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## EXECUTIVE SUMMARY

### One of the largest road networks in the world

- India has the second largest road network in the world, spanning over 5.8 million kms. Over 64.5% of all goods in the country are transported through roads, while 90% of the total passenger traffic uses road network to commute.

### Rising budget allocation of road sector

- Under Union Budget 2020–21, the Government of India has allocated Rs 91,823 crore (US$ 13.14 billion) for the Ministry of Road Transport and Highways.
- The Government of India has allocated Rs 111 lakh crore (US$ 13.14 billion) under the National Infrastructure Pipeline for FY 2019–25. The Roads sector is expected to account for 18% capital expenditure over FY 2019–25

### Growing private sector involvement

- As on December 2019, 824 projects were recommended for development by Public Private Partnership (PPP) Appraisal Committee.
- Investment of US$ 31 billion for national highways is expected in PPP by the end of 2020.

### Rapid growth in national highways

- During 2019–23, National Highway Authority of India (NHAI) will able to generate Rs 1 lakh crore (US$ 14.30 billion) annually from toll and other sources.
- NHAI is planning to raise Rs 40,000 crore (US$ 5.72 billion) to monetise its highway assets through Infrastructure Investment Trust (InvIT).
- National highways under the Bharatmala Pariyojana programme aims to optimize the productivity of freight and passenger movement by filling the critical infrastructure gaps. It will also work to increase the number of districts with national highway linkages from 300 to 550.

### Overseas investment for infrastructure development

- Indian Government and Asian Development Bank signed US$ 500 million loan agreement to build the longest bridge across river Ganga, in Bihar. The bridge is expected to be ready by December 2021.
- In May 2020, Asian Development Bank (ADB) and Government of India signed a US$ 177 million loan to upgrade 450 kilometre (km) of state highways and major district roads in the state of Maharashtra.

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*Source: MoRTH Annual Report 2015–16, NHAI, Make in India, CARE Ratings*
▪ Production of commercial vehicles increased to 752,022 in FY20 from FY16 at a CAGR of 2.42% commands stronger road network in India.
▪ Rise in number of two and four wheeler and increasing traffic supports the growth.

▪ Growing participation PPP.
▪ Under the Union Budget 2020–21, the Government of India has allocated Rs 91,823 crore (US$ 13.14 billion) under the Ministry of Road Transport and Highways.
▪ Transfer to National Investment Fund (NIF) is estimated at Rs 6,070 crore (US$ 868.51 million) for 2019–20.

▪ Financial institutions received Government approval to raise money through tax-free bonds.
▪ 100% FDI is allowed under automatic route subject to applicable laws and regulations.
▪ The Finance Bill 2019 made certain changes in the Central Roads and Infrastructure Fund Act. The central Government will now be responsible for formulating criteria for any state road project.

▪ India has joined the league of 15 of global alliance which will work towards the ethical use of smart city technologies
▪ The Government aims to construct 65,000 km of national highways at a cost of Rs 5.35 lakh crore (US$ 741.51 billion) by 2022.
▪ Road building in India is second least expensive in Asia.\(^\text{5}\)

Note: \(^*\) - investments include Budgetary support, IEBR refers to Internal and Extra Budgetary Resources and constitutes the resources raised by the public sector units through profits, loans and equity and Private sector investments, ^Asian Infrastructure Investment Bank
Source: NHAI, Make in India, MoRTH, Business Monitor International, Ministry of Road Transport and Highways, Asian Infrastructure Investment Bank (AIIB)
MARKET OVERVIEW
ROAD NETWORK IN INDIA IS SUB-DIVIDED INTO THREE CATEGORIES

Roads
(Total length: 5.89 million kms)

- State highways
  - Total length: 156,694 kms
  - Share: 3% of the total roads in India

- National highways
  - Total length: 132,500 kms
  - Share: 2% of the total roads in India

- Other roads
  - Total length: 5,608,477 kms
  - Share: 95% of the total roads in India

STRONG MOMENTUM IN EXPANSION OF ROADWAYS

- Highway construction in India increased at 21.44% CAGR between FY16–FY19. In FY19, 10,855 km of highways were constructed. The Government aims to construct 65,000 km of national highways at a cost of Rs 5.35 lakh crore (US$ 741.51 billion) by 2022.

- In March 2020, NHAI accomplished the highest ever highway construction of 3,979 km of national highways in FY20.

- In April 2020, the Government has set a target of constructing roads worth Rs 15 lakh crore (US$ 212.80 billion) over the next two years.

- In May 2020, Border Roads Organisation (BRO) achieved major milestone by digging up a 440-metre long tunnel below the busy Chamba town on Rishikesh-Dharasu highway (NH 94).

- On July 07, 2020, NHAI decided to undertake performance assessment and ranking of highways in the country to improve quality and provide higher level of service to highway commuters.

- On July 15, 2020, foundation stones of various highway projects, part of a new economic corridor, worth around Rs 20,000 crore (US$ 2.84 billion) were laid in Haryana.

- Under Pradhan Mantri Gram Sadak Yojana (PMGSY), in the UT of Jammu & Kashmir, 3,261 roads of length of 19,277 km and 243 bridges have been sanctioned, out of which 1858 roads of length 11,517 km and 84 bridges have been completed. Similarly, in the UT of Ladakh, 142 roads of length of 1207 km and 3 bridges have been sanctioned, out of which 96 roads of length 699 km and 2 bridges have been completed till July 2020.

Note: E – Estimate, Figures are as per latest data available, CAGR till FY19
With infrastructure investment set to go up, demand for construction equipment will rise further.

By FY20, construction equipment industry’s revenue is estimated to reach US$ 7 billion.

By 2022F, construction equipment sales are forecast to reach 110,815 units.

The Government’s move to cut GST rate on construction equipment from 28% to 18% is supposed to give boost to the industry.

Key players:
• Universal Construction Machinery & Equipment
• Mahindra Construction Equipment (MCE)
• Volvo Construction Equipment India
• ACE Construction Equipment
• L&T Construction Equipment
• Triton Valves

Note: F – Forecast,
Source: NBM & CW, Mahindra Website, Indian Construction Manufacturers’ Association
The Special Accelerated Road Development Programme for the Northeast region (SARDP-NE) is aimed at developing road connectivity between remote areas in the northeast with state capitals and district headquarters.

Implementation of the road development programme would facilitate connectivity of 88 district headquarters across states in the Northeast to their nearest national highway.

The Government of India had estimated to invest Rs 1.45 lakh crore (US$ 22.40 billion) towards road infrastructure in Northeast by end-2020.

Under Phase-I of Bharatmala Pariyojana, the Ministry has approved implementation of 34,800 km of national highways in 5 years with an outlay of Rs 5,35,000 crore (US$ 76.55 billion).

In December 2017, the Prime Minister of India announced investment worth Rs 60,000 crore (US$ 9.33 billion) under SARDP between 2018–2020.

The details of various development and maintenance works undertaken in Northeast region is mentioned below:

<table>
<thead>
<tr>
<th>Project description</th>
<th>Total length (kms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length under NHDP Phase - III</td>
<td>110</td>
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<tr>
<td>Length of National Highways, State Roads under SARDP-NE are divided in 2 phases:</td>
<td></td>
</tr>
<tr>
<td>(i) Phase A</td>
<td>4,099</td>
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<tr>
<td>(ii) Phase B (approved for DPR preparation only)</td>
<td>3,723</td>
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<tr>
<td>Arunachal Pradesh Package of Roads and Highways</td>
<td>2,319</td>
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</tbody>
</table>

Note: data is expected to be updated by June 2019 from Ministry of Road Transport and Highways Annual Report FY19
Source: NHAI, MoRTH Annual Report 2019-20, PPP in India
As of December 2019, there were 9,242 PPP projects in India, of which, 2,872 were related to roads and bridges.

Projects awarded under build–operate–transfer (BOT) was 37.62% of the total awarded projects as of December, 2019.

In August 2020, the Government of India revised the Model Concession Agreement for BOT projects to plug delays by imposing a deadline on the NHAI and incentivising timely work by concessionaires. According to revised norms, the NHAI will have to hand over 90% of the project land (vacant and ready to build) to private developers, thus creating a more market-friendly sector and attracting more private players.

Note: PPP - Public-private partnership, BOT - Build–operate–transfer
Source: MoRTH, Department of Economic Affairs, News Article
PRIVATE PLAYERS GAINING TRACTION IN THE ROADS SECTOR

- Until 2005, the road construction market was dominated by public sector companies.
- With the emergence of private players over the last decade, the road construction market has become fragmented and competitive. Players bidding for projects also vary in terms of size.

**Major private sector players**

**IRB Infrastructure Developers Ltd**


**IL&FS**

- Major projects: North Karnataka Expressway, West Gujarat Expressway, Noida Toll Bridge, Ahmedabad - Mehsana Toll Road, East Coast Road, Kotakatta Kurnool Road Project, East Coast Road, Hazaribagh Ranchi Expressway Ltd, Karnataka Toll Bridges.

**Ashoka Buildcon Limited**

- Major projects: NH6 Dhankuni to Kharagpur, Sambalpur Baragarh, NH4 Belgaum Dharwad, NH-3 Pimpalgaon – Nashik – Gonde Road (JV with L&T), Jaora – Nayagaon Road, Chennai Outer Ring Road, Modhul – Nippani Road, Indore Edalabad Road, Wainganga Bridge, Ahmednagar Aurangabad Road.

**HCC**


**GMR**


**Notes:** NH – National Highway
**Source:** Sutherland Research
GROWTH DRIVERS
STRONG DEMAND AND POLICY SUPPORT DRIVING INVESTMENT

Growing demand
- Rise in two and four wheelers
- Increasing freight traffic
- Strong trade and tourist flows between states

Policy support
- Greater Government focus on infrastructure
- Standardised processes for bidding and tolling, and clear policy framework
- Tax sops, FDI, FII encouragement

Increasing investment
- In 2019–20, Rs 36,691 crore (US$ 5.24 billion) was allocated to NHAI
- For FY20, transfer from Central Road and Infrastructure Fund (CRIF) is estimated at Rs 54,539 crore (US$ 7.80) from the revised estimates of Rs 51,679 (US$ 7.39 billion) in FY19
- The Ministry allocated Rs 3,150 crore (US$ 0.45 billion) for maintenance of roads and highways in FY20 and Rs 280 crore (US$ 40 million) for road transport and safety

Source: Make in India
Growing domestic trade flows have led to rise in commercial vehicles and freight movement; supported by rise in production of commercial vehicles to 752,022 in FY20.

Road’s traffic share of the total traffic in India has grown from 13.8% to 65% in freight traffic and from 32% to 90% in passenger traffic over 1951–2019.

Higher individual discretionary spending has led to increased spending on cars, motorbikes and scooters.

- Domestic sale of passenger vehicles was 2.77 million in FY20.
- Domestic sale of commercial vehicles in the country was 717,688 in FY20.

Note: ^- Only Oct–March 2016 data is available for 2015–16.
Source: SIAM
## POLICY INITIATIVES IN THE RIGHT DIRECTION … (1/2)

### Rural development

- Pradhan Mantri Gram Sadak Yojana (PMGSY), a scheme for development of rural roads in India. The Government of India has succeeded in providing road connectivity to 86% of the 178,184 eligible rural habitations by July 2020.
- To widen and revamp 1.25 lakh km of roads, Government has approved the launch of phase-III of its rural road programme, Pradhan Mantri Gram Sadak Yojana (PMGSY).
- Under Union Budget 2020–21, the Government of India has allocated Rs 19,500 crore (US$ 2.79 billion) for Pradhan Mantri Gram Sadak Yojana (PMGSY).
- As per Union Budget 2019–20, 30,000 km of PMGSY roads were built using green technology, waste plastic and cold mix technology, thereby reducing carbon footprint.
- PMGSY-III is envisaged to upgrade 1,25,000 km of road length over the next five years with an estimated cost of Rs 80,250 crore (US$11.48 billion).

### Taxes and other sops

- Companies enjoy 100% tax exemption in road projects for 5 years and 30% relief over the next 5 years.
- Companies have been granted a capital of up to 40% of the total project cost to enhance viability.

### Encouragement of infrastructure debt funds (IDFs)

- Government of India has set up the India Infrastructure Finance Company (IIFCL) to provide long-term funding for infrastructure projects.
- Interest payment on external commercial borrowings for infrastructure are now subject to a lower withholding tax of 5% vis-a-vis 20% earlier.
- IDF income is exempt from income tax.
- As per Union Budget 2019–20, the Government proposed to permit transfer/sale of investments made by FII/FPIs in debt securities issued by Infrastructure Debt Fund – Non-Banking Finance Companies (IDF-NBFCs) to any domestic investor within the specified lock-in period.

*Source: News Articles, Union Budget 2019–20*
### Bhoomi Rashi
- The portal accelerates the process of publication of notifications for land acquisition.
- It has been useful in reducing the time taken for providing notification regarding approval and publication of land acquisition.

### Bidder Information Management System (BIMS)
- BIMS is a database that provides information about bidders’ basic details, civil works experience, cash accruals and network, annual turnover, etc.
- This portal will enable objective and transparent evaluation which will accelerate project implementation.

### Central Road Fund (CRF)
- In 2019–20, the transfer from CRIF was estimated at Rs 54,539 crore (US$ 7.80 billion), which was 6% increment from the revised estimates of Rs 51,679 crore (US$ 7.39 billion) in 2018–19.

### Goods and Services Tax (GST)
- The GST on construction equipment has been reduced to 18% from 28%, which is expected to give a boost to infrastructure development in the country.

### Investment in roads and other infrastructure
- Under Union Budget 2020–21, the Government has allocated Rs 91,823 crore (US$ 13.14 billion) under the Ministry of Road Transport and Highways.

### Bharatmala Pariyojana Project
- A total length of 34,800 km in road projects have been proposed to be constructed with an estimated outlay of Rs 5.35 trillion (US$ 74.15 billion) under Bharatmala Pariyojana Phase-I.
- NHAI will consider only those projects that require minimal land acquisition worth Rs 3 trillion (US$ 42.92 billion) under Bharatmala Pariyojana scheme.
- A total of 65,000 km of roads and highways are to be constructed under Bharatmala Pariyojana.

**Note:** * - investments include Budgetary support, IEBR refers to Internal and Extra Budgetary Resources and constitutes the resources raised by the public sector units through profits, loans and equity and Private sector investments

**Source:** News Articles, Press releases, Ministry of Road Transport and Highways
Roads have been the key focus area for budget allocations over the years.

Under Union Budget 2020–21, the Government has allocated Rs 91,823 crore (US$ 13.14 billion) under the Ministry of Road Transport and Highways.

Between FY16 and FY21, budget outlay for road transport and highways increased at a robust CAGR of 13.10%.

Huge investment have been made in the sector with total investment increasing more than three times from Rs 51,914 crore (US$ 7.43 billion) in 2014–15 to Rs 158,839 crore (US$ 22.73 billion) in 2018–19.

Source: Respective Union Budgets
FUTURE PROSPECTS REMAIN BRIGHT FOR THE ROAD SECTOR

- National Highway Development Project (NHDP) is a 7-phase project amounting to US$ 60 billion. The projects aims at widening, upgradation and rehabilitation of 47,054 km of national highways.
- The Ministry of Road Transport and Highways had fixed an overall target to award 15,000 km projects and construction of 10,000 km national highways in FY19. A total of about 295 major projects including bridges and roads were expected to be completed during the same period.
- In the coming years, NHAI’s increased delegation along with Bharatmala Pariyojana initiative is expected to enable growth in awarding momentum.
- The funds are provided by NHAI for projects under the National Highways Development Project (NHDP) which include the Golden Quadrilateral, the North–South and East–West Corridors, and four-laning of 12,109 kms under phase III.
- The Ministry of Road Transport and Highways is expected to award road projects with a total length of around 4,500 kms worth Rs 50,000 crore (US$ 7.15 billion) in 2020.
- In April 2020, Government set a target of constructing roads worth Rs 15 lakh crore (US$ 212.80 billion) in the next two years.
- In June 2020, NHAI became fully digital with the launch of unique cloud based and Artificial Intelligence powered Big Data Analytics platform – Data Lake and Project Management Software.

Source: NHAI, MoRT&H Annual Report 2018–19, Crisil Research
PRIVATE FUNDING BEING ENCOURAGED TO REDUCE FINANCE CONSTRAINTS

- Maif 2 Investments India Pvt Ltd became the first largest foreign investment in Indian roads sector under toll-operate-transfer (TOT) mode worth Rs 9,681.5 crore (US$ 1.50 billion).

Note: ^ - FDI in construction development Includes: Townships, housing, built-up infrastructure and construction-development projects
Source: DPIIT
KEY INDUSTRY ASSOCIATIONS
## INDUSTRY ASSOCIATIONS

<table>
<thead>
<tr>
<th>Ministry of Roads Transport and Highways</th>
<th>National Highway Authority of India</th>
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<tbody>
<tr>
<td>Transport Bhavan</td>
<td>G 5 and 6, Sector 10, Dwarka</td>
</tr>
<tr>
<td>1, Parliament Street</td>
<td>New Delhi – 110 075</td>
</tr>
<tr>
<td>New Delhi – 110001</td>
<td>Phone: 91-11-25074100, 25074200</td>
</tr>
<tr>
<td>Phone: 91-11-23719097, 23719955</td>
<td>Fax: 91-11-25093507, 25093514</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:ifcmost@nic.in">ifcmost@nic.in</a></td>
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<table>
<thead>
<tr>
<th>Indian Roads Congress</th>
<th>Central Road Research Institute</th>
</tr>
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<tbody>
<tr>
<td>Sector 6, (Near RBI Quarters), RK Puram, New Delhi – 110022</td>
<td>Delhi-Mathura Road,</td>
</tr>
<tr>
<td>Phone: 91-11-26185303</td>
<td>New Delhi – 110 025</td>
</tr>
<tr>
<td>Secretariat: 91-11-26716778, 26183669, 26185273, 26185315, 26185319</td>
<td>Phone: 91-11-26848917, 26832173</td>
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<td>E-mail: <a href="mailto:director.crrri@nic.in">director.crrri@nic.in</a></td>
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USEFUL INFORMATION
GLOSSARY

- BOT: Build Operate Transfer
- CAGR: Compound Annual Growth Rate
- EPC: Engineering, Procurement and Construction
- FDI: Foreign Direct Investment
- FY: Indian Financial Year (April to March) – So FY10 implies April 2009 to March 2010
- GOI: Government of India
- Rs: Indian Rupee
- LCV: Light Commercial Vehicles
- MoRTH: Ministry of Roads Transport and Highways
- NH: National Highway
- NHAI: National Highway Authority of India
- NHDP: National Highway Development Project
- US$: US Dollar
### Exchange Rates (Fiscal Year)

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<td>2018–19</td>
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<td>2019–20</td>
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### Exchange Rates (Calendar Year)

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<td>68.36</td>
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<td>2019</td>
<td>69.89</td>
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*Source: Reserve Bank of India, Average for the year*
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