

Global Infrastructure Supercycle

A Multi Decade Capital Gap

McKinsey estimates that a cumulative \$106 trillion in investment will be necessary through 2040 to meet the need for new and updated infrastructure. The required investment

spans seven critical infrastructure verticals, with transport and logistics requiring the largest share (\$36 trillion), followed by energy and power (\$23 trillion), digital (\$19 trillion), social (\$16 trillion), waste and water infrastructure (\$6 trillion), agriculture (\$5 trillion), and defense (\$2 trillion).^[1]

A confluence of global forces is accelerating the need for infrastructure investment. Outdated assets, rapid urbanization, geopolitical shifts, and technological advancements are exposing the limitations of yesterday's infrastructure.

At the same time, the boundaries between infrastructure verticals are blurring. Many of today's most critical needs—such as infrastructure to support the deployment of artificial intelligence and the energy transition—exist at the intersections of the verticals. This report explores these intersections in depth and reveals why a siloed approach to infrastructure planning and investment may no longer be viable. Governments, investors, and operators will want to reflect on these interconnections and pursue integrated strategies that best deliver the mix of infrastructure that society needs to prosper.

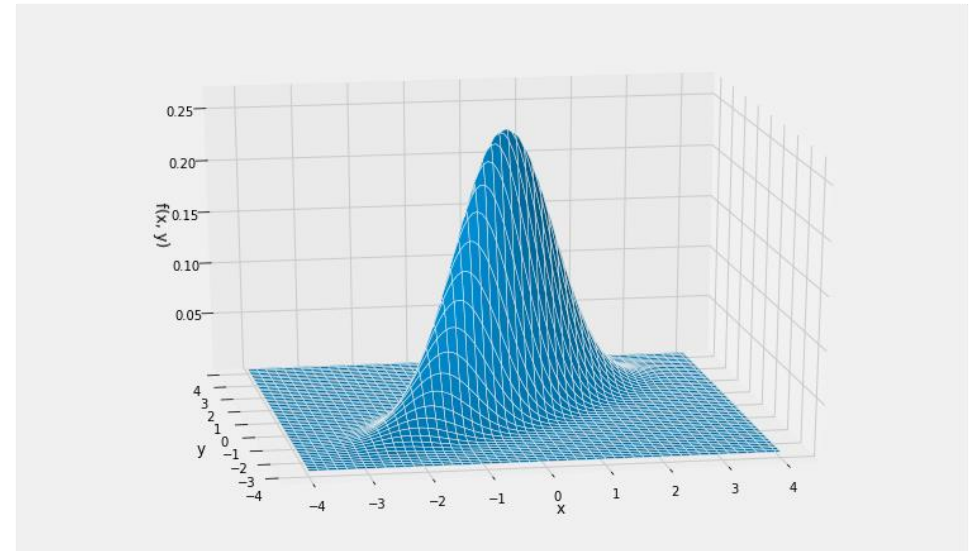
Private capital is playing an increasingly important role in delivering infrastructure that sits at these intersections and within verticals. Private infrastructure assets under management surged from about \$500 billion in 2016 to \$1.5 trillion in 2024, reflecting its new position as the most desired asset class for increased investment. Investments will focus within and at the intersection of seven critical verticals, which this report explores in depth: energy, power, and resources; transportation and logistics; agriculture; digital and communications; waste and water; social; and defense.

To mobilize capital at the required scale, stakeholders can adopt clear, practical, and novel strategies. Policymakers can consider meeting the moment and strategically prioritizing verticals by creating frameworks to attract private capital, streamlining regulatory processes and repurposing underused assets. Investors can broaden their scope by embracing cross-vertical plays and thematic investment opportunities while considering new financing structures that align with long-term asset performance. Finally, infrastructure operators should strive for efficiency gains and improved asset resilience by integrating technology solutions.

The next decade will be a defining one for global infrastructure. Those who act decisively today will shape the future of connectivity, economic growth, and societal well-being for generations to come.

Source - McKinsey The infrastructure Moment, September 9, 2025

- *\$106T of infrastructure investment needed by 2040, current private capital (\$1.5T) is nowhere close.*
- *Critical infrastructure systems are converging (AI, energy transition, logistics), but financing frameworks remain siloed.*
- *Novel, cross vertical financing models are required, traditional categories can't mobilize capital at required scale.*



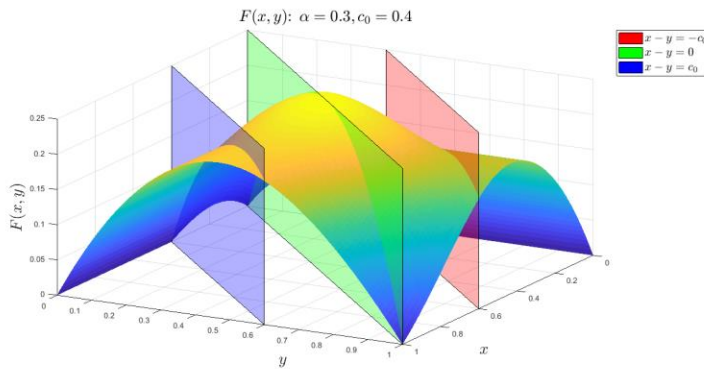
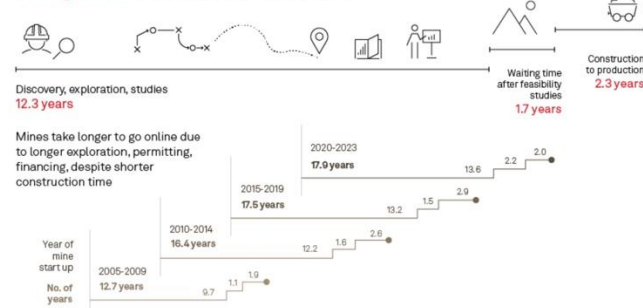
As infrastructure verticals converge, their risk surfaces correlate but financing systems remain siloed.

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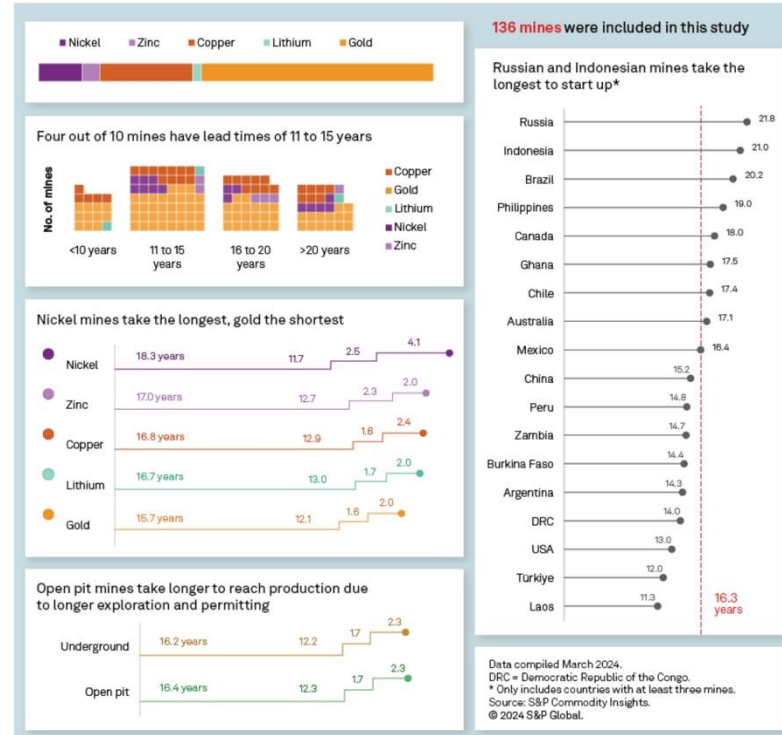
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Bottleneck Architecture Where Value Actually Forms

Mines take an average of
16.3 years from discovery to production



Infrastructure and resource development behaves like a constrained multi variable system through capacity, time, permitting, capital availability, and geopolitical friction define the feasible region. Traditional frameworks don't model these interactions.



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- Multi decade development cycles create structural scarcity
 - Average 16.3 year timelines from discovery to production constrain supply across critical materials.
- \$106T required vs. \$1.5T private AUM, misaligned frameworks
 - The gap isn't capital but lack of models to allocate effectively across intersecting infrastructure needs.
- Cross vertical constraints behave like a multi-variable optimization problem
 - AI, energy transition, logistics, water, and minerals now interact as a constrained system requiring new frameworks.

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Positioning for a Multi Decade Cycle

The Cycle

- Long cycle industrial renewal
- Resource nationalism & reshoring
- Energy transition metals
- Global south industrialization
- Logistics and corridor buildout
- Upstream scarcity premium increasing

Strategic Positioning Principles

- Higher value accrues upstream as disruption accelerates.
- Diversification must occur across bottleneck nodes.
- Exposure must be cycle adaptive and jurisdiction aware.
- Value forms in pre-yield stages, yield is the lagging attribute.
- Pricing power concentrates where throughput is constrained.

Industrial super cycles emerge when long cycle supply cannot match demand acceleration.



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