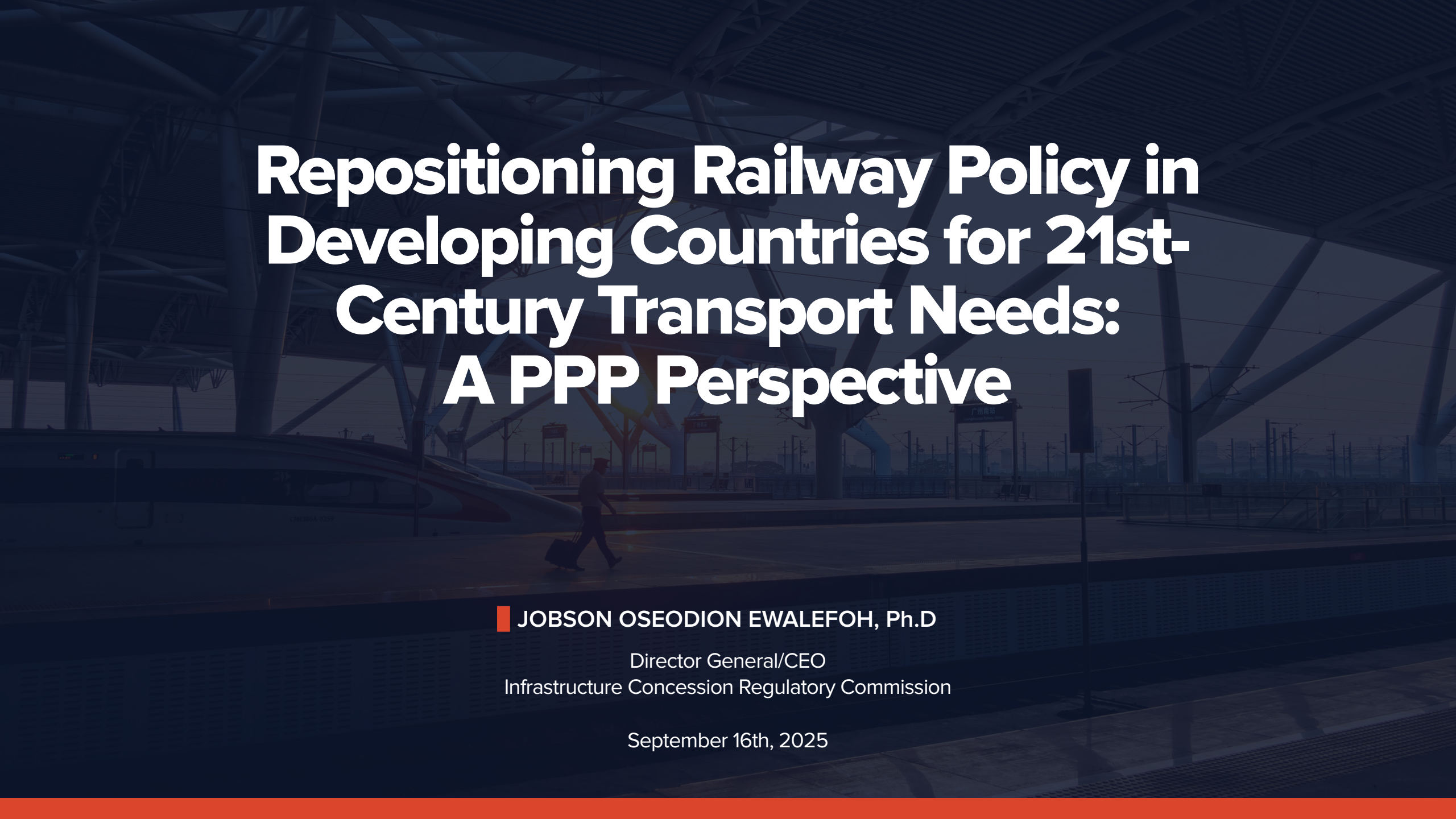




Repositioning Railway Policy in Developing Countries for 21st-Century Transport Needs: A PPP Perspective

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Do you know?



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Nigeria needs about
US\$2.3 trillion



to close its investment gap between
2020 & 2043

This requires an
average annual
investment of
**US\$100
billion.**

The largest investment needs are in the



Energy Sector
US\$759 billion

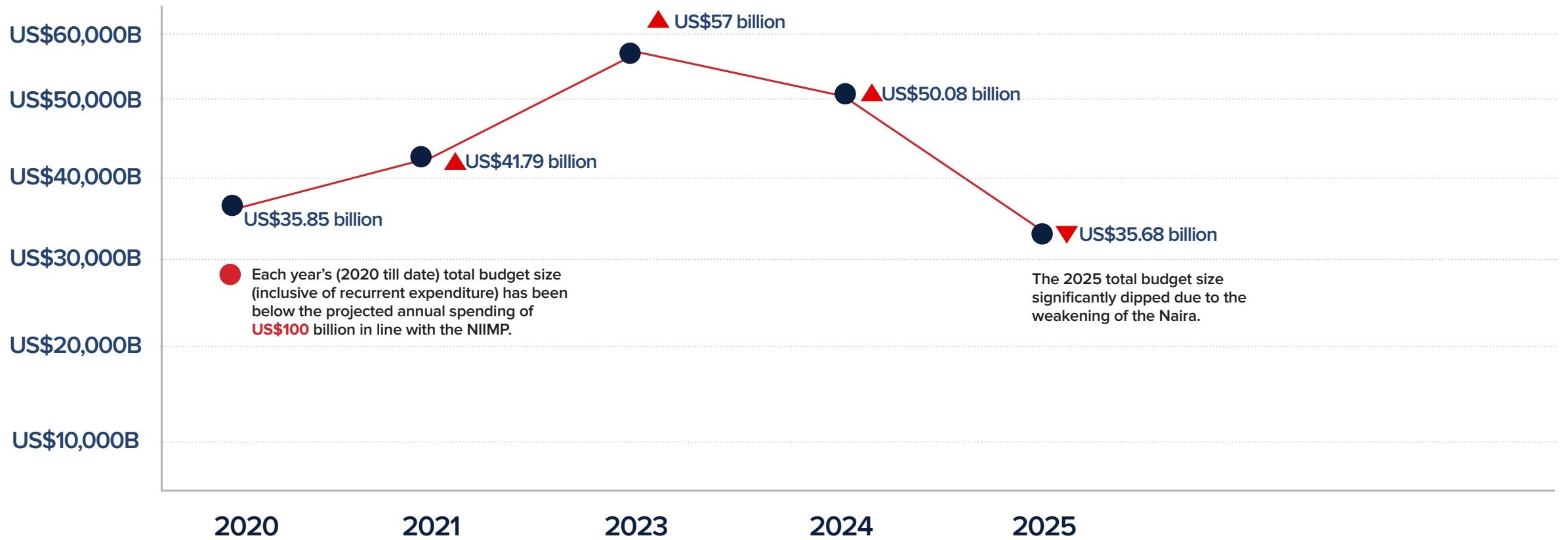


Transport Sector
US\$575 billion

> 50%

of the required
infrastructure
investments
over **2020 - 2043**





To bridge this gap, public funding alone cannot sustainably close the infrastructure gap. Public-Private Partnership (PPP) models offer an opportunity to mobilize private capital, technology, and efficiency while safeguarding public infrastructure.

1. Introduction

Railways in many developing countries remain underutilized despite their potential to lower logistics costs, foster regional integration, and reduce carbon emissions. While roads dominate transport systems, overreliance on trucking and buses has led to congestion, environmental degradation, and rising logistics costs.

Nigeria's railway sector is at a crossroads. Once the backbone of freight and passenger mobility, decades of neglect, underfunding, and institutional inefficiency eroded its role in the national transport system. Recent reforms — standard-gauge construction, urban rail projects, and constitutional amendments decentralizing railway operations — present an opportunity to reposition the sector for 21st-century transport needs.

- **Historic decline:** The colonial-era railway network once dominated long-distance travel and freight but was undermined by inadequate maintenance, poor governance, and competition from road transport.
- **Emerging opportunities:** Investments in standard-gauge lines (Abuja–Kaduna, Lagos–Ibadan, Kano–Maradi) and urban rail (Abuja, Lagos) demonstrate the potential to revive rail as a core transport mode.
- **Policy shifts:** The 2023 constitutional amendment and new Railway Act decentralize powers, enabling states and private operators to participate.
- **Strategic relevance:** Modern rail aligns with national priorities — industrialization, regional trade (AfCFTA), climate commitments, and urban mobility.



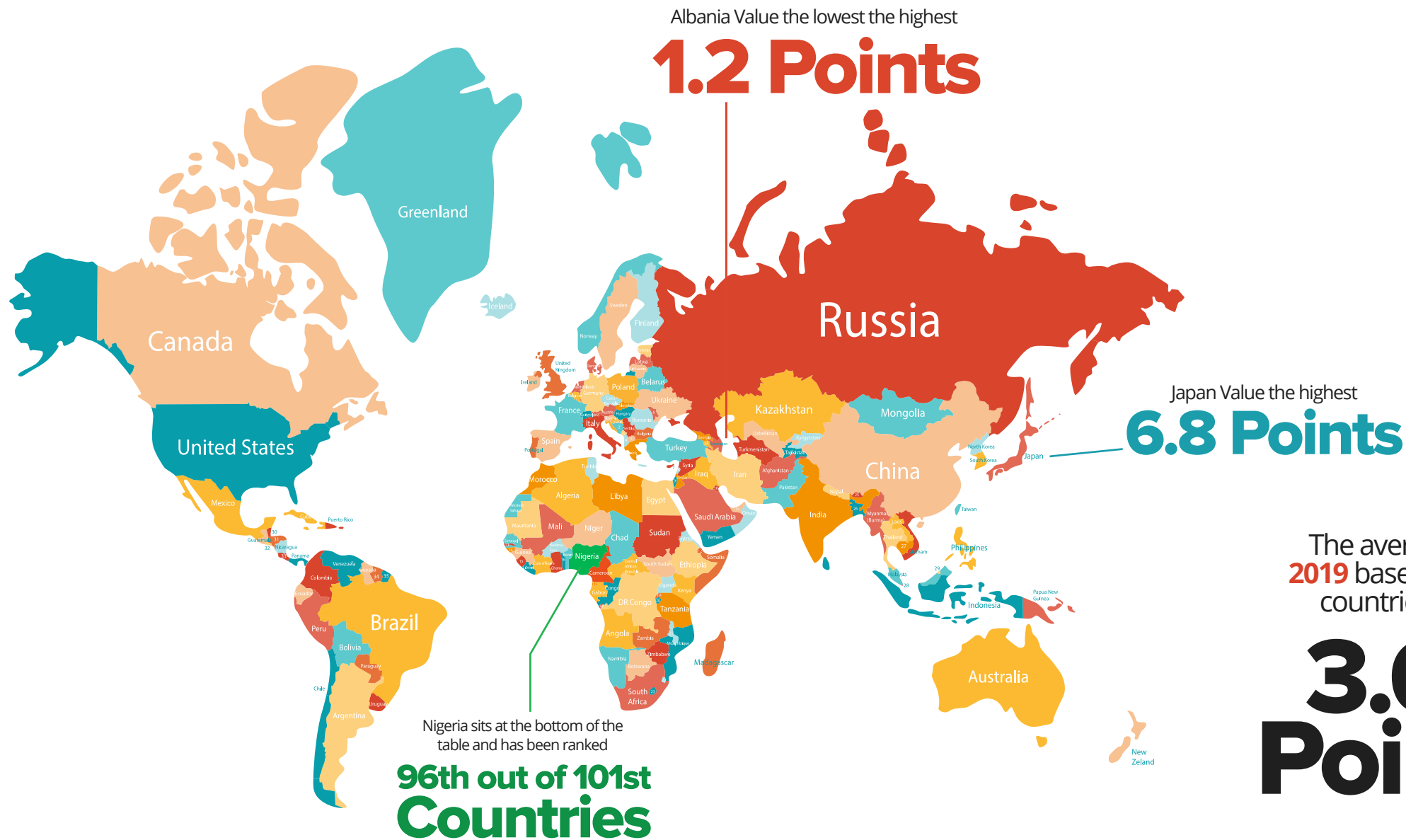
Abuja - Kaduna



Lagos - Ibadan



Kano - Maradi



Countries [▲] [▼]	Railroad infrastructure quality, 2019 [▲] [▼]	Global rank [▲] [▼]	Available data
Japan	6.8	1	2009 - 2019
Hong Kong	6.5	2	2009 - 2019
Switzerland	6.4	3	2009 - 2019
South Korea	5.9	4	2009 - 2019
Singapore	5.8	5	2009 - 2019
Netherlands	5.7	6	2009 - 2019
Finland	5.5	7	2009 - 2019
Spain	5.4	8	2009 - 2019
Taiwan	5.4	9	2009 - 2019
Austria	5.3	10	2009 - 2019
USA	5.2	11	2009 - 2019
Malaysia	5.1	12	2009 - 2019
France	5	13	2009 - 2019

Source: World Economic Forum

Mauritania	2.1	89	2009 - 2019
North Macedonia	2.1	90	2009 - 2019
Zambia	2.1	91	2009 - 2019
Madagascar	2	92	2009 - 2019
DR Congo	1.9	93	2016 - 2019
Ghana	1.9	94	2009 - 2019
Zimbabwe	1.9	95	2009 - 2019
Nigeria	1.8	96	2009 - 2019
Benin	1.7	97	2009 - 2019
Colombia	1.7	98	2009 - 2019
Venezuela	1.5	99	2009 - 2019
Albania	1.2	100	2009 - 2019
Uruguay	1.2	101	2009 - 2019

2. The 21st-Century Transport Context

First, the climate crisis has elevated railways as a critical low-carbon alternative to road and air transport. As countries commit to reducing their carbon footprints, electrified and energy-efficient rail systems have become indispensable.

Second, rapid urbanization is reshaping transport demand. With African cities projected to double in population by 2050, the pressure on urban mobility systems is unprecedented. Urban rail, light rail, and metro systems are no longer luxuries but necessities for functioning megacities.

Third, globalization and regional integration—particularly through frameworks like the African Continental Free Trade Area (AfCFTA)—have heightened the need for efficient freight corridors. Railways are uniquely suited to connect ports with inland markets, link industrial hubs across borders, and reduce the cost of trade.

Fourth, the digital revolution is transforming every dimension of transport. For railways, this means adopting smart technologies such as e-ticketing, automated scheduling, predictive maintenance, Internet of Things (IoT) sensors, and artificial intelligence-driven traffic management. These innovations not only improve efficiency and customer experience but also extend the lifespan of assets, reduce operational costs, and enhance decision-making in real time.

Fourthly, safety, security, and resilience have emerged as non-negotiable priorities. In an era defined by economic volatility, climate risks, and technological disruptions, railways must deliver services that are not only efficient but also reliable, safe, and adaptable.

In sum, the transport context of the 21st century demands that railways be more than just a means of mobility—they must be engines of sustainable development, pillars of regional integration, and symbols of resilience in the face of global challenges.

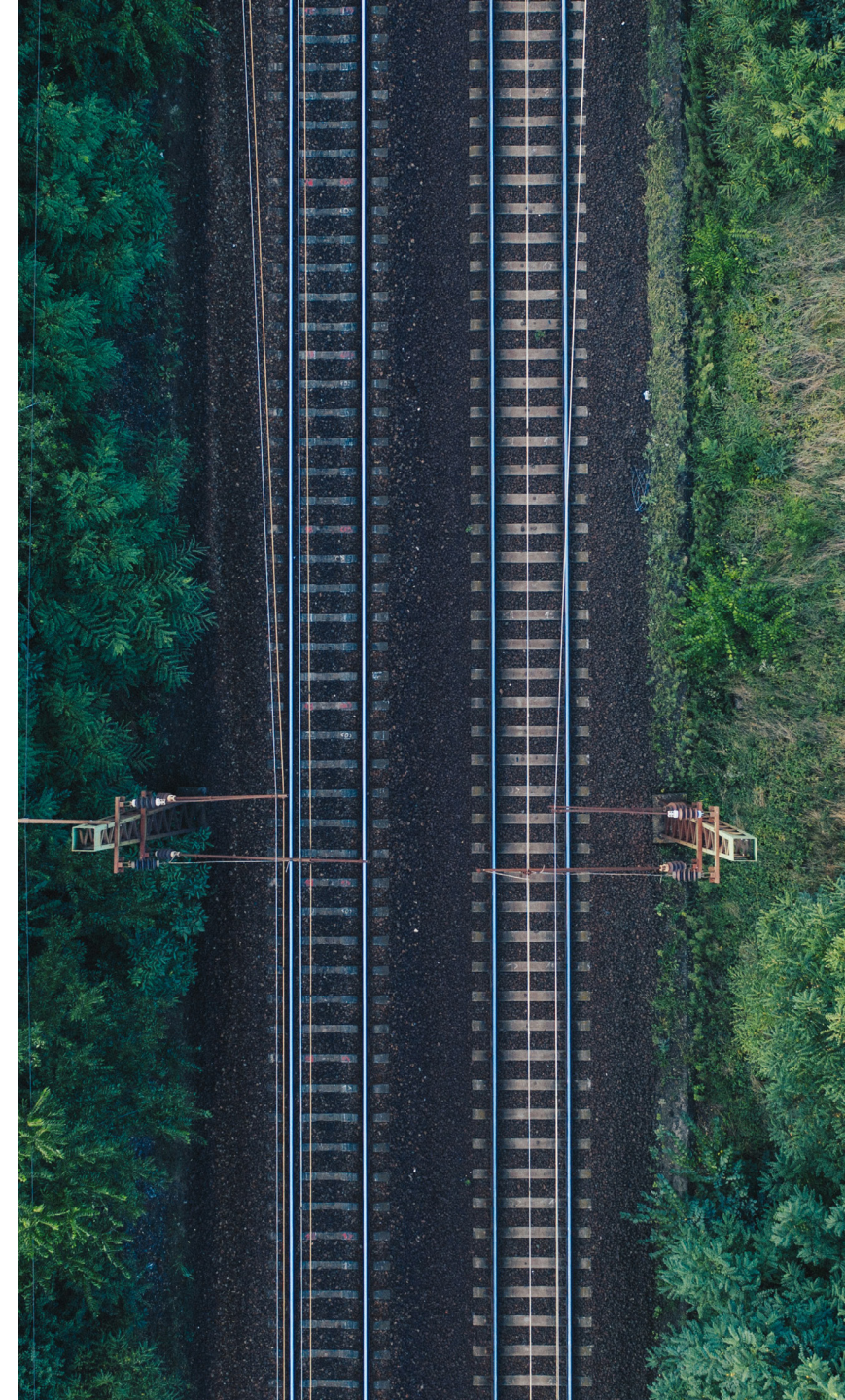


3. Modal shift to cleaner Rail transport

Only three countries—Italy, Slovenia, and France—allocated more than **50%** of their inland transport infrastructure investment to rail in the period 2021-2023. All other countries in the study invested more in road infrastructure than in rail.

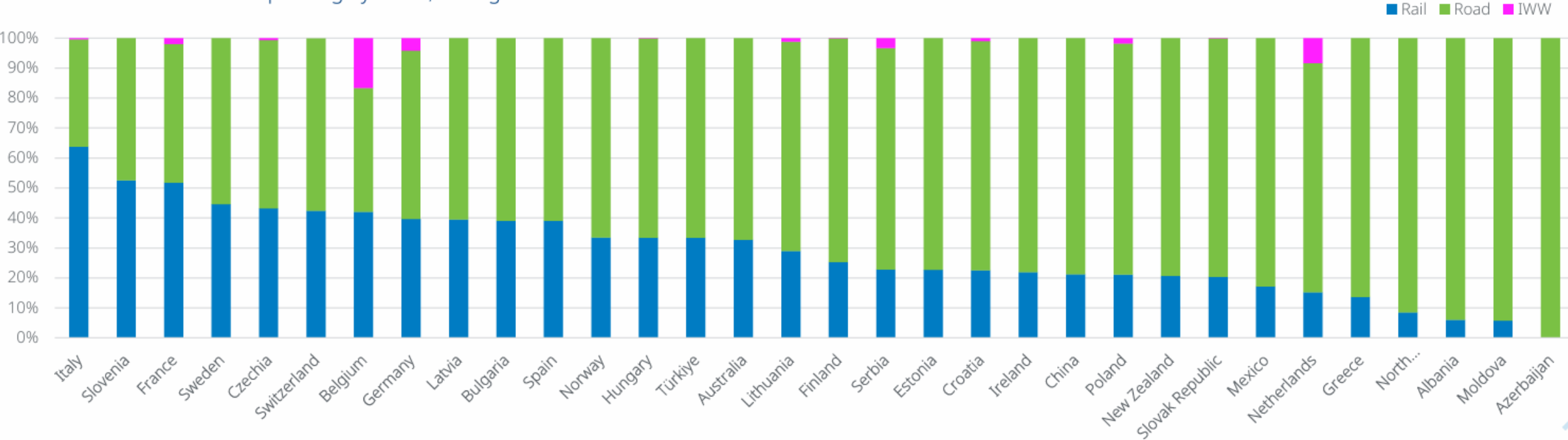
From 2020, Italy doubled its spending on rail infrastructure as a percentage of GDP. In Slovenia, since 2021, the government has invested extensively in renewing and upgrading the national rail infrastructure.

*This is not the case for **Nigeria**.*



Modal investment mix by country

Distribution of investment spending by mode, average 2021-23



4. Global Experiences in Railway Reform and PPPs

S/N	Continent/Country	Description	Remarks
1	Brazil, Argentina, and Mexico	• Concessioning of freight railways. • Operational responsibilities transfer to the private sector • Attracted billions of dollars in investment for infrastructure rehabilitation, acquisition of rolling stock, and modernization of operations	Reduced government subsidies, improved service efficiency, and repositioned rail freight as a competitive mode of transport in regional trade
2	Europe	• Separation of infrastructure management from railway operations. • Dismantling monopolistic structures that had long stifled innovation	Fair and transparent access rules for private operators, enabling competition in both freight and passenger services
3	India	Launch of Dedicated Freight Corridors (DFCs)—partly financed through PPPs	• Improved freight efficiency, decongested passenger routes, and strengthened the country's logistics competitiveness
4	Hong Kong	Mass Transit Railway (MTR) integrates railway expansion with urban real estate development	Generates revenue streams that subsidize rail operations, making the system financially sustainable without heavy reliance on government subsidies

Together, these global experiences demonstrate that successful railway reforms and PPPs are not “*one-size-fits-all*.” The lessons are clear: with the right mix of innovation, policy reform, and partnership, railways can be repositioned as engines of competitiveness, sustainability, and inclusive growth.



5. Nigeria's PPP Experience in Railways

- The flagship Abuja–Kaduna, Lagos–Ibadan, and Warri–Itakpe standard-gauge lines. These projects reflect not only major investments in modernization but also the outcomes of international partnerships that combine infrastructure delivery with technology transfer and skills development.
- Beyond construction and financing, Nigeria has also demonstrated an openness to PPP-driven innovations in service delivery. A notable example is the concessioned electronic ticketing (e-ticketing) system for the Abuja–Kaduna corridor introduced in 2021.
- At the regulatory level, the Infrastructure Concession Regulatory Commission (ICRC) has played a central role in conceptualizing, approving, and monitoring PPP pipelines in the railway sector.
- Nevertheless, critical challenges persist. Financing remains heavily dependent on government guarantees and bilateral loans, underscoring the need for more sustainable financing mechanisms that can attract diverse pools of private capital.

- Issues of maintenance culture, inadequate domestic manufacturing capacity for rolling stock, and vulnerabilities in security (notably attacks on the Abuja–Kaduna line) also highlight the risks that can undermine service reliability and investor confidence.
- Furthermore, Nigeria's rail system is yet to achieve seamless integration with regional and continental networks, which is crucial for unlocking the full benefits of trade and mobility under AfCFTA.
- Despite these hurdles, Nigeria's PPP experience in railways illustrates the value of strong regulatory oversight, innovative partnerships, and adaptive policy frameworks.
- By combining physical infrastructure delivery with operational reforms such as e-ticketing, the country demonstrates that PPPs can serve as instruments not only for financing but also for transforming governance, operations, and user experience.
- The Nigerian case reinforces the broader lesson that sustainable railway development requires a balance between capital investment, institutional reforms, and digital innovation.

6. Policy Challenges

1. **Institutional bottlenecks** – The Nigerian Railway Corporation (NRC) still functions as both operator and regulator, creating conflicts of interest.
2. **Financing gaps** – Heavy reliance on sovereign borrowing (often from bilateral lenders) raises debt sustainability concerns; private capital remains under-mobilized.
3. **Fragmented planning** – Rail development is not well integrated with ports, roads, and urban transit systems.



4. Operational inefficiencies – Limited rolling stock, outdated signaling, and low service reliability undermine competitiveness.

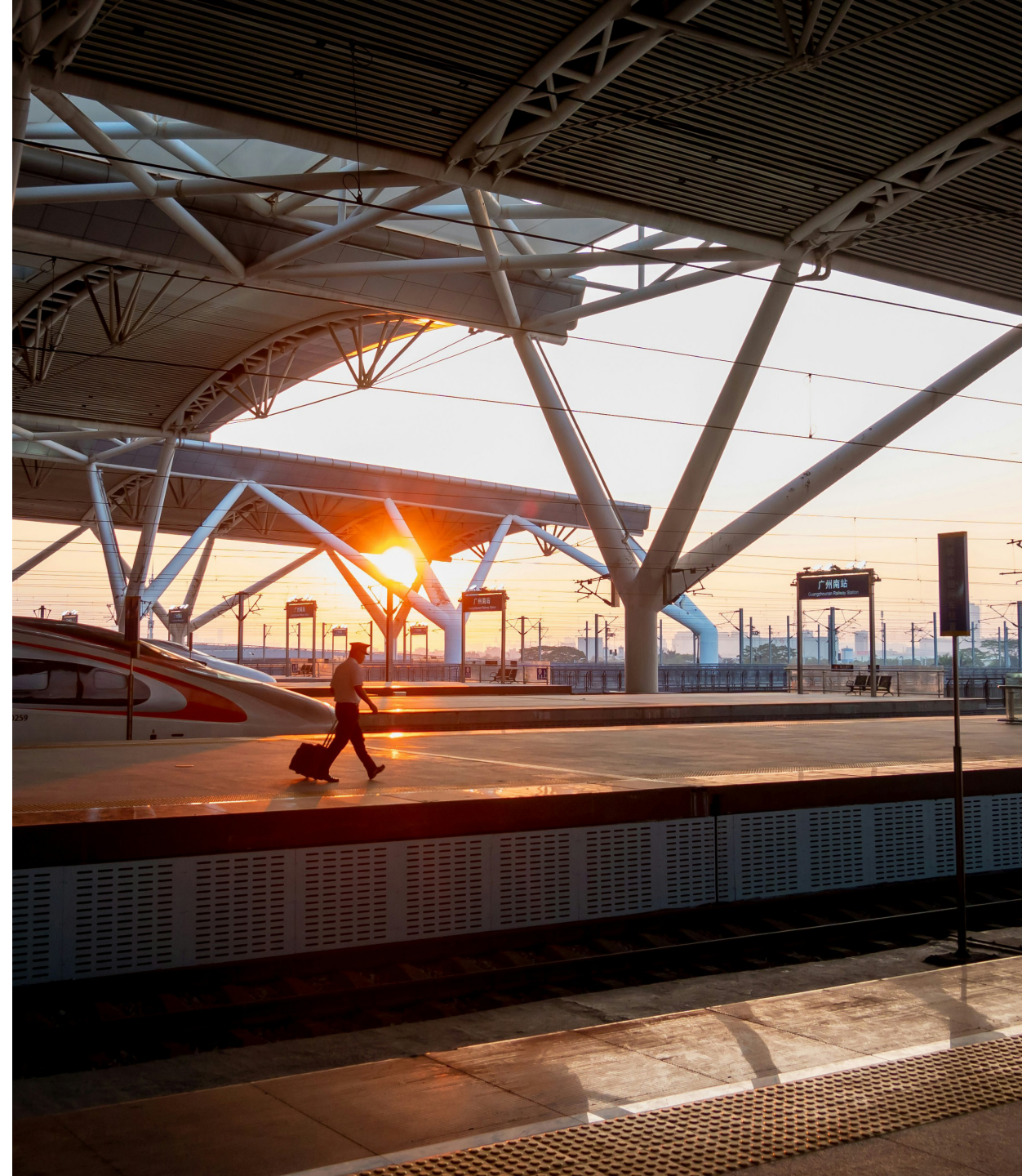
5. Freight underutilization – Rail captures **<5%** of national freight despite potential demand in mining, agriculture, and containerized cargo.



7. Policy Objectives

The repositioned railway policy should aim to:

- Enhance the competitiveness of rail in freight and passenger markets.
- Facilitate private participation through transparent concessions and PPPs.
- Integrate rail with multimodal transport networks, especially ports and urban transit.
- Promote financial sustainability using innovative instruments (e.g., Viability Gap Funding, infrastructure bonds, guarantees).
- Support climate goals by encouraging modal shift from road to rail and planning for eventual electrification.



8. Strategic Policy Pillars

Pillar 1: Legal and Institutional Reform

- Complete unbundling of the NRC into (i) infrastructure manager, (ii) regulator, and (iii) service operators.
- Establish an independent Rail Regulator with authority over safety, tariffs, and track access.
- Operationalize the 2023 decentralization to allow state governments and private concessionaires to develop and operate rail services

Pillar 2: Financing Innovation

- Adopt blended finance structures combining public funds, multilateral loans, and private investment.
- Introduce Viability Gap Funding (VGF) for socially beneficial but commercially weak routes (e.g., urban commuter services).
- Mobilize domestic pension funds and infrastructure bonds, supported by credit guarantees (e.g., InfraCredit).
- Explore land value capture mechanisms around stations (transit-oriented development).

Pillar 3: Corridor Prioritization

- Focus initial investments on high-impact freight corridors (e.g., Lagos–Kano, Port Harcourt–Maiduguri) linked to ports and industrial hubs.
- Develop dedicated freight lines for bulk commodities (cement, iron ore, agricultural produce).
- Strengthen urban commuter rail systems in Abuja, Lagos, and Port Harcourt to ease congestion and enhance productivity.

Pillar 4: Operational Efficiency and Technology

- Establish rolling stock leasing companies to expand availability without heavy upfront capital.
- Deploy digital ticketing, signaling, and freight-tracking systems to boost efficiency.
- Encourage performance-based contracts for maintenance and operations.

Pillar 5: Integration and Climate Readiness

- Align railway expansion with national logistics strategy: link to dry ports, SEZs, and export corridors.
- Design for future electrification and green finance eligibility.
- Integrate urban rail into city-wide mobility systems (bus rapid transit, ride-sharing, last-mile services).

9. Strategic Roadmap for the Future

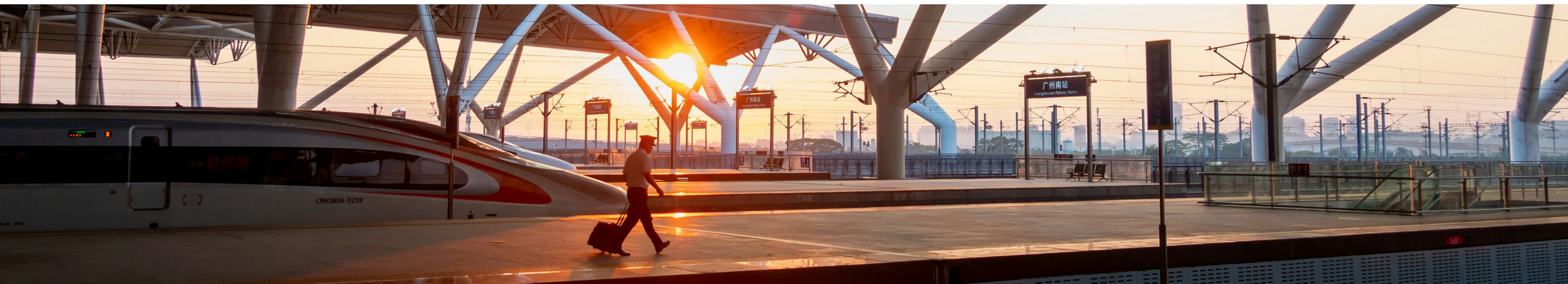
1. Adopt a national railway PPP policy linked to long-term master plans.
2. Enact modern legal frameworks with independent regulators.
3. Establish Railway PPP Units for project preparation and contract oversight.
4. Use blended finance and VGF to bridge viability gaps.
5. Prioritize pilot projects to demonstrate proof of concept and attract investor confidence.
6. Develop standardized templates for PPP contracts and risk allocation.
7. Ensure transparency and disclosure of fiscal risks and contingent liabilities.
8. Integrate social safeguards and affordability mechanisms.
9. Embed digital transformation in all PPP contracts (signaling, ticketing, freight platforms)
10. Institutionalize stakeholder engagement to build legitimacy and manage political risks.

10. Conclusion

Repositioning Nigeria's railway policy requires moving beyond state-led, debt-financed projects toward a diversified, competitive, and integrated system.

By unbundling institutions, innovating finance, prioritizing high-impact corridors, and integrating rail into the wider mobility ecosystem, Nigeria can build a railway system that is economically viable, socially inclusive, and climate-resilient.

The decisions made today will determine whether rail becomes a driver of national transformation or remains a missed opportunity.





Thank You

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