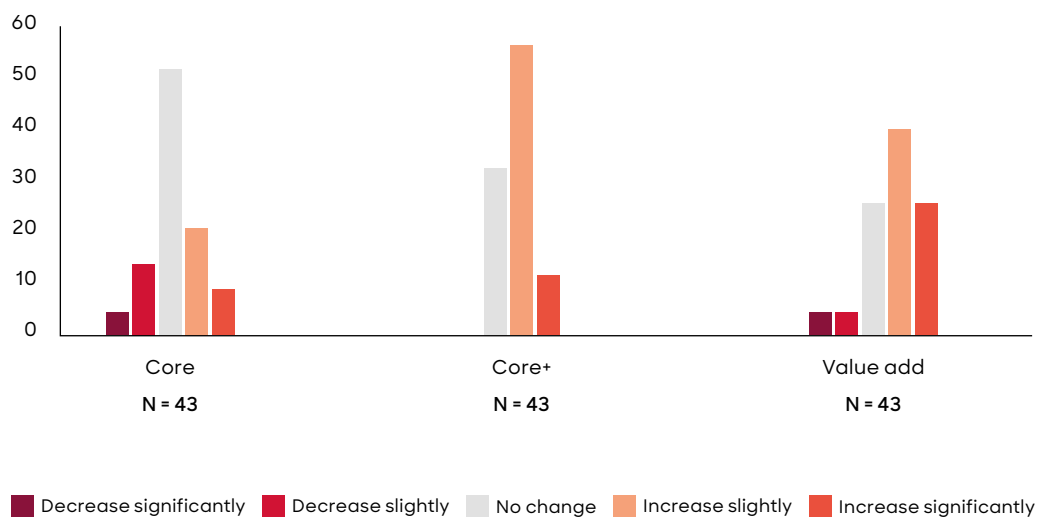
Providers of non-regulated or part-regulated last mile electrical networks, the UK incarnation of which are iDNOs, are enjoying a period of great promise. These players, many of which also provide other multi-utility gas and water offers, were introduced to bring price competition to the DNO market around twenty years ago and have been a relatively quiet backwater for investment. Today, with encouragement from demand for new housing and, particularly, from EV charging infrastructure markets, they are facing some areas of non-linear growth. These markets are hungry for capital, and, with the potential to access adjacent energy transition themes like solar and heat pumps if emerging business models can be proven, can point to strong upsides. We expect investment opportunities of this kind to be of great interest going forward. Some of these have already been prominent in the last twelve months.

3.3 Transport

Investors' appetite for Transport infrastructure waned in 2023. Deal count was down ~50% on the annual average over the previous five-year period. However, there is a more positive outlook on the sector for 2024, with increasing interest in Core+ and Value-add strategies. This is supported by volume performance surpassing pre-Covid levels for some assets in key transport sub-sectors such as airports, car parks, and ports. ► **Figure 13**

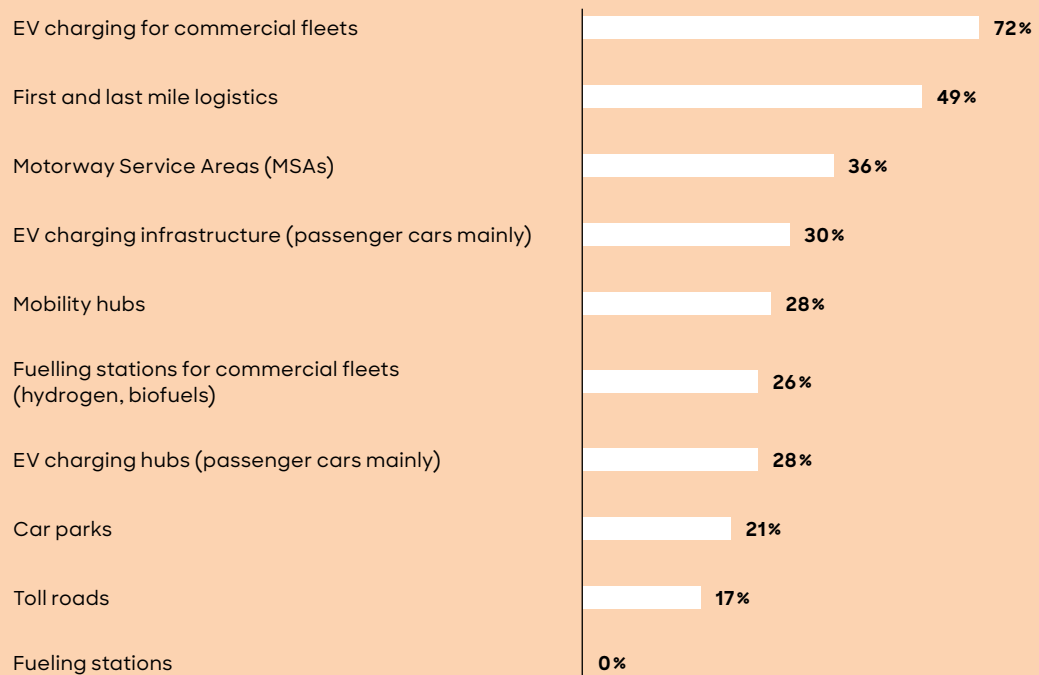
13 Transport infrastructure – survey results

Relative focus by asset type – 2024 vs. 2023 [% of respondents]



Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Most attractive assets within transportation infrastructure (N=47) [% of respondents]



Electrification of commercial fleets continues to be seen as the "next big thing" in transportation investment

Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Electrification remains a driving force

Electric mobility continues to transform the landscape of Transport infrastructure. While headwinds to electrification of the vehicle parc (politicizing including sales ban delays, challenging macroeconomic conditions, supply side disruptions, variable corporate strategy focus, etc.) have presented themselves in recent months, electrification of commercial fleets continues to be a key next topic. With advancements in EV technology, charging infrastructure, and more favorable cost of ownership, widespread adoption of EVs in fleets draws ever closer. Specifically in HGV charging, depot storage/charging infrastructure and fuelling/charging network assets appeal to investors, albeit with concerns over utilization risk, technology risk, and margin pressure, in what is still a very nascent market. Other focus topics include first- and last-mile logistics, and infrastructure on major road routes (e.g., motorway service areas, charging and mobility hubs).

Decarbonizing transport is not solely about electrification. Other lower-carbon solutions such as biofuels and biogas present accessible alternatives, especially in heavy-duty road vehicles, while the outlook remains positive for sustainable aviation fuels and greener marine fuels, which will require associated infrastructure, equipment, and services. Across the board in Transport infrastructure, including traditional sub-sectors such as rail, buses, and ferries, companies with a clear plan to decarbonize their fleets and operations are being favored, especially if they can demonstrate first mover advantage or signals of being an early winner, as seen in the Nordic ferry market (e.g., Norled, Fjord1) and bus market (e.g. Umove).

EV charging

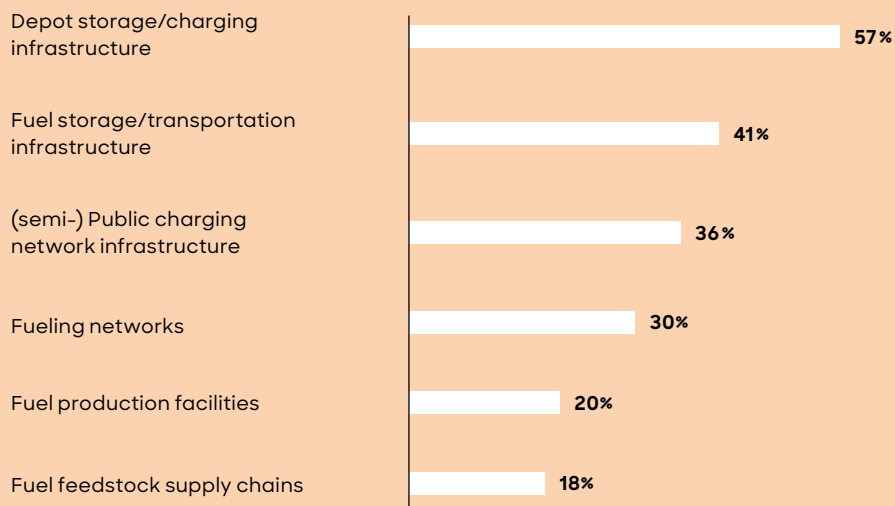
Notable investments in EV charge point operators and electrification solution providers included Zenobē (KKR), Electrip (Wren House), WattEV (Apollo), Wattif (Marguerite), and Elaway (SUSI). These assets span transit buses to passenger cars, rapid to slow charging across public, depot and residential use cases, and both North America and Europe. Clearly, investors are exploring different angles of a fast-growing opportunity in EV charging provision.

Clean fuelling networks

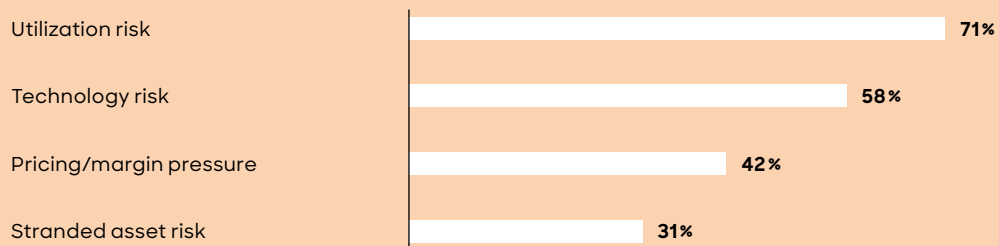
While BEVs look increasingly certain to be the solution to Decarbonizing segments of the commercial vehicle landscape, in areas such as long-haul heavy goods transport, liquid fuels (biodiesel, biogas, hydrogen) provide a more pragmatic solution to some operators for at least an interim period (if not permanently in particularly-difficult-to-electrify segments). Networks for such fuels will require dedicated infrastructure (though with some overlap in equipment and required capabilities with traditional fuel stations) and the fact that many of the users of such networks will be vehicle fleet operators will give a degree of revenue visibility through B2B contracts (be it direct or via fuel card companies) on top of upsides from renewable transport fuel certificates.

14 HGV decarbonization deep dive – survey results

Most appealing assets in HGV decarbonization (N=44) [% of respondents]



Key concerns regarding investing in HGV decarbonization (N=45) [% of respondents]



Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Zoom in: HGV decarbonization

As decarbonization of passenger cars takes its place firmly within the scope for infrastructure investors, many are starting to think about the “next big thing” in transportation – these conversations often revolve around HGV decarbonization.

There are over 6.5 million medium and heavy-duty vehicles (commercial vehicles over 3.5t) in circulation in the EU and UK – a substantial number that is further amplified in terms of emissions share by the fact that heavy-duty vehicles tend to be heavily utilized and are significantly more carbon-intensive than smaller passenger cars (HGVs are 20x more polluting than passenger cars on a per vehicle basis). After accounting for these amplifying factors – HGVs produce around a quarter of all road transport CO₂ emissions across the EU and UK, making their decarbonization a crucial step in reaching Europe’s overarching climate goals. In recognition of this fact, governments across Europe have introduced legislation to drive HGV decarbonization that often mimics the legislation present for passenger cars, albeit with a lag given the lower level of technological maturity for zero-emission HGVs. In the EU, a recently proposed policy update is likely to establish a target of reducing HGV emissions by 45% by 2030, 65% by 2035 and 90% by 2040 (over 2019 levels).

EU HGV emissions reduction targets

45 %
by 2030

65 %
by 2035

90 %
by 2040

In the UK, as part of the Government's Transport Decarbonization plan, the sale of HGVs which emit carbon dioxide and other noxious gases at the tailpipe will be banned after 2040 (and after 2035 for vehicles smaller than or equal to 26t). Alongside policy targets and sales restrictions, governments are introducing financial incentives for decarbonization in the form of subsidies, investment commitments, and tax breaks – for example, the French government is introducing a bonus that could cover up to ~20% of the purchase or long-term leasing cost of a zero emission HGV, with similar grants being introduced in the UK.

There are only a handful of ways through which the road freight transportation industry can reach these targets, with battery electric and fuel cell being the only solutions that effectively reduce local air pollution. Biofuels offer an attractive alternative to truck operators but are likely to suffer from significant competition for feedstocks with other biomass applications, and Power-to-Liquid fuels are likely to continue to be cost prohibitive for road transportation. At the same time, major HGV OEMs are investing R&D capital into zero emission (battery electric and hydrogen fuel cell) truck development, and many are announcing ambitions to transition their offering to a fully zero emission one by 2035, suggesting both battery electric and hydrogen FC trucks are likely to take a significant share of the market in the long term, with biofuels playing a bridging technology role in the shorter term.

This creates significant opportunities for infrastructure investments, in both electric charging for HGVs and hydrogen infrastructure, with early projections suggesting that over 250,000 depot and on road electric charging points for HGVs will need to be rolled out as soon as by 2030, alongside upwards of ~2,000 hydrogen refuelling stations. Investors clearly realize the magnitude of the opportunity, with 57% of the survey respondents identifying EV charging for commercial fleets as one of the most attractive asset classes in transportation. Within HGV infrastructure specifically, depot and fuel storage / transportation infrastructure are the most popular, with (semi-) public infrastructure following closely. Concerns, such as technological uncertainty (e.g., need for 600 kW+ high-power charging to charge trucks during driver rest breaks) and future utilization risk are likely to dampen the appetite of investors in the immediate future, however as technology matures and innovative financing models (e.g., Zenobe Battery on the eBus, electric transport as a service) take shape to reflect the additional capex and technological risks faced by fleet operators, we will undoubtedly see infrastructure investors come into the market.

3.4 Digital infrastructure

For the five years preceding 2023, we witnessed phenomenal growth in Digital infrastructure investment. Both in terms of deal count and value, Digital infrastructure consistently grew its share of the total infrastructure investment space.

Over this period, traditional private equity was crowded out by infrastructure funds as IRRs fell to single digits and the penchant for minority deals grew.

The three core digital asset classes – towers, data centers, and fibre – all tend to exhibit traditional infrastructure characteristics of essential services to the economy, high capex and barriers to entry, limited competition within a geographic catchment, sticky customers, and/or long-term contracts. One key driver of historical M&A activity has been the de-verticalization of traditional telcos – carving out towers, disposing of data centers, and formalization of netco/servco models with new infrastructure financing for the netco. These types of deals have largely dried out over the past 18 months as interest rates rose.

The slowdown in growth that started in 2022 worsened in 2023 as deal count declined by 30 % and average deal size almost halved y-o-y.

Apart from refinancing, there was very little deal activity in 2023 in the fibre sub-sector for two main reasons: (i) there is increasing evidence that fibre/broadband prices have not kept pace with inflation, and (ii) there are concerns in several key geographies regarding “over-build” risk along with lower-than-expected take-up related to local fibre specifically.

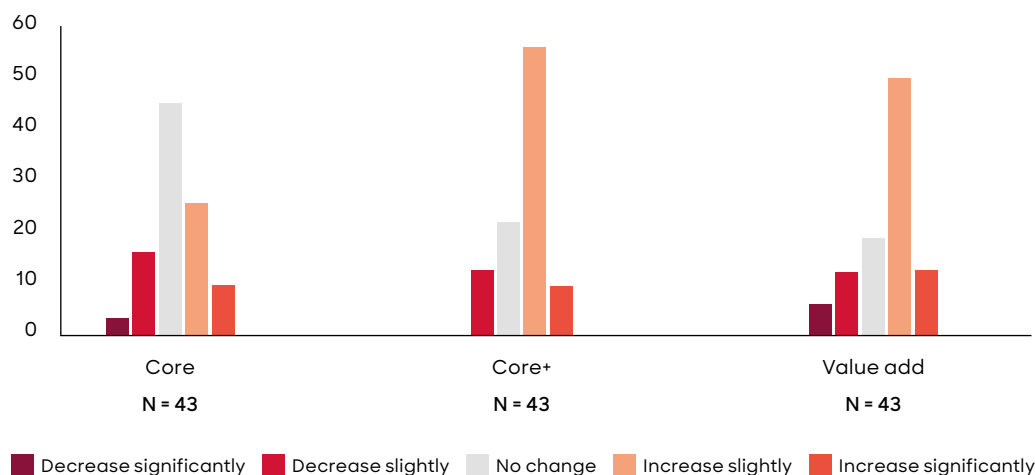
Likewise, tower deals in 2023 were largely skewed to minority towerco deals rather than new asset deals.

Therefore, although global deal volumes were down y-o-y, they continued to increase in Europe, with data centers still representing a focus for many infrastructure investors in 2023. With global data consumption growth not abating and customer contracts which are largely immune to inflation, many investors continue to see this sub-sector as relatively attractive. There are two further factors which are driving investment interest in data centers: (i) edge computing is becoming more of a reality; and (ii) the hype that is Gen-AI is driving real incremental growth in data consumption and, along with this, investment requirements in underlying associated infrastructure.

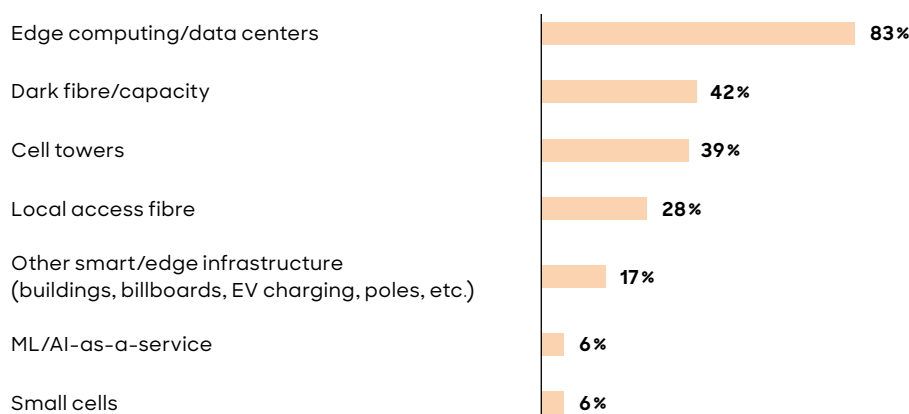
Demand for high performance computing associated with AI/ML requires more power-intensive GPUs, such as those of Nvidia. Estimates suggest that an extra 2,000 to 2,500 MW of IT load could be needed to meet the demand for AI workloads based on Nvidia's forecast to ship up to 2.5 million H100 / H200 chips in 2024 (up from c.500k in 2023).

15 Digital infrastructure – survey results

Relative focus by asset type – 2024 vs. 2023 [% of respondents]



Most attractive assets within digital infrastructure (N = 36) [% of respondents]



Edge computing continues to be viewed as the most attractive sector, with investors expecting increases in data consumption and public cloud demand

Source: Roland Berger Infrastructure Investment Outlook Survey 2024

According to our survey, Digital infrastructure investors are among the most optimistic in terms of deal activity for 2024. A majority of investors are expecting a tale of two halves – with caution still prevailing in H'1 but activity picking up in H'2 on the back of anticipated interest rate reductions (albeit modest) and associated debt financing costs.

For the above stated reasons, data centers and edge computing are expected to remain the dominant focus for investors in 2024.

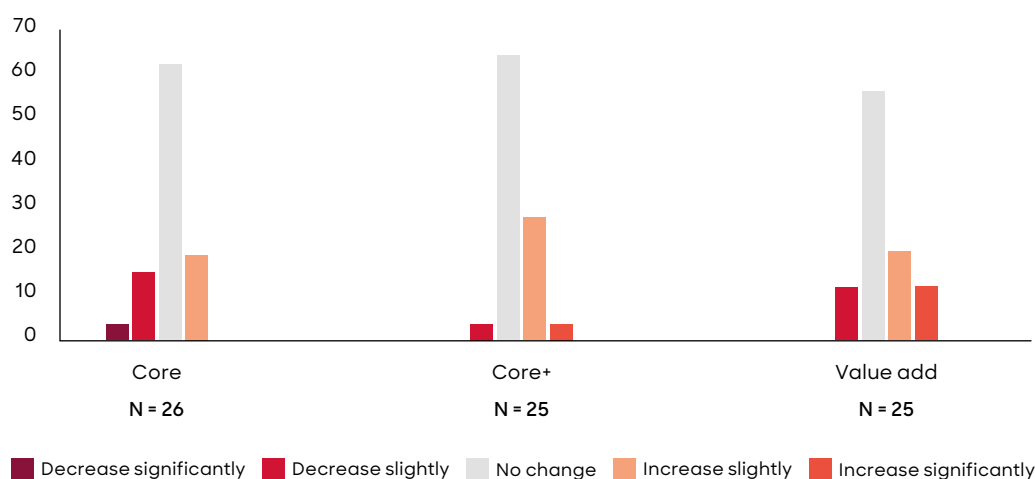
3.5 Social infrastructure

Traditional social infrastructure assets have fallen out of favor with investors. Recent deal flow is below historical levels, in both value and volume terms (noting that historical data often includes separate portfolio assets (e.g., hospitals in a chain) as multiple transactions, driving high deal count in 2016/17). The decline over 2022-23 was the sharpest across the asset classes we cover. Furthermore, the outlook is still less positive than that for the other sectors, with more than 60% of survey respondents expecting deal count to remain stable or decline through 2024 y-o-y. Sentiment is marginally worse in education than healthcare, with 73% of survey respondents expecting a stagnation or slowdown in education deals, vs. 63% in healthcare.

Our survey highlights a number of Core+ and Value-add strategies catching the eyes of investors. In healthcare, diagnostics labs, healthcare equipment leasing services, and care homes are seen as the most attractive asset classes, and early education/nursery assets standing out in education. While in healthcare this is in line with our findings from our 2023 report, in the education sector the focus has shifted away from primary and secondary schools and focused more strongly on early education/nursery assets.

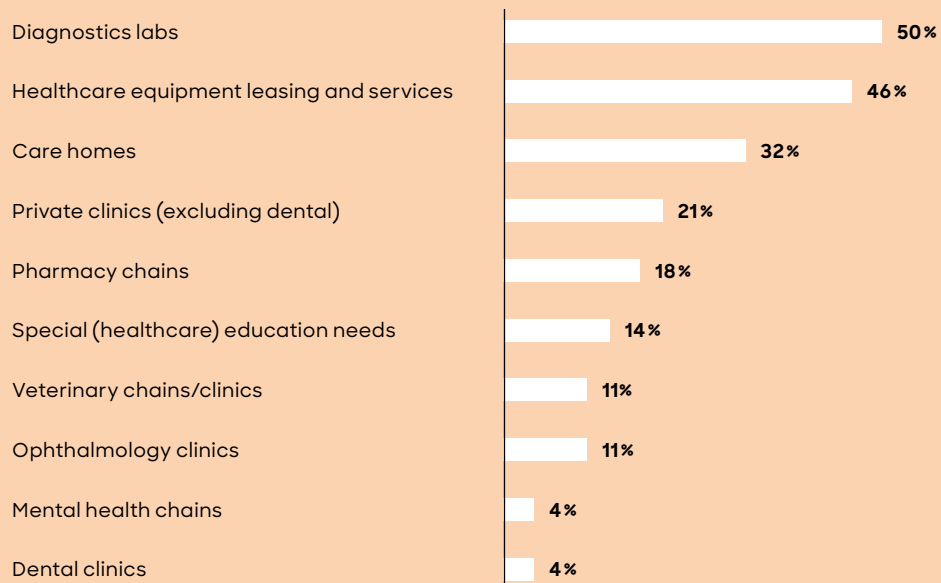
16 Social infrastructure – survey results

Relative focus by asset type – 2024 vs. 2023 [% of respondents]

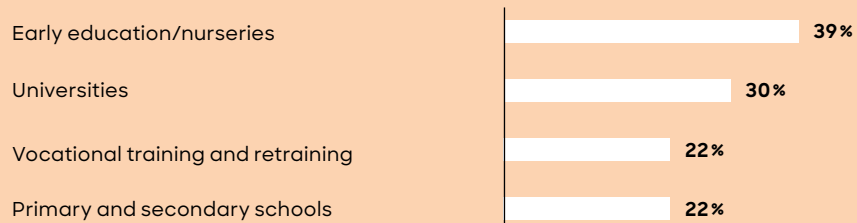


Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Most attractive assets within healthcare infrastructure (N=28) [% of respondents]



Most attractive assets within education infrastructure (N=23) [% of respondents]



Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Zoom in: Healthcare

As many Western economies slow down or even enter recession, segments with high resilience may increase in priority for investors. Healthcare is one such sector where spending is typically ringfenced during downturns.

Furthermore, COVID-19 demonstrated the long-term implications of chronic underinvestment in healthcare systems, meaning spending is likely to be further protected. Overall, this could provide a positive area for investor interest, with certain pockets poised to benefit from these macro-trends.

Diagnostic labs are emerging in importance as many European hospitals have insufficient imaging capabilities to support the medical needs of patients and the requirements of doctors. As an asset class diagnostic labs have a good fit with infrastructure fund portfolios, given the essential role that outsourced labs are increasingly taking in healthcare systems, and strong long-term outlook given the increasing prevalence of chronic diseases and increasing emphasis on preventative medicine.

The diagnostic lab market is highly fragmented. Many investors are seeing opportunities for buy and build to accelerate growth at either a national or regional level. Recent acquisitions of Excellence Imagerie by Antin Infrastructure Partners and Alliance Medical by Icon Infrastructure are cases in point.

Healthcare equipment leasing and services are a growing offering, as primary care facilities look to defray capital expenditures during times of significant budget pressure. This business model has been seen across all capital equipment, with imaging equipment, orthopaedics/prosthetics, and endoscopy apparatus as the most common topics. The model is a good fit for infrastructure funds given the high cashflow security and visibility from inflation-linked long-term contracts, and limited exposure to clinical risk (given separation of the operator and lessor).

Care homes are often seen as a way of accessing the megatrends of an aging population with increasing prevalence of chronic diseases, with >30% of respondents identifying them among the most attractive assets. However, the sector is still recovering from a string of crises, most notably COVID-19 (reducing occupancy and leading to operational challenges) and rising interest rates leading to a challenging funding environment. This has seen appetite reduce significantly, with the acquisition of Orpea by a consortium led by CDC the only major transaction in 2023.

Private clinics and specialized clinics (particularly mental health and dental clinics) are once again seen as less interesting to infrastructure funds in 2024, as their relatively high levels of clinical risk lead to lower cashflow security vs. other healthcare assets.

3.6 Hybrid infrastructure

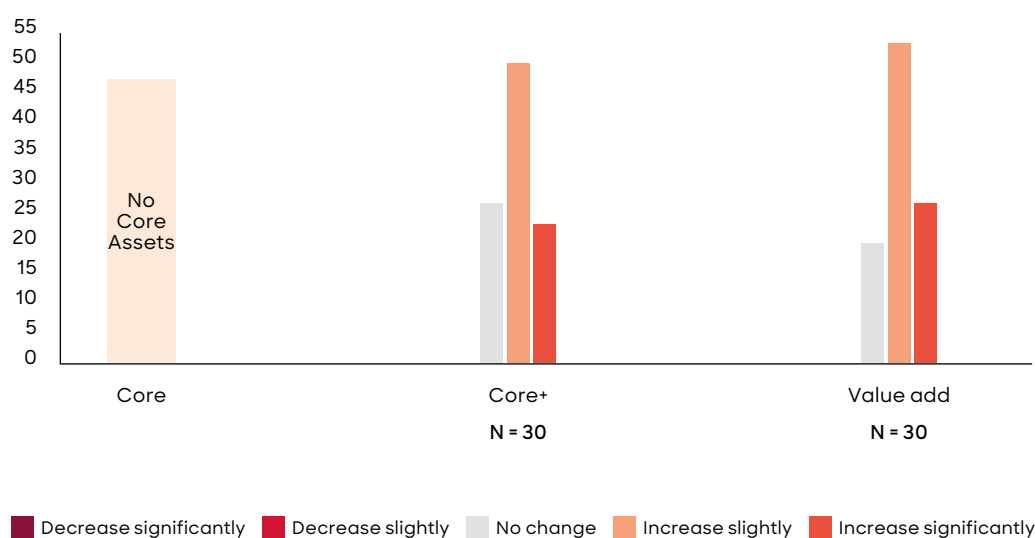
Definition: new assets that do not belong to one of the traditional infrastructure sectors, but where the business model or underlying sector exposure qualifies them as meeting many of the infrastructure asset test criteria.

Every year, new asset types are brought into the fold by infrastructure investors, broadening the definition of the infrastructure universe. Most of these assets do not meet the full range of traditional infrastructure test criteria, necessitating trade-offs for investment committees to get comfortable with the infrastructure investment thesis. De-risking the business during the holding period is of critical importance for value creation and exit positioning.

With such infra-like hybrid assets, investors must get comfortable with shorter contracts (typically 1-3 years), the relatively asset-light business model and a lack of explicit downside protection. Typically, investors gain conviction through the recurring nature of the use case (examples include HVAC equipment rental businesses such as Coolworld), the business's strong customer relationships characterized by low churn (examples include modular unit leasing players such as Portakabin), and the mission critical nature of the solution by combining the asset base with a strong service wrapper (examples include commercial vehicle rental/leasing solution providers such as Fraikin and Petit Forrester).

17 Hybrid infrastructure – survey results

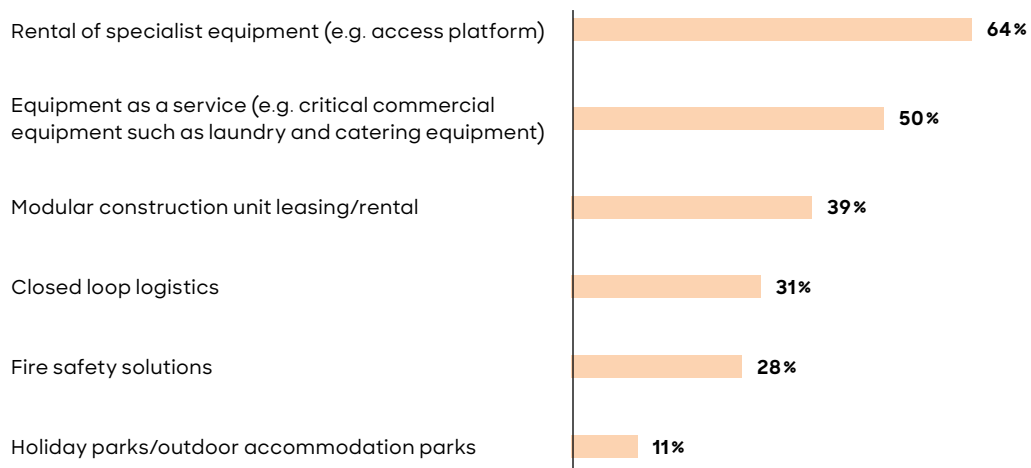
Relative focus by asset type - 2024 vs. 2023 [% of respondents]



Source: Roland Berger Infrastructure Investment Outlook Survey 2024

17 Hybrid infrastructure – survey results (continued)

Most attractive assets within hybrid infrastructure (N=34) [% of respondents]



Source: Roland Berger Infrastructure Investment Outlook Survey 2024

Our survey highlights that this is a segment that is continuing to receive increasing interest, with 70% of respondents expecting the deal count to increase in 2024. With specialist equipment rental, equipment-as-a-service and modular unit leasing/rental topping the list of most attractive asset types.

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