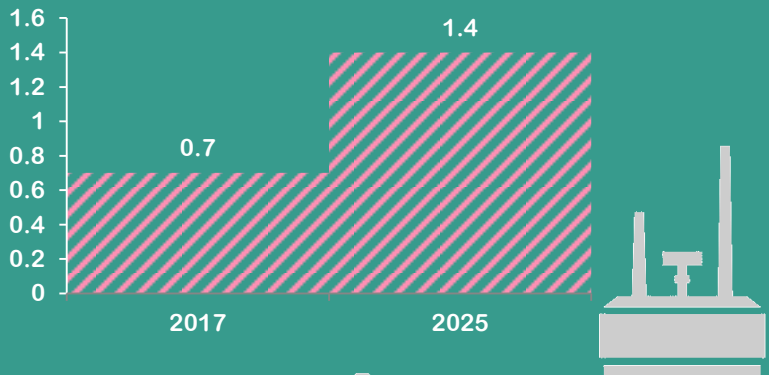


The logo for MRAC+, consisting of the letters 'MRAC' in a bold, sans-serif font enclosed in a rectangular box, with a plus sign to the right.

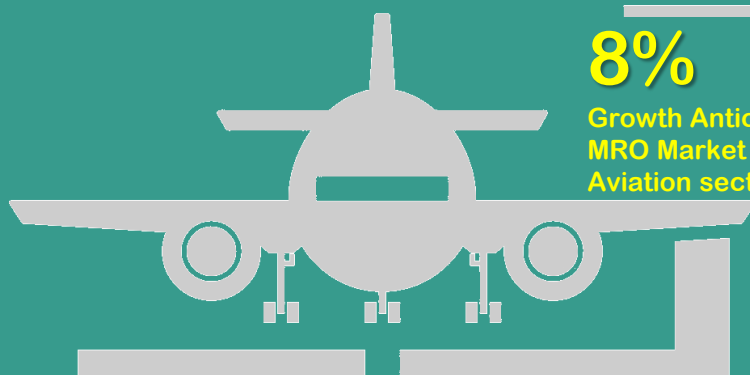
Maintenance , Repair & Overhaul
(MRO) Market Opportunity in India
Across Energy Sector and Outlook Till
2022 (Vol-II)

January 2019

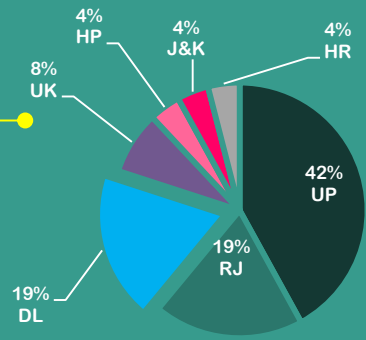
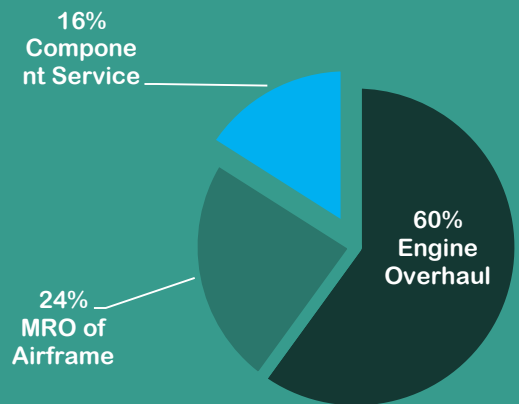
MRO Market Size (USD Billion) for Aircrafts



8%
Growth Anticipated in the MRO Market Size for Aviation sector till 2025



Percentage Share of MRO Spending Across Different Categories for Aircrafts



1000 +
Railway Stations identified for re-vamping and modernization under "Adarsh Station Scheme"



90
Railway Stations identified to re-develop as "airport like" transit hubs

Why eninrac's report upon "Maintenance, Repair and Overhaul Market in India for Infrastructure Sector & Outlook Till 2022"

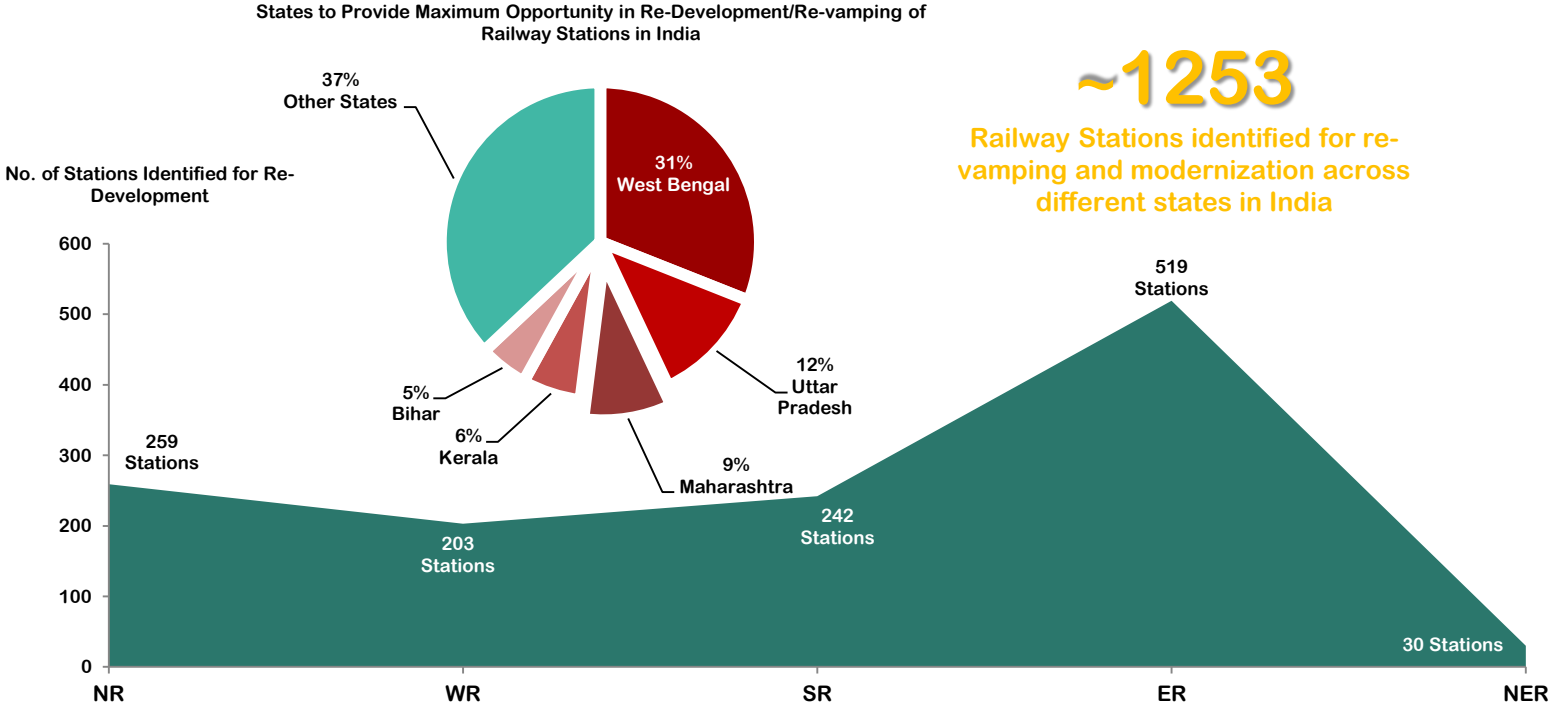
MAKING THE MOST OF EXISTING INFRA PROJECTS, A NEW TREND SEEN IN THE INDIAN MARKET – REVAMPING, RENOVATION & REPAIR LIKELY TO OFFER NEW BUSINESS OPPORTUNITIES TO THE SERVICE PROVIDERS

ABOUT INR 1 TRILLION OF INVESTMENT OPPORTUNITY EXISTS IN THE RE-DEVELOPMENT OF 600 RAILWAY STATIONS IN INDIA

The growth trajectory of infrastructure development in India has been quite interesting and much talked about in the international markets. Courtesy government initiatives, the development course which the country has seen w.r.t infrastructure over the last couple of years clearly indicates towards the existence of a strong market. Also, given the current scenario there are speculations that Indian infra market shall swell up to a size of USD 778 Billion by 2022. Having said that, despite all hunky dory the recurring challenges that have been confronted by lot many developed and developing nations around the world in maintaining and upgrading the existing infra is no different for India. In order to make the most of existing infra projects, to utilize them fully its really important to improve their efficiency and this is what India is currently focusing on. Hence, revamping and modernizing the already existing infra – be it into the transportation, power supply , gas supply networks, maintaining of roads & highways etc. is a new and strong market mushrooming up in India. For instance, Indian railways – the largest transporter in India is not only working developing new railway tracks and stations but shall be face-lifting the existing railway stations too. Over 1000 railway stations have been identified across the nation that shall be modernized under the "Adarsh Station Scheme". Not only this, about 90 stations of the total shall be overhauled into world class transit hubs. This shall include facilities like CCTV cameras, Wi-Fi, renovation of the station buildings, modular water kiosks, water ATMs, LED lights, lifts, escalators, stainless steel benches, modular catering kiosks etc. Apart from these facilities, waiting halls, waiting rooms, retiring rooms, wash rooms of the stations will be improved as well. Civil aviation, another important and fastest growing arm of India's transport infra is aiming at expanding & modernizing the existing airports in the country along with constructing the fresh ones. AAI is already taking initiatives in implementing the modernization programmes at major airports across the country. An investment of close to INR 9430 crores has already been planned for revamping the airports by 2022.

Like transportation, in other infra facets too maintenance, repair and overhaul activities are surfacing up, creating a new business avenue for value chain players. To evaluate the existing potential business opportunity for MRO service providers, original equipment manufacturers, EPC contractors, sub contractors and other value chain players eninrac is coming up with a report on “ Maintenance, Repair & Overhaul (MRO) Market in India and Outlook Till 2022”. The report has two volumes. Volume I unleashes market opportunity in MRO across energy sector - Thermal Power Plants, Captive Power Plants, Refineries and Petrochemical units, Solar Power Plants and Wind Power Plants. Volume II analysis market opportunity in MRO across infra sector – Railway, Metro Rail, Roads & Highway, Ports, Airports, Power T&D, Gas Pipeline Infra, Steel Plants. The report too covers a holistic list and details of 500 + projects offering /most likely offer MRO opportunities across different sectors in each volume.

Exhibit 01: Region Wise Likely Opportunity for MRO Players in Re-Development of Railway Stations in India



Source: Gol, eninrac research

BUSINESS CASE FOR MAINTENANCE, REPAIR AND OVERHAUL MARKET IN INDIA

- Indian government encourages investment in MRO. India becomes more aggressive in attracting MRO services, an initiative that is showing promise with Airbus considering building a MRO center in-country. India's current civilian MRO market size is estimated to be around USD 700 million. The market is expected to grow at 8% CAGR for the next 10 years to reach over USD 1.4 billion by 2025
- Habibganj to become India's first railway station to be overhauled on the lines of Germany's Heidelberg. The project shall be carried out in two phases of which the part dealing with station redevelopment will cost INR 100 crores
- As a part of Sagarmala Programme, more than 577 projects worth INR 8.75 Lakh Crores have been identified for implementation, during 2015-2035, across the areas of port modernization & new port development, port connectivity enhancement, port-linked industrialization and coastal community development. As of 31-Mar-2018, a total of 492 projects worth INR 4.25 Lakh Crores were under various stages of implementation, development and completion
- The government, through a series of initiatives, is working on policies to attract significant investor interest. A total of 200,000 km national highways are expected to be completed by 2022. An investment to the tune of USD 7 Trillion has been freed for construction of new roads and highways till 2022
- India's Ministry of Housing and Urban Affairs announced that within the next few years, the government plans to build new metro lines with a total length of 700 km in 50 cities. The Metro Policy 2017 enables greater private participation, innovative financing, value capital finance and provides more options of financing by the government for creation and maintenance of metro rail infrastructure. This will go a long way in further boosting the growth of Metro rail and shall provide business opportunity to the associated value chain players
- A cost of INR 1.07 Lakh has been planned to be invested in the revamping of 600 railway stations in India

1. Examining Current MRO Market Opportunity in India– Track of Business Case in Volume & Value , 2015-2018

- a. Industry Practice – Power Transmission & Distribution
- b. Industry Practice – Gas Transmission & Distribution
- c. Industry Practice - Roads & Highways
- d. Industry Practice - Ports & Airports
- e. Industry Practice – Railways & Metro Rails
- f. Industry Practice – Steel Segment

2. Forecasting MRO Market Opportunity in India– Outlook of Business Case in Volume & Value , 2018-2022

- a. Industry Practice – Power Transmission & Distribution
- b. Industry Practice – Gas Transmission & Distribution
- c. Industry Practice - Roads & Highways
- d. Industry Practice - Ports & Airports
- e. Industry Practice – Railways & Metro Rails
- f. Industry Practice – Steel Segment

3. Regional Market Opportunity for MRO in India and Outlook – Track of Business Case in Volume & Value , 2015-2018 & 2018-2022

- a. Opportunity in Northern Region States of India for Indicated Industry Practices
- b. Opportunity in Western Region States of India for Indicated Industry Practices
- c. Opportunity in Eastern Region States of India for Indicated Industry Practices
- d. Opportunity in Southern Region States of India for Indicated Industry Practices

4. Existing Trends in MRO Market in India – Examining the Market Leaders & Competition

- a. Tracking the market capitalization trends for MRO in Power Transmission & Distribution Industry
- b. Tracking the market capitalization trends for MRO in Gas Transmission & Distribution Industry
- c. Tracking the market capitalization trends for MRO in Roads & Highways Industry
- d. Tracking the market capitalization trends for MRO in Ports & Airports Industry
- e. Tracking the market capitalization trends for MRO in Rail & Metro Rail Industry
- f. Tracking the market capitalization trends for MRO in Steel Segment

5. Projecting Business Case for the Classified Value Chain Players till 2022

- a. Business Case for Independent MRO Service Providers
- b. Business Case for Original Equipment Providers
- c. Business Case for EPC Players
- d. Business Case for MRO Consultants

6. Covering Database of total 500+ Existing and Upcoming Projects for MRO in India for all the Regions

- a. Industry Practice – Power Transmission & Distribution
- b. Industry Practice – Gas Transmission & Distribution
- c. Industry Practice - Roads & Highways
- d. Industry Practice - Ports & Airports
- e. Industry Practice – Railways & Metro Rails
- f. Industry Practice – Steel Segment

KEY HIGHLIGHTS

- Region wise MRO opportunity assessment into power transmission & distribution (T&D) segment in India till 2022
- Opportunity track for OEMs in maintenance, repair and overhaul into the power transmission & distribution (T&D) segment in India till 2022
- Tracking existing trends in MRO market into the T&D power segment – Examining market leaders and competition
- Opportunity assessment for MRO in roads and highways till 2022
- Opportunity track for EPC contractors and sub constructors in the maintenance and repair of roads and highways till 2022
- Railway electrification and region wise MRO opportunity assessment in over head equipments till 2022
- MRO opportunity assessment into Rail locomotives in India till 2022
- Planned capacity expansions and region wise MRO opportunity assessment in the metro rail segment till 2022
- Tracking the MRO opportunity in the Indian airport segment till 2022
- Capacity expansion plans for steel manufacturing in India till 2022
- Plant age wise MRO opportunity assessment for steel plants in India till 2022
- Opportunity track for emission control equipments providers to steel plants in India till 2022
- Tracking existing trends in MRO Market for Steel Manufacturing Segment in India – Examining the Market Leaders & Competition

PRESS EXCERPTS

“GMR awarded the expansion, development of Dr. Babasaheb Ambedkar International Airport. The estimated cost of the project is INR 1685 Crores and shall be constructed on DBFOT mode”

The Hi tavada

“ Indian Railways likely to raise funds of INR 40 Billion for upgrading nearly 50 railway stations ”

Business Standard

“ The Nashik Zila Parishad has handed over eight roads to the state PWD for construction and maintenance. The existing length of MDR maintained by PWD is 2712.2 kms. It will now increase by 133.1 km to 2,845 kms during 2018-19 ”

Times of India

KEY QUERIES ADDRESSED

- What is the current power transmission & distribution scenario in India ?
- What is the current status of maintenance, repair and overhaul in power transmission & distribution segment?
- What shall be the opportunity for MRO players in power T&D till 2022 ?
- What is the current status of gas pipeline infra in India ?
- What is the current status of maintenance, repair and overhaul in gas pipeline segment ?
- What shall be the opportunity for MRO in city gas distribution pipelines till 2022 ?
- What shall be the region wise opportunity track for MRO in gas pipeline segment till 2022 ?
- What is current status of rail infra in India ?
- What is the current scenario of MRO into the Indian railways segment ?
- What shall be the MRO opportunity into the re- development of 400 railway stations till 2022 ?
- What shall be the region wise MRO opportunity in OHE till 2022?
- What is the current status of metro rail infra in India ?
- What are the capacity expansion plans of metro rail infra in India till 2022 ?
- What shall the MRO opportunity in maintaining the metro rail tracks in India till 2022 ?

KEY QUERIES ADDRESSED

- What shall be the opportunity size of MRO in Indian airports till 2022 ?
- What shall be the opportunity size of MRO in Indian ports till 2022 ?
- What is current status of steel manufacturing in India ?
- What is current scenario of MRO in steel manufacturing units in India ?
- What is the opportunity assessment for MRO in steel manufacturing unit till 2022?
- What shall be the opportunity track for EPC contractors in the maintenance of roads, railway tracks, metro rail tracks, airports, ports till 2022?

MUST BUY FOR

- Independent Maintenance, Repair & Overhaul (MRO) Service Providers
- Original Equipment Manufacturers (OEMs)
- Equipment Sub contractors/Suppliers
- Pollution Control Equipment Manufacturers/Suppliers
- Engineering , Construction and Procurement Players
- Construction Contractors
- MRO Consultants /Consulting Agencies/Firms
- Power Transmission & Distribution Players
- Oil and Gas Pipeline Players
- Government & Regulatory Bodies
- Research Institutions/Bodies
- Funding Bodies/Banks

KEY COMPANIES MENTIONED

- L&T ECC
- Gammon India
- JMC Projects
- GMR
- Tata Projects
- Lanco Infratech
- Hindustan Construction Company
- Punj Lloyd
- JP Associates
- IVRCL
- Nagarjuna Construction Company
- Kalpataru
- Sterlite
- KEC
- Gayatri Projects
- Welspun



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vantedget⁺

THANK YOU!

Happiness does not come from doing easy
work but from the afterglow of satisfaction
that comes after the achievement of a
difficult task that demanded our best

- Theodore Isaac Rubin