

# URBAN RAIL IN INDIA 2020

Sector Analysis, Investment Opportunities, Emerging Trends  
and New Opportunities

- ❖ Report (PDF)
- ❖ Data-set (Excel)

India has emerged as a fast growing market for urban rail systems. The urban rail network has increased significantly; up from 81 km in 2006 to over 680 km operational currently. The current pipeline of upcoming projects in the urban rail sector spells significant opportunity for stakeholders across the board. Over 25 cities in India will have operational metro rail networks in the coming years. While metro will continue to be the dominant mode, new modes such as rapid rail and light rail are also being explored. Emerging segments such as station branding, commercial development, real estate development, etc. will also provide significant opportunity in the years to come. New concepts and technologies such as mobility-as-a-service (MaaS), the internet of trains, big data, predictive maintenance, and the use of renewable energy to power trains and stations are also being explored.

The Urban Rail in India report will be released in March 2020. The report will help you to:

- ❖ Analyse the size and growth, market trends and key developments
- ❖ Assess the new growth areas and emerging opportunities
- ❖ Track the upcoming projects and new opportunities in the sector
- ❖ Gain insights on segment-wise opportunities and outlook for the sector
- ❖ Understand the risks and returns associated with urban rail projects
- ❖ Support business planning and strategy

## EXECUTIVE SUMMARY

### SECTION I: SECTOR ANALYSIS, EMERGING TRENDS AND NEW OPPORTUNITIES

#### 1. Sector Snapshot

- ❖ Key Sector Trends
- ❖ Role of 'Make in India' and Focus on Indigenisation
- ❖ Growth in Budgetary Outlays
- ❖ Recent Developments
- ❖ New Business Models
- ❖ Emerging Trends in Technology
- ❖ Investment Requirements (Till 2025-26)
- ❖ Risks and Challenges
- ❖ Future Outlook

#### 2. Operational Network, Ridership & Revenue Analysis

- ❖ Existing Network
- ❖ Trends in Network Addition
  - At Grade
  - Underground
  - Elevated
- ❖ Growth in Ridership
- ❖ Pricing Trends
- ❖ Fare Box & Non-fare Box Revenue trends

#### 3. Metro Rail Policy, 2017 - Expected Amendments & Industry Recommendations

- ❖ Key Features
- ❖ Potential Benefits
- ❖ Impact on PPPs
- ❖ Scope for Private Participation in O&M
- ❖ Creation of the Unified Metropolitan Transport Authority
- ❖ Industry Expectations
- ❖ Key Recommendations
- ❖ Expected Amendments

#### 4. Analysis of Project Pipeline

- ❖ By Status
  - Ongoing
  - Awarded

- Under Bidding
- Approved
- Planned
- ❖ By Mode of Implementation
  - EPC
  - PPP
- ❖ By Type of System
  - Metro
  - Monorail
  - Light Rail/Metrolite
  - MetroNeo
- ❖ By Alignment
  - At Grade
  - Elevated
  - Underground
- ❖ By Expected Completion
  - By 2021-22
  - Beyond 2021-22
- ❖ Key Upcoming Tenders

#### 5. Outlook, Opportunities and Key Projections (Till 2025-26)

- ❖ Growth Drivers
- ❖ Expected Network Addition
- ❖ Market Prospects and Opportunities for
  - Consultants
  - EPC Contractors
  - Private Developers
  - Financiers
  - Rolling Stock Suppliers
  - System Suppliers (signalling, telecommunications, fare collection, etc.)
  - Station Designers
  - Technology Providers
- ❖ Projected Investment
  - New Construction
  - Network Expansion
  - Rolling Stock
  - Signalling Systems
  - AFC Systems
  - Others
- ❖ Segment Outlook

**6. New Modes of Rail-based Mass Transit**

- ❖ Metrolite
  - Key Features
  - Standards and Specifications
  - Cost Economics
  - The Experience So Far
  - Key Proposed Projects
  - Upcoming Opportunities
  - Issues and challenges
- ❖ MetroNeo
  - Standards and Specifications
  - Cost Economics
  - The Experience So Far
  - Key Proposed Projects
  - Upcoming Opportunities
  - Issues and challenges

**7. Growth Areas, Emerging Opportunities & New Revenue Sources**

- ❖ Transit Oriented Development & Last Mile Connectivity
- ❖ Station Retail & Branding
- ❖ Commercial Development
- ❖ Real Estate Development
- ❖ Solar Rooftops
- ❖ Train Leasing
- ❖ Technology & Digital Solutions
  - MaaS
  - IoT
  - Big Data
- ❖ Other Focus Areas

**8. Financing Scenario and Prospects for PPPs**

- ❖ Key Financing Trends
- ❖ Business Models
  - Fully Government-funded
  - VGF-based PPPs
  - Hybrid PPPs (Proposed)
  - Fully Privatised
- ❖ Role & Impact of Multilateral Agencies
- ❖ Value Capture Financing Framework
- ❖ Key Sources of Revenue
- ❖ New Revenue Streams (Advertising Revenue, License Fee, Real Estate Development Rights, Additional Stamp Duty, etc.)
- ❖ Cost Components
- ❖ Project Economics
- ❖ PPP Experience & Potential
  - Case Studies
  - Key Success Factors/Reasons for Failure
- ❖ Risks and Challenges

**SECTION II: SEGMENT ANALYSIS, NEW DEVELOPMENTS AND OPPORTUNITIES (Till 2025-26)****9. Rolling Stock**

- ❖ Segment Size and Growth
- ❖ Nature of Fleet and Specifications
- ❖ MoHUA's Guidelines on Rolling Stock Standardisation
- ❖ Contract Awards
- ❖ Upcoming Tenders
- ❖ Competitive Landscape
- ❖ Profiles of Key Players

- ❖ Focus on Indigenous Production
- ❖ New Manufacturing Facilities
- ❖ Recent Innovations in Design and Introduction of Driverless Trains
- ❖ Experience with Driverless Operations
- ❖ Outlook and Projections

**10. Signalling, Train Control and Telecommunications**

- ❖ Market Size and Growth
- ❖ Technologies and Systems in Use
- ❖ System Upgrades and Innovations
- ❖ Competitive Landscape
- ❖ Profiles of Key Players
- ❖ Contract Awards
- ❖ Upcoming Tenders
- ❖ Recent Developments
- ❖ Outlook and Projections

**11. Fare Collection & Ticketing Systems**

- ❖ Market Size and Growth
- ❖ Specifications of Systems in Use
- ❖ Level of Integration and Interoperability
- ❖ Upgrades and Innovations in Fare Media
  - ABT Systems
  - National Common Mobility Card
  - Smartcards and Bank Cards
  - Mobile Wallets
  - Near-field communication (NFC)-enabled devices
  - Others
- ❖ Global Advances
- ❖ Competitive Landscape
- ❖ Profiles of Key Players
- ❖ Contract Awards
- ❖ Upcoming Tenders
- ❖ Key Trends
- ❖ Recent Developments
- ❖ Plans for Deployment of Advanced Fare Media
- ❖ Outlook and Projections

**12. Construction - At Grade and Elevated Structures**

- ❖ Size and Growth
- ❖ Trends in Per-km Construction Cost
- ❖ Prevalent Methods and Techniques
- ❖ Key Trends
- ❖ Market Share of Key Contractors
- ❖ Recent Contracts
- ❖ Upcoming Tenders
- ❖ Outlook and Projections

**13. Construction - Metro Tunnels**

- ❖ Size and Growth
- ❖ Techniques/Methods in Use
- ❖ Analysis of The TBM Market
- ❖ Market Share of Key Players
- ❖ Recent Contracts
- ❖ Upcoming Tenders
- ❖ Best Practices in Tunnel Design & Construction
- ❖ Outlook and Opportunities

## 14. Traction and E&M

- ❖ Traction Systems
- ❖ Market Size
- ❖ Specifications of Traction and E&M Systems
- ❖ Energy Consumption and Expenditure
- ❖ Energy Conservation Initiatives
- ❖ Solar Energy Use
- ❖ Key Players
- ❖ Recent Contracts
- ❖ Upcoming Tenders
- ❖ Outlook and Projections

## 15. Station Area Development and Inter-Modal Integration

- ❖ Size and Growth
- ❖ Innovations in Material and Design
- ❖ Key Components of Station Design
  - Elevators
  - HVAC Systems
  - Public Information Display Systems
  - Safety and Accessibility Aspects
  - Others
- ❖ Key Players
- ❖ Recent Contracts
- ❖ Global Best Practices
- ❖ Upcoming Tenders
- ❖ Outlook and Projections

## SECTION III: PROJECT PROFILES

### 16. Operational and Under Construction Projects

- ❖ Ahmedabad-Gandhinagar Metro Rail Project Phase I
- ❖ Bengaluru Metro Rail Project Phase I and II
- ❖ Bhopal Metro Rail Project
- ❖ Chennai Metro Rail Project Phase I and Phase I Extension
- ❖ Delhi Metro Rail Project Phase I, II, III, IV and Extensions
- ❖ Rapid Metro Rail Project Gurgaon Phase I and II
- ❖ Hyderabad Metro Rail Project Phase I
- ❖ Indore Metro Rail Project
- ❖ Jaipur Metro Rail Project Phase I
- ❖ Kochi Metro Rail Project Phase I
- ❖ Kolkata Metro Rail Project (East-West and Expansion projects)
- ❖ Lucknow Metro Rail Project
- ❖ Mumbai Metro Rail Project
- ❖ Mumbai Monorail Project Line 1
- ❖ Nagpur Metro Rail Project
- ❖ Navi Mumbai Metro Rail Project Phase I
- ❖ Pune Metro Rail Project

### 17. Upcoming Projects (Announced, Planned, Approved and Under Bidding Projects)

- ❖ Metro Rail Projects
  - Agra Metro Rail Project
  - Ahmedabad-Gandhinagar Metro Phase II
  - Amaravati Metro Rail Project
  - Bengaluru Metro Rail Project Phase IIA
  - Bengaluru Airport Metro Line

- Bengaluru Metro Rail Project Phase III
- Bhubaneswar-Cuttack Metro Rail Project
- Chennai Metro Rail Project Phase II
- Coimbatore Metro Rail Project
- Dehradun-Haridwar-Rishikesh Metro Rail Project
- Delhi-Greater Noida-Jewar Metro Rail Project
- Gorakhpur Metro Rail Project
- Gurgaon-Faridabad Metro Rail Project
- Gurgaon-Manesar-Bawal Metro Rail Project
- Guwahati Metro Rail Project Phase I
- Hyderabad Metro Rail Project Phase II
- Iffco Chowk-Dwarka Metro Rail Project
- Jaipur Metro Rail Project Phase II
- Kanpur Metro Rail Project Phase I
- Kochi Metro Rail Project Phase II
- Mumbai Metro Rail Project
- Nagpur Metro Rail Project Phase II
- Noida-Greater Noida Metro Rail Project
- Patna Metro Rail Project Phase I
- Surat Metro Rail Project
- Thane Metro Rail Project
- Visakhapatnam Metro Rail Project Phase I
- ❖ Light Rail/Metrolite Projects
  - Bengaluru LRT Project
  - Pune LRT
  - Kozhikode LRT Project
  - Ranchi LRT Project
  - Thiruvananthapuram LRT Project
  - Meerut, Prayagraj, Varanasi, Gorakhpur and Jhansi
  - Jammu & Srinagar LRT Project
  - Kirti Nagar-Dwarka Sector 25 Exhibition-cum-Convention Centre Metrolite Corridor
  - Ritihala-Narela Metrolite Corridor
- ❖ MetroNeo Projects
  - Warangal MetroNeo
  - Bhopal Rapid Rail Project
  - Indore Rapid Rail Project
- ❖ Monorail Projects
  - Chennai Monorail Project (First Corridor)
  - Delhi Monorail Project

#### ❖ Others

Each profile will cover the project scope (network length, alignment details, number of stations, rolling stock, fare system, signalling and telecommunications, traction, etc.), ownership details, implementing agency, cost estimates, key consultants, key contractors, key milestones, funding pattern, expected ridership, recent contracts, upcoming tenders, current status, etc.

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