

AN INDIA ECONOMIC STRATEGY TO 2035

NAVIGATING FROM POTENTIAL TO DELIVERY



INFRASTRUCTURE SECTOR SNAPSHOT

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#IES2035

OVERVIEW

- The urbanisation of the world's largest rural population is exerting enormous pressure on existing Indian infrastructure and spurring demand for major infrastructure improvements.
- India's urban population is expected to reach 640 million by 2035. The country has over 60 million-plus cities, and this is growing rapidly.
- Out to 2035, improvements in city planning and increasing disposable incomes could enable user charges to increase revenue generation for infrastructure developments.
- **Transport** is expected to attract the majority of infrastructure investment out to 2035. The need for capital is immense. The Indian Government is actively seeking foreign investment to finance its large-scale rail and road projects including through newer investment vehicles.
- Improving transport infrastructure is critical to the liveability of India's cities. Improved transport infrastructure is also central to India's productivity and the competitiveness of sectors such as agriculture and manufacturing.
- Investment in **urban development** is driving demand for inputs such as metallurgical coal and iron ore for steel production and will shape India's use of energy. The Indian Government is focusing on improving basic services such as sanitation and housing.
- Water management is already a serious challenge, with most of India's large cities already facing water shortages on a daily basis.
- The Indian Government recognises the urbanisation challenges it faces and has introduced a range of policies to manage the development of cities
 - The Indian Government's Smart Cities Initiative is focused on providing core infrastructure, decent quality of life and sustainable environments in 100 cities across five segments – security, transportation, water, energy and solid waste.
 - The Housing for All project has ambitious targets for building housing for low income groups in urban areas by 2022.
 - The Swachh Bharat (Clean India) Mission aims to introduce modern solid waste management, improve sanitation and enable private sector engagement to make cities cleaner.

AUSTRALIAN SUCCESS: TRANSPORT INFRASTRUCTURE

Largest foreign investor in India's national highways



\$3.2 billion committed to India's national highways

Investor in the National Highway Authority of India's toll-operate-transfer asset recycling scheme

OPPORTUNITIES FOR PARTNERSHIP

The opportunities for Australia are not in building India's cities, but financing and services.

Australia will generally have better prospects in services exports than equipment supply, contracting or end to end project development and delivery.

TRANSPORT

The Strategy identifies de-risked brownfield assets in the transport sector as the clearest investment opportunities for Australia. There are also export opportunities for Australian expertise in areas such as port logistics, infrastructure financing, road safety, heavy haul transportation, multimodal logistics, cold-chain logistics, architectural design and engineering.

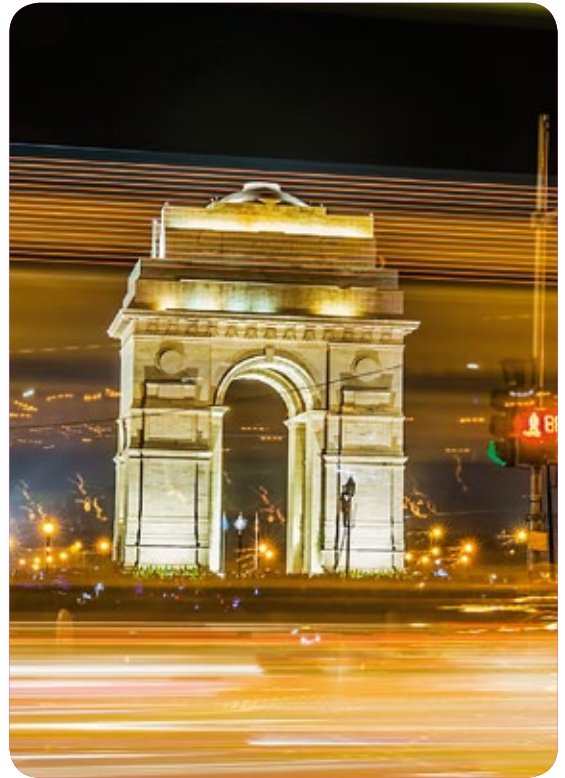
India's road, rail and aviation sectors are widely projected to be the fastest growing components of Indian infrastructure in the short to medium term

1. India's road density is high but the length of surfaced roads is low at 61 per cent. New technologies in transport are becoming more widely adopted, including shared mobility platforms, electric vehicles, and autonomous vehicles.
2. India's railways carried eight billion passengers and transported over one billion tonnes of freight in 2017-18, but major corridors are facing severe capacity constraints. Investment is needed most in network expansion, decongestion and improving passenger safety.
3. Air traffic is expected to experience double digit growth well beyond 2020, by which point India will become the world's third largest aviation market.

URBAN DEVELOPMENT

Australia can provide niche services for smart cities development including in road safety, water and waste management.

The Strategy recommends that Australia diversify engagement on water from river basin management into sectors such as urban planning to overtly align with Indian priorities such as the Clean Ganga and Smart Cities initiatives.



India will require
4.5 trillion USD
by 2040



India is expected
to be able to meet
3.9 trillion USD

CONSTRAINTS AND CHALLENGES

- India’s transport policy environment is fragmented between modes (roads, railways, shipping, airways) and levels (central and state) of government, with responsibility for infrastructure investment planning, policy making, regulatory supervision and financing strategies sitting with various departments and agencies. This can create complications for intermodal linkages between roads, railways, ports and airports.
- Land acquisition issues are a roadblock to infrastructure development, with potential disputes and resistance from local communities on land value leading to project delays, cost escalations, disputes and litigation. Successful land acquisition reform would stimulate infrastructure investment and increase opportunities.
- Urban development has been constrained by governance and financing issues, as well as limited urban planning, distortions in land markets and a stringent regulatory framework for governing land use and management.
- Weak governance of Indian cities is a persistent impediment. Most cities in India are run by a municipal corporation. Other bodies which manage utilities and transport do not typically sit under a clear structure of accountability.

URBAN DEVELOPMENT EXPORT OPPORTUNITIES OUT TO 2035

Australian competitive advantage		Opportunity
Water	Water resource management	Provide services to urban local bodies to control flooding, reuse storm water, assess and clean up waste water and prevent water contamination
		Provide specialised technology and services to the industrial and energy sectors in water resource management, water recycling and treatment systems and desalination
Transport	Intelligent transport systems	Provide strategy, planning, design and engineering for traffic management systems to help reduce congestion and improve road safety
	Road safety	Provide road safety training to government authorities, emergency response teams and medical care in India
Waste	Waste management services	Deliver end to end waste management to urban local bodies and industries in waste-to-energy, compost systems, carbon management and landfill management
Financing	Financing consulting	Australian banks and financial services providers can provide expertise in issuing municipal bonds or green bonds as well as asset recycling, privatisation and public-private partnerships [see Chapter 10: Financial Services Sector]
Planning	Master planning	Master planning, inspection, assurance and environmental impact assessment



EXPLORE
INDIAN STATE
ECONOMIES
IN-DEPTH

WHERE TO FOCUS

The states with the most brownfield road projects in the short term are likely to be **Tamil Nadu, Rajasthan** and **Uttar Pradesh**.

Short term greenfield road development (presenting brownfields opportunities in the medium to long term) is likely to be strong in **Maharashtra, Andhra Pradesh, Madhya Pradesh** and **Bihar**.

Andhra Pradesh, Maharashtra, Rajasthan and **Gujarat** are states with robust finance, a good track record of infrastructure implementation and success at attracting private funding for urban development projects.

Promising cities for urban development infrastructure investment include **New Delhi, Vizag (Andhra Pradesh)** and **Pune (Maharashtra)**.

TRANSPORT INFRASTRUCTURE EXPORT OPPORTUNITIES OUT TO 2035

		Australia's strengths	Opportunity in India
Investment	Capital	Australia's funds management sector has over \$2.7 trillion under management Experience with municipal bonds, infrastructure financing, PPP models, asset recycling and infrastructure privatisation	Explore de-risked brownfield investment opportunities, for example in road toll-operate-transfer models
Services and solutions	Development	A leader in technologies in rolling stock and train brakes Expertise in road safety, driver education and regulation including vehicle registration and driver licensing Expertise in design and engineering services and network design Experienced and internationally focused consultancies	Development of PPP models that de-risk investments and recycle assets Provide specialised services and solutions to Indian infrastructure developers and operators: 'Below-rail' services such as planning and design, infrastructure construction, facilities, systems and technologies
	Operation and maintenance	A record of innovation in heavy haul transportation projects Established services in infrastructure maintenance and operation in sectors such as toll roads operation, airport operations and transport logistics Award-winning architectural expertise in redesigning train stations and maintenance facilities	'Above-rail' services such as operation, maintenance and training (technical, safety and environment), inspection, fault detection, train loading, and in-motion weighing solutions India Railways project to redesign 400 train stations Road safety consultancy

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SECTOR REPORT



Australian Government



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