



## MEP INFRASTRUCTURE DEVELOPERS LIMITED

### Corporate Presentation

June 2016

*This presentation and the following discussion may contain “forward looking statements” by MEP Infrastructure Developers Limited (“MEPIDL” or the “Company”) that are not historical in nature. These forward looking statements, which may include statements relating to future results of operations, financial condition, business prospects, plans and objectives are based on the current beliefs, assumptions, expectations, estimates and projections of the management of MEPIDL about the business, industry and markets in which MEPIDL operates.*

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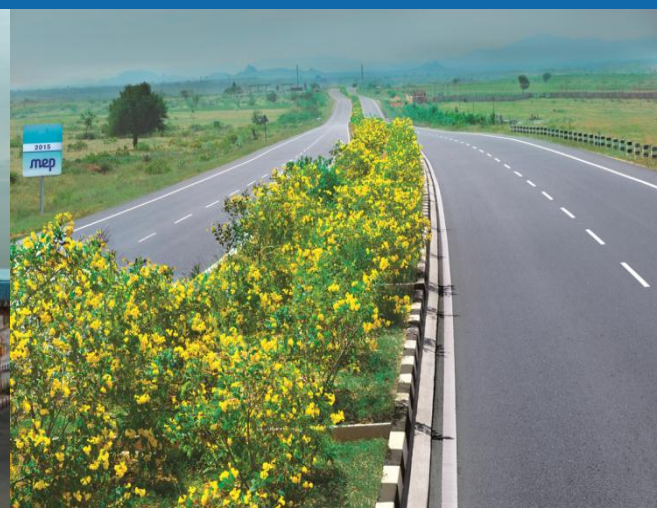
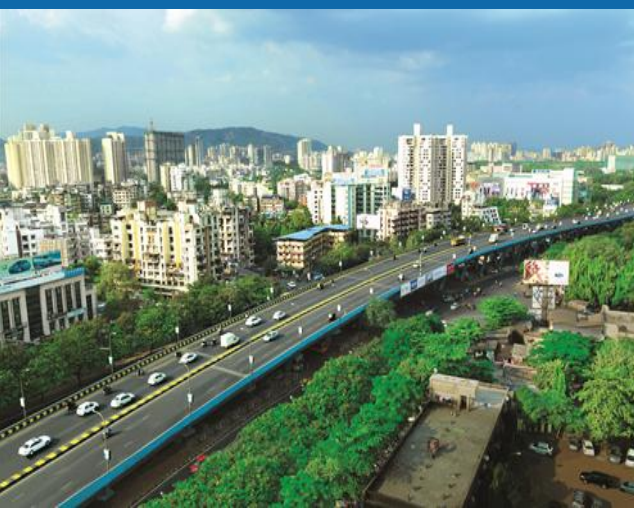
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## Company Overview

## Leading Player In Toll Collection and OMT Projects

- MEPIDL is the leading player in OMT and Toll Collection in India <sup>(1)</sup>.
- Commenced operations in 2002 - toll collection at the five Mumbai Entry Points for 8 years.
- Progressed into winning one of the largest OMT contracts at the Mumbai Entry Points – toll collection at the five Mumbai Entry Points and maintenance of 27 flyovers and certain allied structures in Mumbai for a period of 16 years until 2026.
- MEPIDL (in Joint Venture with Sanjose India Infrastructure & Construction Pvt. Ltd.) has recently forayed into road development / construction by actively participating in Hybrid Annuity Model road projects.

### Strong Execution Experience

- Successful operational experience of over 13 years.
- Pan India presence across 8 states.
- Executed more than 110 projects.
- Completed 95 projects including 182 toll plazas and 1,086 lanes.
- 21 operational projects as on 31<sup>st</sup> May 2016 –
  - 16 long term and short term toll collection projects (28 toll plazas) in 8 states.
  - 4 long term OMT projects (covering 2,334 lane km and 13 toll plazas).
  - 1 long term BOT project (covering 42 lane km and 5 toll plazas).
- Recently won 5 HAM projects in Maharashtra & Gujarat in March-April 2016, worth Rs 32,323.1 mn covering 788.3 lane-km.



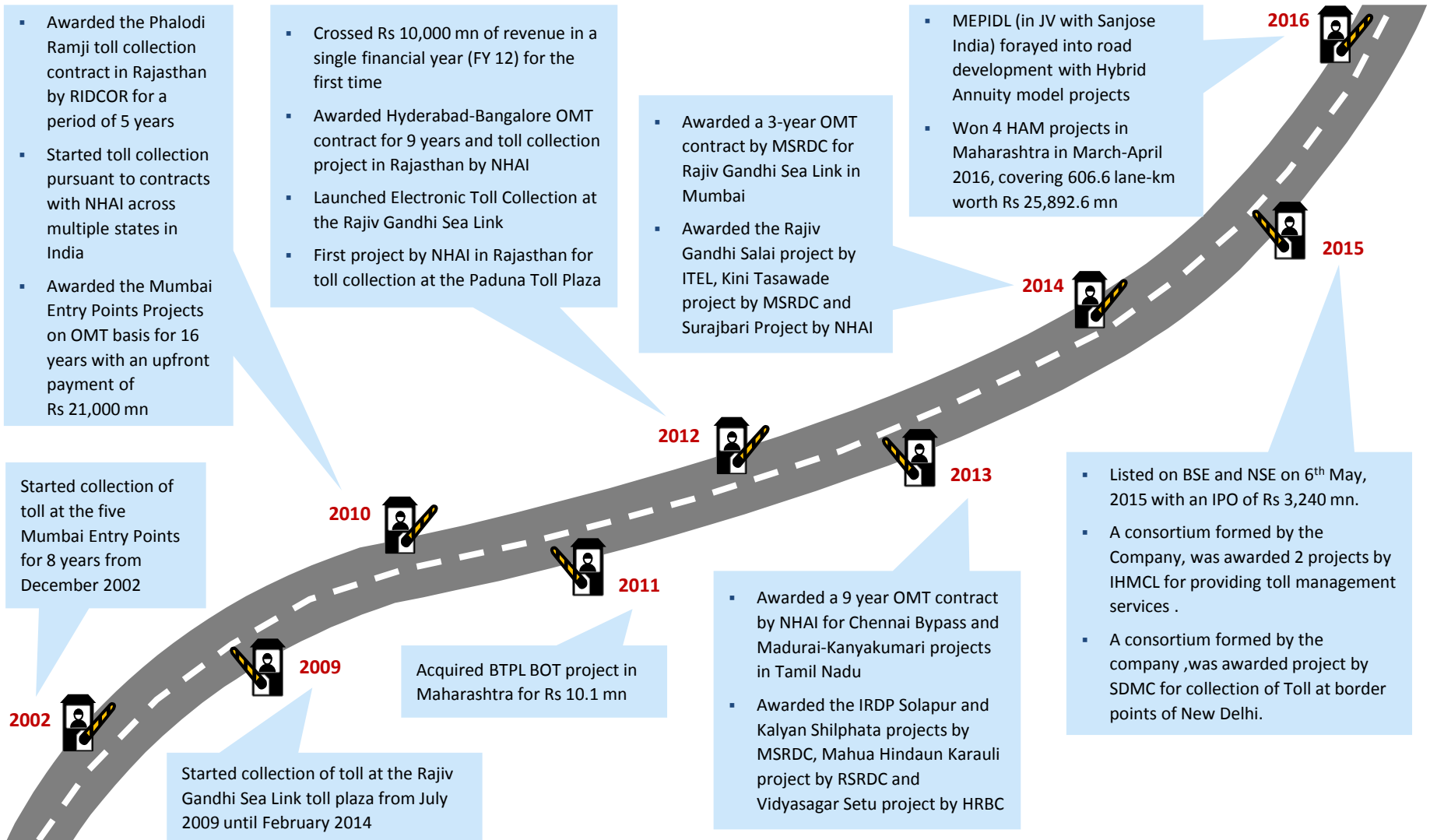
### Strong Qualifications & Capabilities

- Pre-qualified by NHAI and various statutory corporations and government companies for bidding in Tolling and OMT space .
- Strong relationships with various statutory and government companies, primarily NHAI, MSRDC, RSRDC, RIDCOR, MJPRCL and HRBC.
- Strong promoter and management team capabilities.
- Strong workforce as on 31<sup>st</sup> May 2016 –
  - ~ 3,218 employees in Tolling and maintenance activities.
  - ~ 1,014 contract workforce at various toll plazas.

(1) Source: Assessment of Operate-Maintain-Transfer (OMT) and Toll Collection Market for Road Projects in India” dated June 2014, by CRISIL Limited.



# Key Milestones



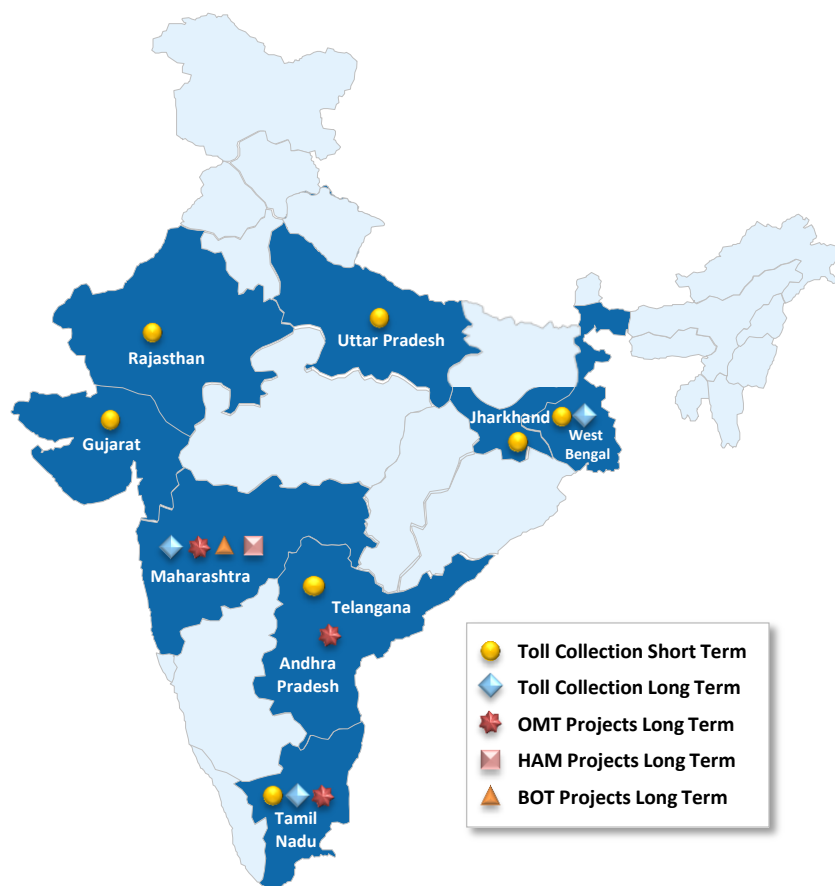
Sanjose India: Sanjose India Infrastructure & Construction Pvt. Ltd.

MSRDC – Maharashtra State Road Development Corporation Limited, SDMC- South Delhi Municipal Corporation

# Diversified Project Portfolio With Pan India Presence



## Current Portfolio Across Eight States In India



## Current Project Mix

Location	OMT	Long Term Toll	Short Term Toll	HAM	BOT	Total
Maharashtra	2	3		4	1	10
Tamil Nadu	1	1	1	-	-	4
Rajasthan	-	-	3*	-	-	1
Gujarat	-	-	1	1	-	2
Uttar Pradesh	-	-	4	-	-	4
West Bengal	-	1	1	-	-	2
Andhra Pradesh	1	-	-	-	-	1
Jharkhand			1	-		1
<b>Total</b>	<b>4</b>	<b>5</b>	<b>11</b>	<b>5 *</b>	<b>1</b>	<b>26#</b>

Company's ability to manage multiple projects across different geographies provides a significant advantage to efficiently manage its growth and expansion

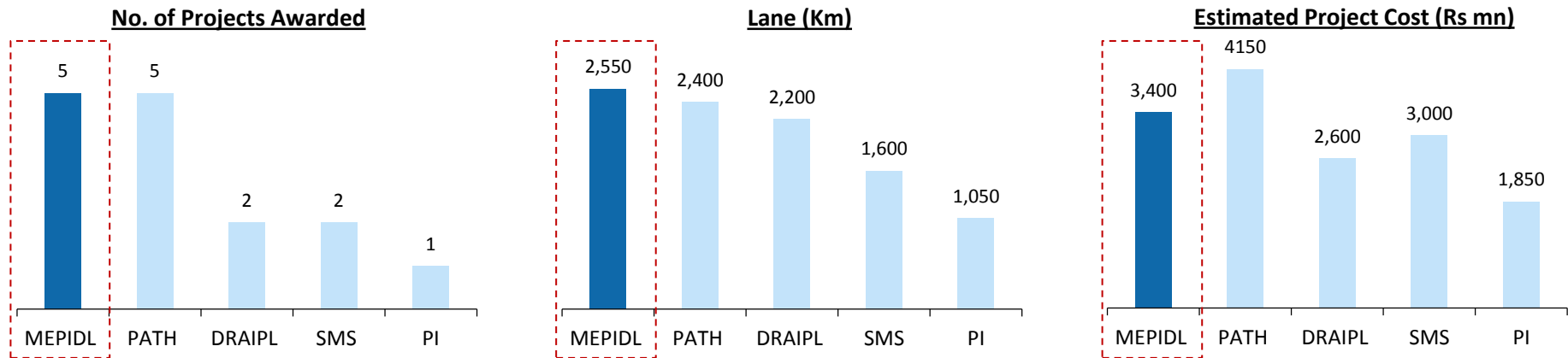
Note – Refer annexure for project specific details

- MEPIDL – Sanjose India JV has recently won 5 HAM projects in Maharashtra & Gjarat. The projects are currently in process of achieving financial closure
- # This comprises of 21 operational projects and 5 recently won HAM projects, within our project portfolio

# Leadership Position In OMT And Toll Collection In India



## Leading Player In The OMT



PATH – Prakash Asphaltting & Toll Highways (India) Limited; DRAIPL – Dinesh Chandra Agarwal Infracon Private Limited; SMS – SMS Infrastructure; PI – Patel Infrastructure

## Leading Player In Toll Collection Over FY12-FY15

During FY12 to FY15, financial bids were opened / awarded for 324 NHAI toll projects, out of which MEPIDL bid for 59% of the projects.

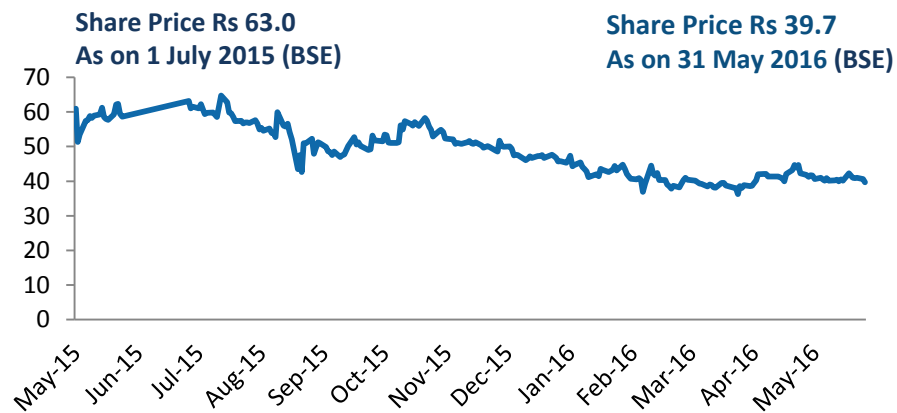
	MEPIDL	Konark	Skylark	Eagle Infra	Sangam India	Sahakar Global	Shiva Corporation	SMS Infra
Total Projects (Bids / Executed)	59%	20%	21%	40%	3%	29%	7%	3%
H1 / Total Bids	45%	41%	25%	34%	45%	45%	25%	33%

Source: Assessment of Operate-Maintain-Transfer (OMT) and Toll Collection Market for Road Projects in India” dated April 2016 by CRISIL Limited



# Shareholding Structure

## Share Price Performance



## Market Data

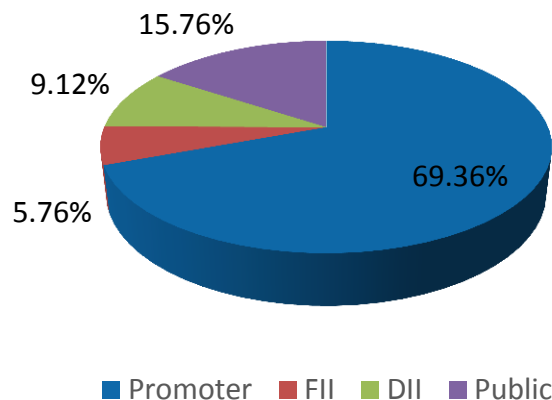
As on 31.05.2016 (BSE)

Market Capitalization (Rs Mn)	6,45.5
No. of shares outstanding (Mn)	162.6
Face Value (Rs.)	10.0
52 week High-Low (Rs.)	34.2 – 67.0

Source – BSE

## % Shareholding – 31.03.2016

### Shareholding pattern



Source – BSE

## Key Institutional Investors – 31.03.2016









## % Holding

HDFC Trustee company Ltd	8.86%
EM Resurgent Fund	4.60%
Orange Mauritius Investments	1.16%
Four Dimensions	0.57%
IL&FS Sec	0.34%

Source – BSE

# Experienced Promoters And Management Team – Board Of Directors

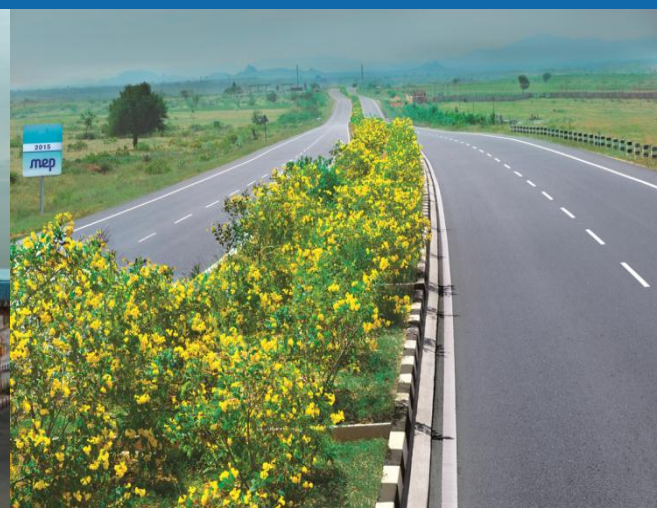
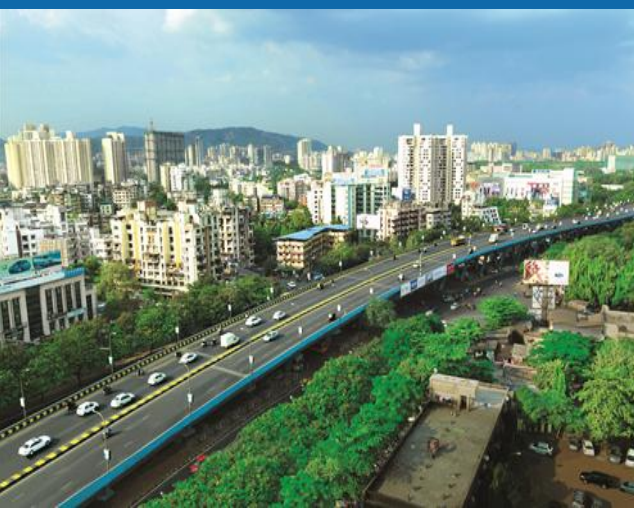


Name & Designation	Experience
 <p><b>Dattatray P. Mhaiskar</b> <i>Chairman, Non Independent and Non Executive Director</i></p>	<ul style="list-style-type: none"> <li>▪ Founding Director and Promoter of the Company</li> <li>▪ Holds a Diploma in Civil Engineering from Sir Cursow Wadia Institute of Electrical Technology, Pune</li> <li>▪ 49+ years of experience in Construction and Infrastructure industry</li> </ul>
 <p><b>Jayant D. Mhaiskar</b> <i>Vice Chairman &amp; Managing Director</i></p>	<ul style="list-style-type: none"> <li>▪ Founding Director and Promoter of the Company</li> <li>▪ 19 years of experience in the Tolling and Infrastructure industry</li> </ul>
 <p><b>Anuya J. Mhaiskar</b> <i>Non Independent and Non Executive Director</i></p>	<ul style="list-style-type: none"> <li>▪ Bachelor's degree in Arts with major in Philosophy from Ramnarain Ruia College, University of Mumbai</li> <li>▪ 17 years of experience in the field of Administration</li> </ul>
 <p><b>Murzash Manekshana</b> <i>Executive Director</i></p>	<ul style="list-style-type: none"> <li>▪ Qualified Chartered Accountant with a Bachelor's degree in Commerce from University of Mumbai</li> <li>▪ 23 years of work experience in areas of finance &amp; risk management, fund raising, investment banking, strategic planning and business development</li> </ul>
 <p><b>Deepak Chitnis</b> <i>Independent Director</i></p>	<ul style="list-style-type: none"> <li>▪ Bachelor's degree in Science and Master's degree in Law from Mumbai University</li> <li>▪ 32 years of experience in the field of Law</li> </ul>
 <p><b>Khimji Pandav</b> <i>Independent Director</i></p>	<ul style="list-style-type: none"> <li>▪ Fellow Chartered Accountant with a Bachelor's degree in Commerce from University of Mumbai</li> <li>▪ Held key posts in the field of Finance and Accounts and also was a Financial Advisor to CIDCO and MSRDC</li> </ul>
 <p><b>Vijay Agarwal</b> <i>Independent Director</i></p>	<ul style="list-style-type: none"> <li>▪ Fellow Chartered Accountant with a Bachelor's degree in Commerce from Jodhpur University</li> <li>▪ 33 years of experience in cross-border acquisitions and transactions, advising in foreign service collaboration arrangements, providing statutory, management and tax audit services and providing tax advisory services</li> </ul>
 <p><b>Preeti Trivedi</b> <i>Independent Director</i></p>	<ul style="list-style-type: none"> <li>▪ Fellow Chartered Accountant with a Bachelor's degree in Commerce from University of Mumbai</li> <li>▪ 32 years of experience in management consulting, corporate finance, corporate restructuring, mergers and amalgamation and advisory services</li> </ul>

# Experienced Promoters And Management Team – Key Management



Name & Designation	Experience
<b>Uttam Pawar</b> <i>Chief Tolling Officer</i>	<ul style="list-style-type: none"> <li>Bachelor's degree in Commerce from Shivaji University, Kolhapur with over 25 years of experience in tolling business</li> <li>Previously associated with Ideal Road Builders Private Limited</li> </ul>
<b>Subodh Garud</b> <i>Chief Operating Officer</i>	<ul style="list-style-type: none"> <li>Bachelor's degree in Commerce from University of Mumbai with 20 years of experience in toll operations and automization of toll projects</li> <li>Previously associated with A. J. Tolls Private Limited, Ideal Road Builders Private Limited and Dhruv Consultancy</li> </ul>
<b>Sameer Apte</b> <i>Chief Operating Officer (Corporate)</i>	<ul style="list-style-type: none"> <li>Bachelor's degree in Commerce from University of Mumbai with 16 years of experience in tolling operations</li> <li>Previously associated with Ideal Toll &amp; Infrastructure Private Limited and Ideal Road Builders Private Limited</li> </ul>
<b>Mohan Khandkar</b> <i>President – Human Resources</i>	<ul style="list-style-type: none"> <li>47 years of work experience, with over 5 years of experience in human resource development</li> <li>Previously associated with Ideal Road Builders Private Limited as General Manager (Tolls), Heubach Colours &amp; Khatau Group.</li> </ul>
<b>M. Sankaranarayanan</b> <i>Chief Financial Officer</i>	<ul style="list-style-type: none"> <li>Chartered Accountant, Company Secretary, and a fellow member of the ICAI and holds Diploma in Information Systems Audit (DISA) from ICAI.</li> <li>Over 18 years of experience in the field of finance, accounting, audit and taxation</li> <li>Previously associated with SKS Ispat and Power Limited, Hotel Leelaventure Limited and was a partner of M. Srinivasan &amp; Associates, Chartered Accountants, Chennai</li> </ul>
<b>Sainath Gurav</b> <i>Director- subsidiary</i>	<ul style="list-style-type: none"> <li>Master's degree in Business Administration from Institute for Technology and Management, and Advance Diploma in Network Center Computing from NIIT with over 15 years of experience</li> <li>Previously associated with RSM Astute Consulting Private Limited and Ideal Toll &amp; Infrastructure Private Limited</li> <li>Responsible for strategic and technology innovation within the group</li> </ul>
<b>Shridhar Phadke</b> <i>Company Secretary &amp; Compliance Officer</i>	<ul style="list-style-type: none"> <li>Qualified Company Secretary with over 16 years of work experience</li> <li>Master's degree in Commerce from University of Pune</li> <li>Previously associated with J. H. Ranade &amp; Associates and Kshitij Investment Advisory Company Limited and Ideal Energy Projects Limited</li> </ul>
<b>Dinesh Padalkar</b> <i>Assistant Vice President, Toll Audit</i>	<ul style="list-style-type: none"> <li>Bachelor's degree in Commerce from University of Mumbai with over 16 years of experience in audit</li> <li>Previously associated with IRB Infrastructure Developers Limited, Yash Jewels and JAN Transport</li> </ul>
<b>Arvind Vinze</b> <i>Head Corporate Communications</i>	<ul style="list-style-type: none"> <li>Masters degree in Journalism (Communication) from Dr. Harisingh Gaur Vishvavidyalaya</li> <li>27+ years of experience, Previously associated with Ideal Toll &amp; Infrastructure Private Limited, Mumbai Metro One Private Limited, Mumbai Doordarshan and Pradeep Metal Treatment Chemicals Private Limited</li> </ul>



Understanding Our Business Model

# Understanding Our Business Model: Asset Light Business Model



Business Model	Capital Employed	Development / Construction Risk	Traffic Risk	Financing Risk	Concession Period	Maintenance Responsibility	Revenues/Payments from authority
OMT	Minimal	No	Yes	Yes	~ 9+ years (Long-term)	Yes	<b>Toll Revenues</b> Traffic Growth - 5-8% YoY Toll Rate hike – Fixed Rate + % of WPI MIPL – ~ 18% hike every 3 years
Toll Collection	Minimal	No	Yes	Yes	~ 1 year (Short-term) ~ 1-5 years (Long-term)	No maintenance, Only toll collection	<b>Toll Revenues</b> Traffic Growth - 5-8% YoY Toll Rate hike – Fixed Rate + % of WPI
HAM	Moderate (40% construction support from Authority)	Yes	No	Yes	15* years (Long-term)	Yes	Annuity payment + interest (bank rate + 3%), O&M payment (inflation indexed)

\* This is 15 years post initial construction period of 2-2.5 years

Business Model	Capital Intensity
Toll Collection – Short Term	<ul style="list-style-type: none"> <li>Equity free portion of the business.</li> <li>No initial capex.</li> <li>No upfront payment to Authority required.</li> <li>Performance security (funded / non-funded) needs to be provided. (Normally funded via working capital)</li> </ul>
Toll Collection – Long Term	<ul style="list-style-type: none"> <li>No initial capex.</li> <li>Upfront payment to Authority (mainly non-NHAI).</li> <li>Performance security (funded / non-funded) needs to be provided.</li> </ul>
OMT – Long Term	<ul style="list-style-type: none"> <li>No Upfront payment to Authority required for any OMT project under NHAI.</li> <li>Upfront payment to authority required for certain State OMT projects.</li> <li>Performance security (non-funded) needs to be provided .</li> <li>Payment to Authority is an operational expense and needs to be paid from toll cash flows on a monthly instalment basis.</li> </ul>
HAM – Long Term	<ul style="list-style-type: none"> <li>60% of project cost financed by the concessionaire to be recovered as annuity payments over 15 years</li> <li>Minimal initial capex.</li> <li>Biannual O&amp;M payments over 15 years</li> </ul>

# Understanding Our Business Model: Balanced Mix Of OMT, Toll Collection and HAM Projects



Well-balanced Mix Of Short Term & Long Term Projects Is Essential For Long Term Sustenance

## Lifecycle of Toll Collection Projects

### Short Term Projects

- Pure toll collection project is awarded initially on a short term basis when the newly constructed project is covered under the defect liability period.
- During the defect liability period, the project contractor is responsible for the maintenance of the project.



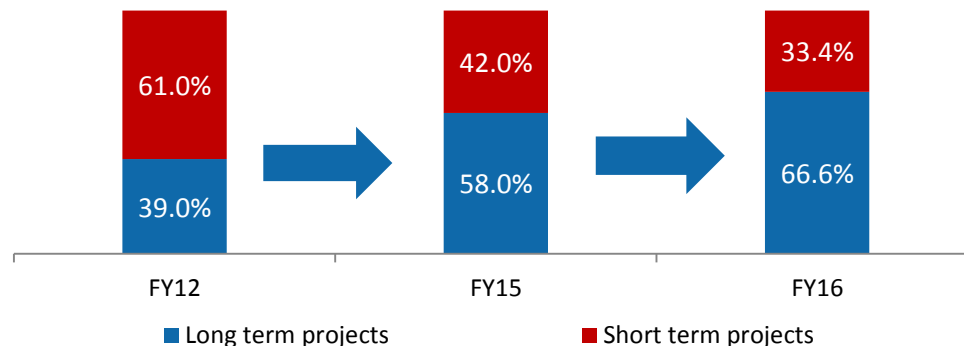
### Long Term Projects

- Post the completion of the initial defect liability period of 2-3 years, the toll project is bidded for OMT Project on a long term basis.
- Short term projects provide the visibility for future pipeline of long term OMT projects

## HAM Projects – Dual Opportunity

- Provides long term revenue visibility in form of Annuity payments over 15 years, post initial construction period of 2-2.5 years.
- Post completion of construction, contract for toll collection to be bidded out separately.

## Focus On Increasing Revenue Contribution From Long Term Projects







Sustainable Competitive Advantages

# Strong Execution Capabilities With Proven Track Record



## Expertise And Experience In Project Management

- One of the first few companies focusing to operate on pure toll collection business model.
- Successful operational experience of over 13 years with a pan India presence across 8 states.
- Completed 95 projects including 182 toll plazas and 1086 lanes.
- 21 projects operational projects– 16 toll collection projects (24 toll plazas) in 8 states, 4 OMT projects (covering 2,334 lane kms and 13 toll plazas) and 1 BOT project (covering 42 lane km and 5 toll plazas).
- Recently won 5 HAM projects (4 in Maharashtra and 1 in Gujarat) in March-April 2016, covering 788.3 lane-km worth Rs 32,323.1 mn.
- Strong track record of being re-awarded projects which were previously operated by the Company.
  - Project for collection of toll at Chirle and Karanjade in Maharashtra.
  - Project for collection of toll at the toll plazas on Ahmedabad – Vadodara Expressway in Gujarat.
  - Project for collection of toll at Surajbari, Dasna & Dastan in Gujarat, UP & Maharashtra respectively.
  - Awarded the Mumbai Entry Points Project in 2010 on an OMT basis for 16 years after having previously undertaken collection of toll from Dec-2002 until Nov-2010.
  - Awarded RGSL Project in 2014 on an OMT basis after having undertaken collection of toll at the RGSL since its opening in 2009.

## Strong Relationship With Statutory And Government Companies



MUMBAI - JNPT PORT  
ROAD COMPANY  
LIMITED



Leading toll operator in India with an overall experience of over 13 years

## Tendering

- In-house business development team prepares tendering documents for all the bids.
- Company's ability to tender appropriately depends significantly on the assessment of the future traffic patterns and the amount of toll to be collected.

## Traffic Survey and Revenue Forecasting

- The in-house traffic study and revenue forecasting capacity and expertise strengthens the Company's ability to evaluate new projects and tender effectively for toll collection and OMT contracts .
- The final revenue model created is discussed and finalized by the senior management for bidding purpose.
- Dual responsibility of conducting pre-bidding traffic surveys as well as monitoring loss in revenue on account of non-paying vehicles for ongoing projects.

## Civil Construction and Maintenance

- In-house experts with significant experience for supporting and managing all EPC and maintenance related activities.
- In-house equipment and resources availability for implementing routine and major maintenance works.

## Financial Closure

- The finance and operations team coordinates activities relating to achieving financial closure by obtaining fund and non-fund based loan facilities from banks / financial institutions.

## Tolling Operations

- As of 31 March 2016, ~ 3,306 employees in Tolling and maintenance activities.
- ~ 999 contract workforce at various toll plazas.

Integrated structure facilitates efficient bidding process and completion of projects on a profitable basis

## Use of Advanced Technology for Toll Collection leads to improved Operational Efficiency And Transparency

### ETC System:

- Electronic Toll Collection (ETC) systems are based on prepaid mode of toll collection either through smart cards or RFID technology based tags.
- ETC systems reduce cash management resulting in revenue enhancement as well as improved transparency in toll collection.
- ETC systems also help in reducing the clearing time for vehicles at the toll stations thereby improving operational efficiency.
  - RFID based ETC system is currently installed at RGSL toll plaza in Mumbai, the Vidyasagar Setu Project, and Mumbai Entry Points Project.
  - Smart card based ETC system is currently installed at the Mumbai Entry Points Project, Chennai Bypass Project, Hyderabad-Bangalore Project, Madurai-Kanyakumari Project, RGSL Project, the Dankuni toll plaza in West Bengal and the Kalyan-Shilphata Project.
- Semi-automated or fully-automated toll collection systems collect and store traffic and payment data, thereby reducing the manual intervention.
- A semi-automated system consists of revenue collection software desktop, barrier gate, smart cards and monitoring cameras.
- Additionally, a fully-automated system also consists of vehicle counting classifier, vehicle audit system, communication channels and traffic control equipment.



### Weigh-in-motion Technology:

- Use of weigh-in-motion technology for projects where weight based toll collection is mandated. These weight based tolling systems are integrated with the fully automatic toll collection system for enhanced revenue controls.

**Centralized control room at Mumbai which Monitors with 891 cameras at Multiple Locations, 24 X 7, 365 days with experienced team.**





## Consolidated Financials

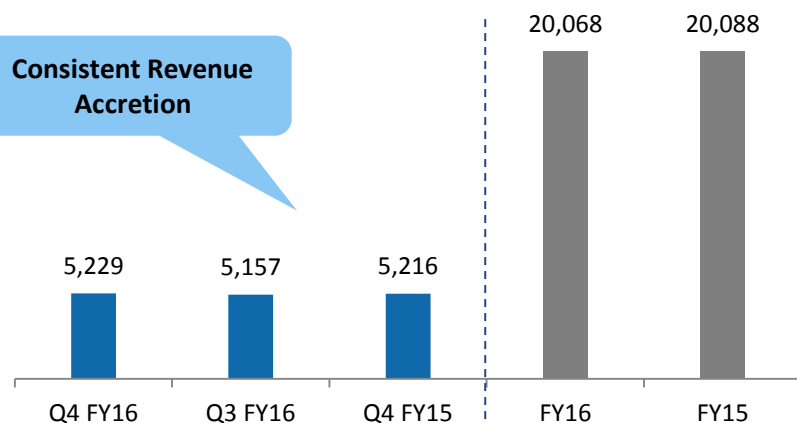
# Q3 & 9M FY16 Results Highlights



In Rs Mn

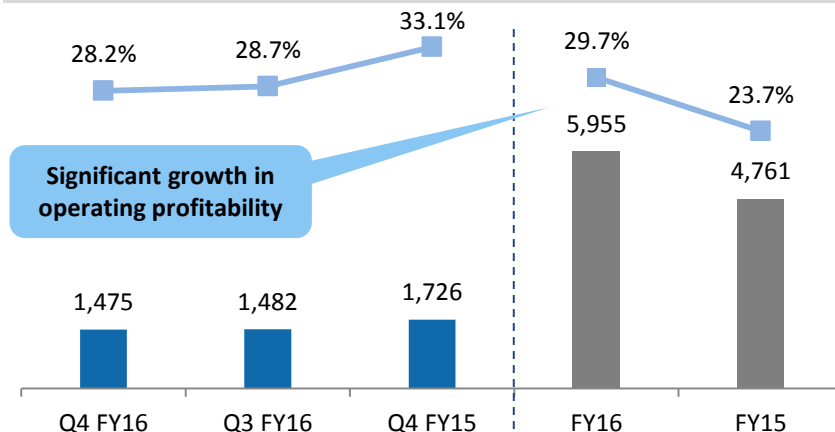
## REVENUE FROM OPERATIONS

Consistent Revenue Accretion



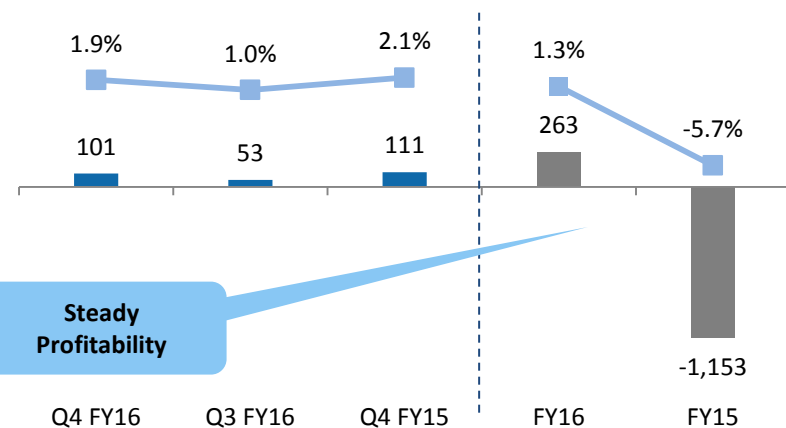
## EBITDA & EBITDA MARGIN

Significant growth in operating profitability



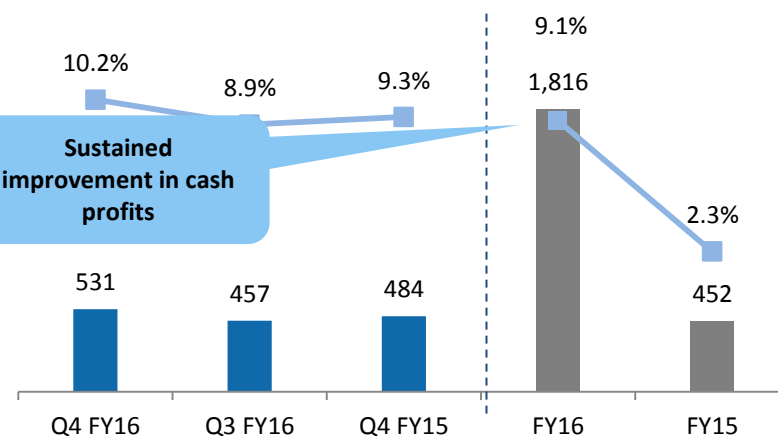
## PAT & PAT MARGIN

Steady Profitability



## CASH PROFIT & CASH PROFIT MARGIN

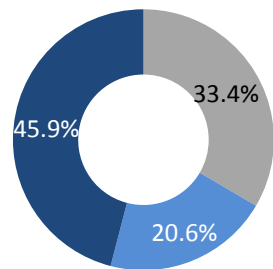
Sustained improvement in cash profits



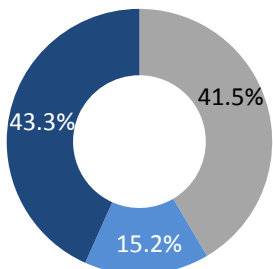


REVENUE BREAKUP

FY16

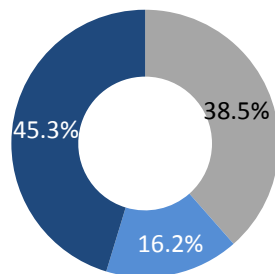


FY15

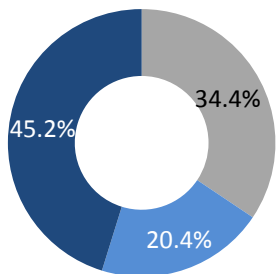


■ Long Term - OMT      ■ Short Term – Toll Collection      ■ Long Term – Toll Collection

(Q4) FY16



(Q3) FY16



■ Long Term - OMT      ■ Short Term – Toll Collection      ■ Long Term – Toll Collection

# Consolidated P&L Statement

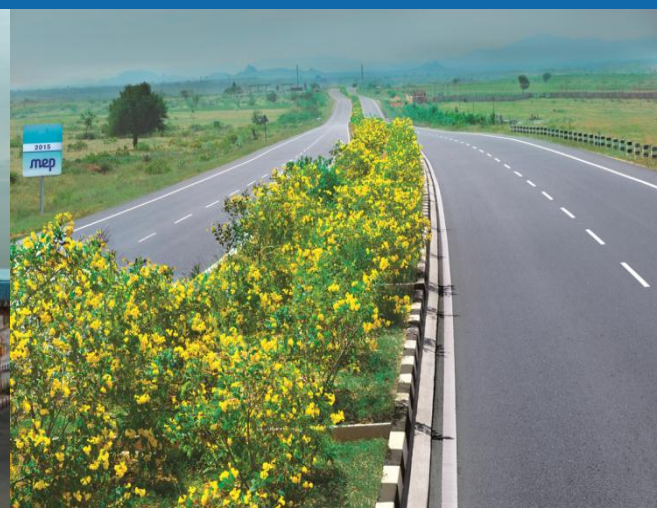
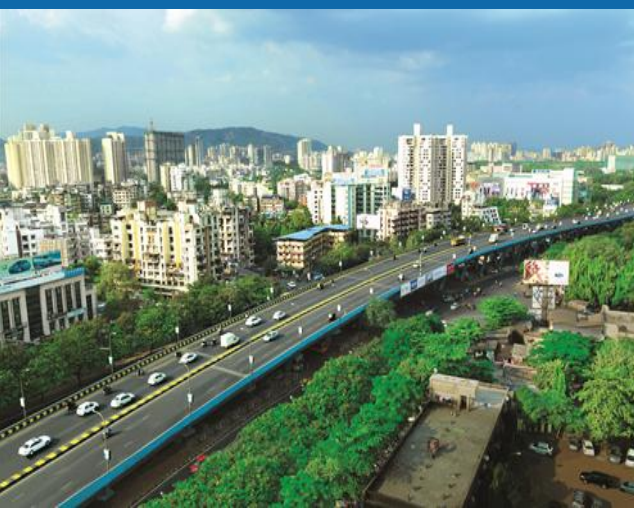


Particulars in Rs. Mn	FY12	FY13	FY14	FY15	FY16
<b>Revenue from Operations</b>	<b>10,801</b>	<b>12,800</b>	<b>11,979</b>	<b>20,088</b>	<b>20,068</b>
Other Income	565	220	433	325	407
Operating and Maintaining Expenses	6,679	8,332	8,015	14,570	13,333
Employee Expenses	413	525	499	761	775
Other Expenses	219	294	360	321	411
<b>EBITDA</b>	<b>4,055</b>	<b>3,869</b>	<b>3,538</b>	<b>4,761</b>	<b>5,955</b>
<b>EBITDA Margin (%)</b>	<b>37.5%</b>	<b>30.2%</b>	<b>29.5%</b>	<b>23.7%</b>	<b>29.7%</b>
Depreciation	947	990	1,303	1,799	1,706
Finance Costs	3,766	3,765	3,797	4,036	3,832
<b>PBT</b>	<b>-658</b>	<b>-886</b>	<b>-1,562</b>	<b>-1,075</b>	<b>417</b>
Taxes	-127	45	-236	79	154
<b>PAT before Minority Interest</b>	<b>-531</b>	<b>-931</b>	<b>-1,326</b>	<b>-1,153</b>	<b>263</b>
Minority Interest	54	0	-9	0	0
Pre-acquisition profit/loss adjustment	0	0	43	0	0
<b>PAT</b>	<b>-477</b>	<b>-931</b>	<b>-1,292</b>	<b>-1,153</b>	<b>263</b>
<b>PAT Margin (%)</b>	<b>-4.4%</b>	<b>-7.3%</b>	<b>-10.8%</b>	<b>-5.7%</b>	<b>1.3%</b>

# Consolidated Balance Sheet



Particulars in Rs. Mn	FY12	FY13	FY14	FY15	FY16
<b>Equities &amp; Liabilities</b>					
<b>Shareholder's Funds</b>					
Share Capital	1,000	1,000	1,000	1,115	1,626
Reserves & Surplus	-379	-1,308	-1,878	-3,379	-613
<b>Total Shareholder's Funds</b>	<b>621</b>	<b>-308</b>	<b>-878</b>	<b>-2,264</b>	<b>1,012</b>
Share Application Money	453	453	-	-	-
Minority Interest	0	0	-	9	-
<b>Non-Current Liabilities</b>					
Long-term Borrowings	29,864	29,128	28,663	29,568	26,570
Other Long-term Liabilities	-	2	1,566	1,044	522
Long-term Provisions	9	12	15	23	31
<b>Current Liabilities</b>					
Short-term Borrowings	449	388	1,387	2,072	2,506
Trade Payables	241	222	1,464	2,663	3,344
Other Current Liabilities	1,675	2,842	3,115	3,247	2,855
Short-term Provisions	2	3	3	5	26
<b>Total Equity &amp; Liabilities</b>	<b>33,314</b>	<b>32,742</b>	<b>35,343</b>	<b>36,356</b>	<b>36,867</b>
<b>Assets</b>					
<b>Non-Current Assets</b>					
Fixed Assets	22,074	21,513	23,695	21,722	20,360
Non-Current Investments	0	30	6	216	217
Deferred Tax Assets (net)	287	350	756	942	1,070
Long-term Loans & Advances	2,660	7,027	7,519	8,934	8,983
Other Non-Current Assets	753	263	219	387	412
<b>Current Assets</b>					
Current Investments	28	0	0	106	-
Trade Receivables	45	384	287	258	1.7
Cash & Bank Balance	824	1,539	1,623	1,348	1,499
Short-term Loans & Advances	6,519	1,579	915	1,812	3,280
Other Current Assets	124	57	322	630	1,046
<b>Total Assets</b>	<b>33,314</b>	<b>32,742</b>	<b>35,343</b>	<b>36,356</b>	<b>36,867</b>

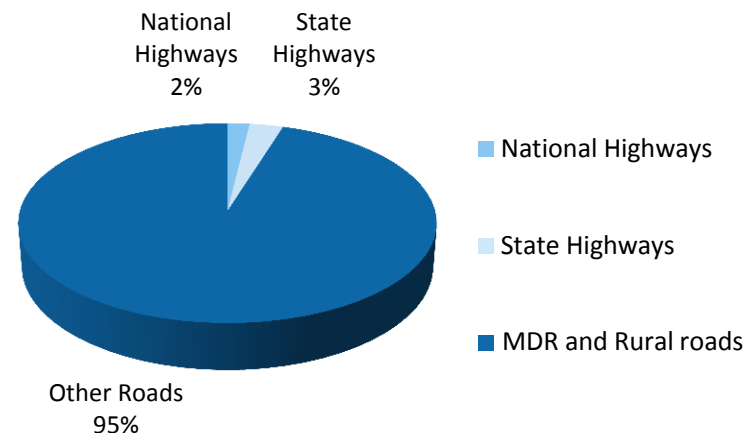


## Industry Overview

# India Road Network – Size And Growth

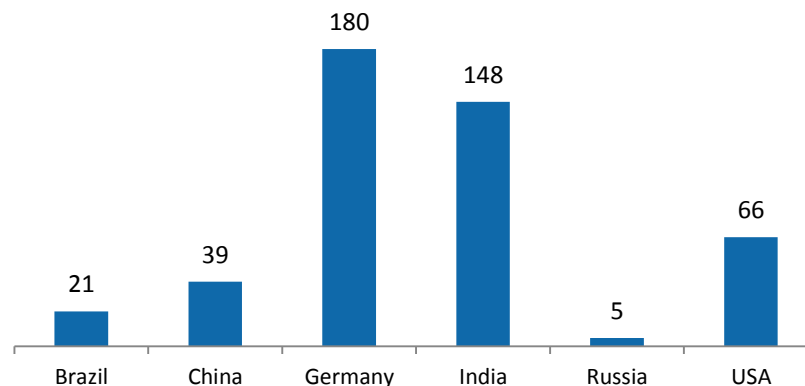
- At 5.23 million km, India has the second largest road network in the world.
- National highways account for ~ 2% of the network. State highways account for 3% and the Major District Roads (MDRs) and other roads together account for the remaining 95%.
- About 60% of freight and 85% of passenger traffic is supported by the road network. National highways constitute only ~ 2% of the road network but carry about 40% of the total road traffic.
- Further, India's road density is higher than the US and China. India's road density stands at 148 km per 100 sq. km as compared to 66 km per 100 sq. km in the US and 39 km per 100 sq. km in China.

India Road Network Share %



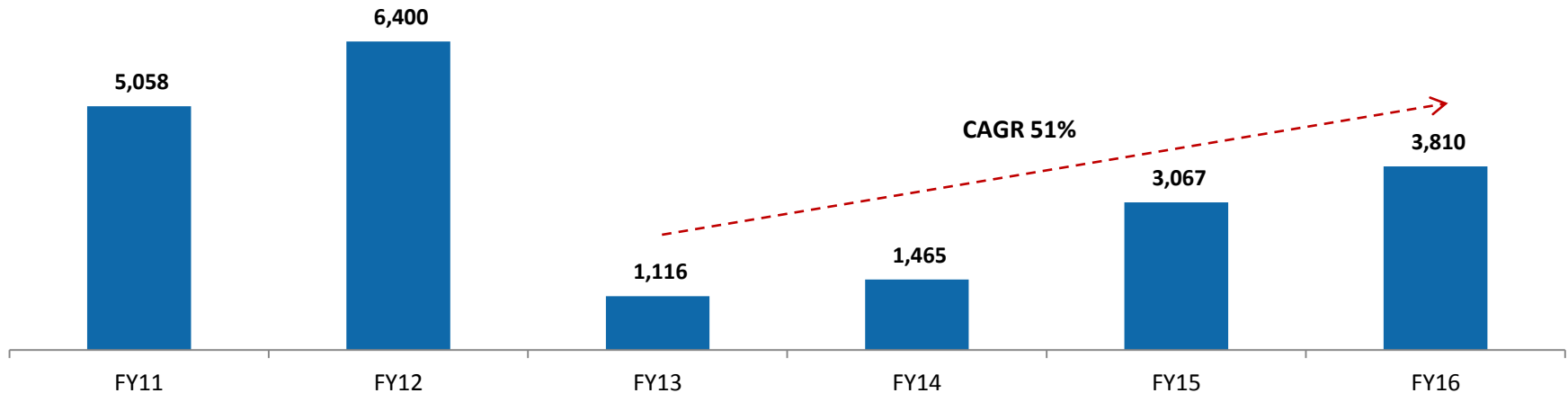
Road Network	Total Length (km)	November 2015 Total Length (km)	CAGR %
National Highways	68,534 (2009)	100,475	6.58
State Highways	130,000 (2007)	1,48,256	1.65
District & Rural Roads	NA	49,83,579	-

Road Density – km / 100 sq km



## Significant Pickup In New Projects

### Highway Projects Awarded by NHAI (km)



- The total length of the National highways is expected to cross ~200,000 km in next five years.
  - a) This expansion will include ~ 25,000 km under Bharat Mala Project and declaration of ~75,000 km of State highways as National highways.
  - b) NHAI along with MoRTH plans to award ~ 12,000 km of road projects in FY17.
- Significant opportunity exists in the State highway segment. States like Bihar, Gujarat, Madhya Pradesh, Maharashtra, Karnataka, Rajasthan, Uttar Pradesh and West Bengal have planned several projects both on EPC and PPP basis.
- The Government has set a medium-term target to achieve 2.0% of the GDP from Transport and Port sector.

NHAI – National Highways Authority of India, PPP – Public Private Partnership, EPC – Engineering, Procurement, Construction, MoRTH – Ministry of Road Transport & Highways

Source: India Infrastructure Research 2016



## Initiatives to Revive the Road Sector

- **Shift towards EPC contracts** which would be awarded on a turnkey basis instead of item-rate contract basis.
- **Regulatory clearances** to ~ 80 stuck projects and railway clearances for 85 projects with railway over-bridges.
- **Authorisation to NHAI to provide funds** to stuck road projects from its overall budget/corpus as loans at a pre-determined rate of return.
- **Rescheduling of premium payment** for 20 national highway projects.
- **Golden handshake** with developers for 34 projects worth ~ \$5.5 billion.
- **Comprehensive Exit Policy Framework** approved by CCEA that permits concessionaires /developers to divest 100% equity, two years after completion of construction. This will help revive private participation.
- **Empowerment of MoRTH** to appraise and approve projects worth Rs 10 billion and above.
- Plans to allow **international arbitration for dispute resolution**.
- **Setting up of SAROD** for speedier redressal of disputes at reasonable arbitration fee and miscellaneous expenditure.
- **Setting up of NHIDCL** for upgradation of road infrastructure in the north-eastern region and other strategic areas of the Country on a priority basis.
- **Fast-tracking road projects in border areas** and bringing BRO under the Ministry of Defence.
- **Easing of environmental clearance norms** and de-linking them from forest clearances.
- **The implementation of ETC (Electronic Toll Collection) method** of tolling to enable faster transit at toll plazas and seamless travel across tolled roads.
- **Easing of the land acquisition process** particularly for PPP projects. However, the developers would be required to pay a higher amount for acquiring land.
  - NHAI will not award any road project unless it possesses 80% of land for the BOT projects and 90% of land for the EPC projects.
  - MoRTH & NHAI plan to award ~ 12,000 km in FY17, respectively. NHAI has already acquired ~ 60% of land required for road projects which MoRTH (including NHAI) plans to award in FY17.
  - Currently, the authorities (NHA/MORTH) are evaluating development of rigid pavements (cement concrete) instead of bituminous earlier, to ensure minimum maintenance over next 15 years

## Policies For Different Stages Of PPP Project Development

### Bidding Stage

- Standard bidding documents – RFQ and RFP – used to bid for projects under NHDP.
- Since 2011, the annual pre-qualification criteria are used to shortlist developers to directly enter the RFP stage for their respective cost category and speed up the pace of awards.
- Technical and financial capability of the bidders for pre-qualification is evaluated at the RFQ stage, and the RFP document gives the standard format for submission of financial bids by pre-qualified players (shortlisted after the RFQ stage).

### Award Stage

- Model Concession Agreement (MCA) used to award projects on PPP basis.

### Investment Norms

- 100 % Foreign Direct Investment in the construction and maintenance of roads, highways, tunnels, etc. through the Automatic Route.
- NHAI and Government to provide capital grant (Viability Gap Funding) up to 40% of project cost to enhance viability on a case to case basis.

### Fiscal Policies

- 100% tax exemption for 5 years and 30% relief for next 5 years, which may be availed of in 20 years after completion of construction, provided the project involves the addition of new lane.
- Duty free import of specified modern high capacity equipment for highway construction.

### Operations & Maintenance

- MCA for operation, maintenance and transfer mode, used to award projects.

### Tolling

- Tolling is based on the National Highways Fee (Determination of Rates and Collection) Rules, 2008. These rules have been further amended in 2011.

## Private Public Partnership (PPP) Framework

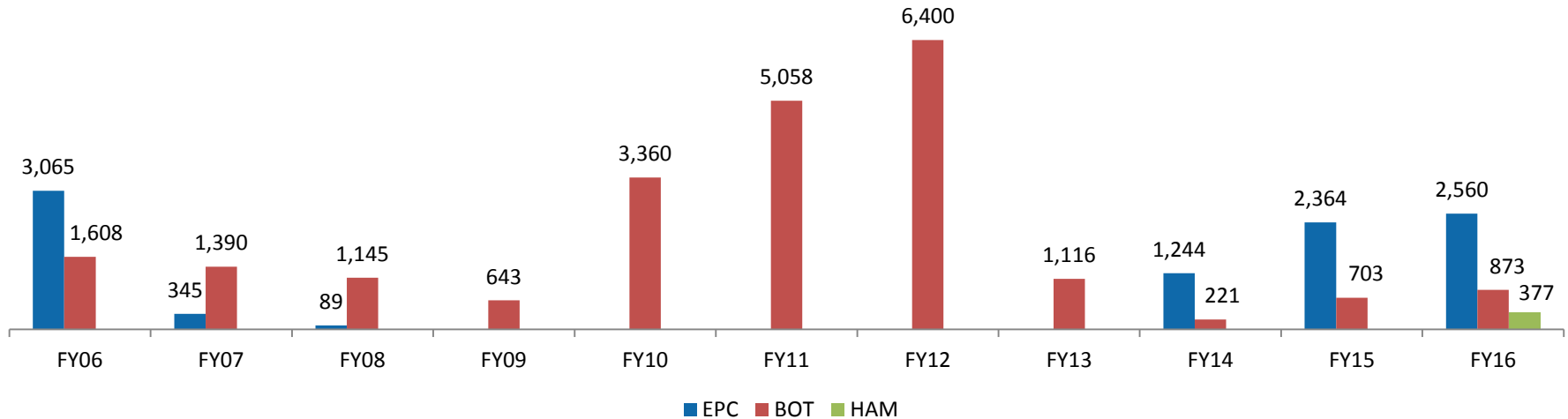
Government has recognized the need to engage with the private sector to achieve the following objectives:

- Harness private sector efficiencies in asset creation, maintenance and service delivery
- Provide focus on life cycle approach for development of a project, involving asset creation and maintenance over its life cycle
- Create opportunities to bring in innovation and technological improvements
- Enable affordable and improved services to the users in a responsible and sustained manner

Types	Description	Revenue Stream	Development Risk	Financing Risk	Traffic Risk	Concession Period (NHAI)	Award Criteria
<b>BOT (Toll)</b>	Private party builds roads, undertakes O&M and collects toll	Toll	Concessionaire	Concessionaire	Concessionaire	~20-25 years	Highest revenue sharing bid
<b>BOT (Annuity)</b>	Private party builds roads, undertakes O&M and collects annuity	Annuity payment	Concessionaire	Concessionaire	Authority	~20-25 years	Lowest annuity
<b>Hybrid (Annuity)</b>	Private party builds roads, undertakes O&M and collects annuity , Construction Support 40% from Authority	Annuity payment	Concessionaire	Concessionaire (60%) Authority (40%)	Authority	15 years post construction	Lowest bid project cost and O&M cost
<b>EPC</b>	Private party builds roads (money spent by government)	Contract amount	Concessionaire	Authority	Authority	Not required	Lowest tariff requested
<b>OMT</b>	Private party collects toll and undertakes O&M	Toll	No development	Concessionaire	Concessionaire	~9 years	Highest % of toll revenues or highest premium per year
<b>Tolling</b>	Private party collects toll during the concession period and pays the estimated toll to the authority	Toll	No development	Concessionaire	Concessionaire	~1 years	Highest revenue sharing bid
<b>TOT (Proposed)</b>	Private party pays the estimated toll upfront to the authority, undertakes O&M and collects the toll during concession period	Toll	No development	Concessionaire	Model is under consideration by NHAI	Long term (typically more than 25 years as observed globally)	Model is under consideration by NHAI

# Trend In Project Awarding - EPC Vs BOT Model

Length Awarded On EPC,BOT and Hybrid-Annuity Formats During 2005-06 to 2015-16 (In Km)



- The trend towards private participation increased after 2005, as several National Highway projects were awarded under the NHDP on a BOT basis.
- However, post 2012-13, reasons like the overall macroeconomic environment, aggressive bidding by the developers and lenders turning cautious made the PPP format unviable and unattractive.
- During FY16, NHA awarded 72 projects through a mix of EPC, BOT and HAM (Hybrid Annuity Model) formats -
  - 55 EPC projects with length of 2,559.6 km worth Rs 401.4 billion as on 29<sup>th</sup> February 2016
  - 7 BOT projects with length of 872.9 km worth Rs 119.3 billion as on 29<sup>th</sup> February 2016
  - 10 HAM projects with length of 377.1 km worth Rs 74.5 billion as on 31<sup>st</sup> March 2016

## New Hybrid Annuity Model expected To Improve Private Participation

Going forward, over 80% of the road projects are proposed to be awarded under EPC and Hybrid Annuity Model (HAM) routes. For FY17, MoRTH and NHAI have lined up 40% of total road projects to be awarded on HAM requiring an investment of ~ Rs 600 billion.

### Hybrid Annuity Model (HAM)

- 60% of the total project cost to be contributed by developer and balance 40% to be invested by the Government during construction period in five equal instalments linked to project milestones.
- The Government / NHAI will collect the toll under HAM model and pay the developer annuity payments over 15 years along with interest thereon (at bank rate + 3% payable on reducing balance of completion cost) as 30 bi-annual annuity payments. The developer will also receive bi-annual O&M payments. All project payments are inflation indexed.
- NHAI and MoRTH have begun awarding projects under HAM model since November 2015.
- 17 projects worth Rs 123.5 billion, have been awarded till date entailing a length of ~ 634 km.

### Advantages

- Comfort to lenders and easier debt-servicing by developers.
- Lower equity requirement for concessionaire.
- Lower financial burden to NHAI / MoRTH as compared to EPC.
- No traffic risk to the developer.

# Hybrid Annuity Mode- MEPIDL's Recent Project Wins



Project Asset	Arawali Kante	Kante Wakad	Nagpur Package I	Nagpur Package II	Talaja Mahuva*
Scope of Project	Four-laning of NH66 (km 241.3 – 281.3) under NHDP Phase-IV	Four- laning of NH66 (km 281- 332) under NHDP Phase IV	Four-laning standalone Ring Road / Bypass (km 0.5- 34.0) for Nagpur city package	Four-laning standalone Ring Road / Bypass (km 34.5- 62.035) for Nagpur city package	Four-laning of Talaja Mahuva section of NH 8E (km 53.5 - 100.1) & design chainage (km 54.9- 100.45)
Lane kms	156.9	203.6	134.0	112.1	181.8
Authority	MoRTH	MoRTH	NHAI	NHAI	NHAI
State	Maharashtra	Maharashtra	Maharashtra	Maharashtra	Gujarat
Bidder	MEPIDL – Sanjose India JV	MEPIDL-San Jose India JV	MEPIDL – Sanjose India JV	MEPIDL – Sanjose India JV	MEPIDL – Sanjose India JV
MEPIDL's Stake	74%	74%	74%	74%	60%
Bid Project Cost (BPC)	Rs 5,929.8 million	Rs 8,262.8 million	Rs 5,310.0 million	Rs 6,390.0 million	Rs 6,430.5 million
Project NPV	Rs 5,565.6 million	Rs 8055.9 million	Rs 4,938.9 million	Rs 5,878.2 million	Rs 6,242.4 million
Construction Period	2 Years	2 Years	2.5 Years	2.5 Years	2.5 years
Concession Period	15 Years	15 Years	15 Years	15 Years	15 Years

Sanjose India: Sanjose India Infrastructure & Construction Pvt. Ltd.; \* MEP-Sanjose has been declared L1 on 20<sup>th</sup> May 2016, LOA is awaited.



# Toll-Operate-Transfer : Upcoming model

## New Toll-Operate-Transfer (TOT) Model To Be Introduced For Efficient Monetization Of Existing Toll Roads

### TOT Model

- To award existing toll roads to a private entity for efficient operations and maintenance over a fixed long-term period.
- One time concession fee payable upfront (lump sum) in the operations and tolling phase.

NHAI or a Concessionaire has already financed the construction of the project

NHAI securitizes the toll receivables / Concession fee collected upfront

Private entity operates and tolls the project stretch for the concession period

### Key Benefits

- Efficient operations and maintenance.
- Reduction in toll pilferage.
- Capital inflow to the Government which can re-invested in new road projects.
- Opportunity for the private sector to invest in low risk assets.

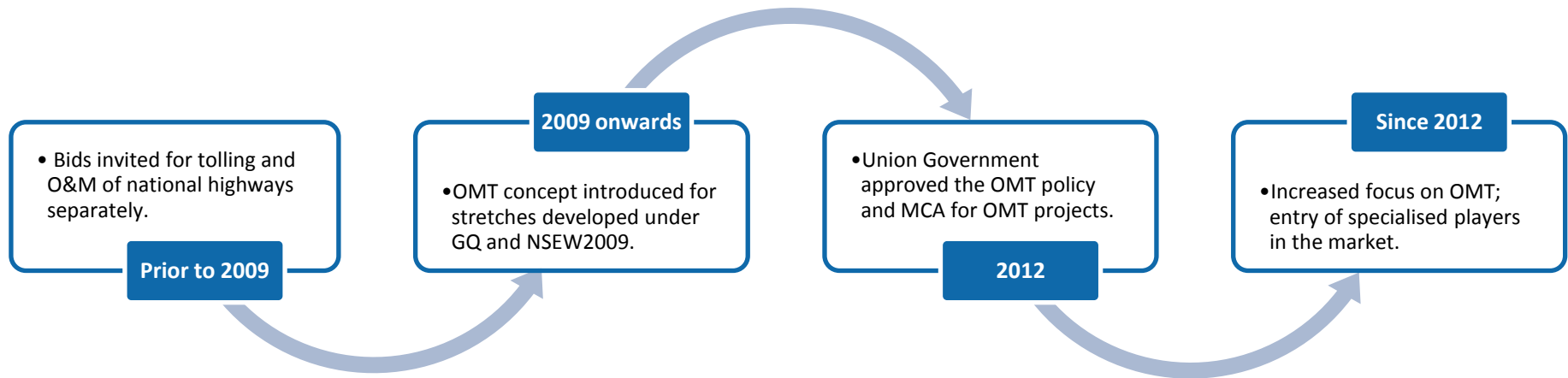
~ 104 existing toll roads across India funded by Government

~ 40% of existing toll roads are generating toll revenues which are more than 10% of the project completion cost

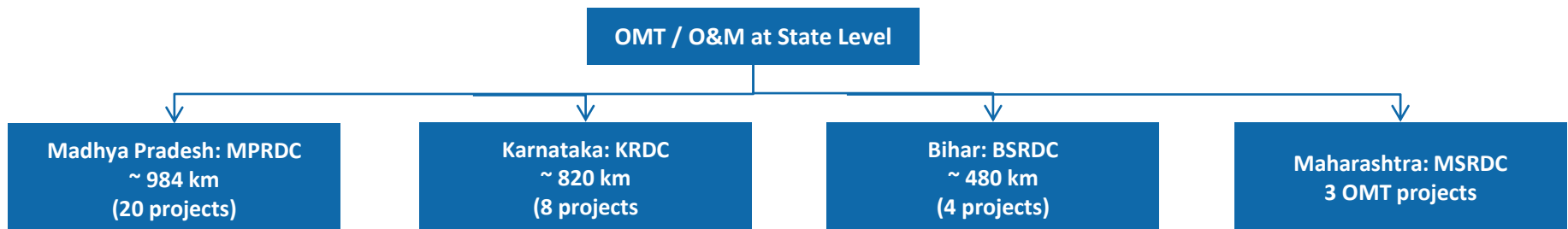
### TOT Model has been successfully implemented and tested globally

Toll Asset	Country	Investors	Investment Size	Concession Period
Chicago Skyway	USA	Consortium ▪ Macquarie, Cintra	USD 1.83 billion	99 years
Puerto Rico Highway PR-22	USA	Consortium ▪ Goldman Sachs, Abertis	USD 1.43 billion	40 years
Penang bridge	Malaysia	United Engineers Malaysia Berhad	USD 204 million	25 years extended to 45 years
Indiana Toll Road	USA	Consortium ▪ Macquarie, Cintra	USD 3.8 billion	75 years

## Evolution Of The OMT Concept



- A number of OMT projects have been identified and awarded both at the national and state level. Between 2009-10 to 2014-15, projects covering around 2,400 km have been awarded by the NHAI on OMT basis.
- Apart from NHAI, a few states like Madhya Pradesh, Karnataka, Maharashtra and Bihar have outsourced the operation and maintenance (O&M) and tolling activities to private players.

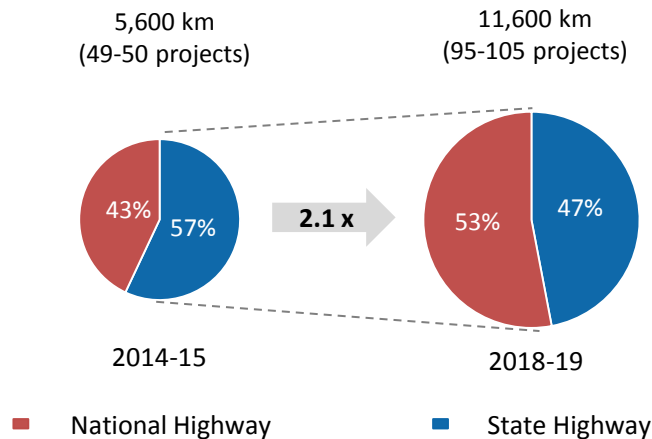


MPRDC - Madhya Pradesh State Road Development Corporation, KRDC - Karnataka Road Development Corporation Limited, BSRDC - Bihar State Road & Bridges Development Corporation, MSRDC - Maharashtra State Road Development Corporation

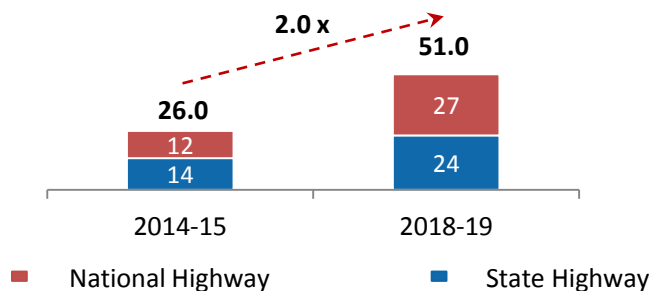
Source – India Infrastructure Research, GQ – Golden Quadrilateral, NSEW – North-South and East-West Corridor

## Outlook For The OMT Model

### Market Size (Km) on bids invited basis



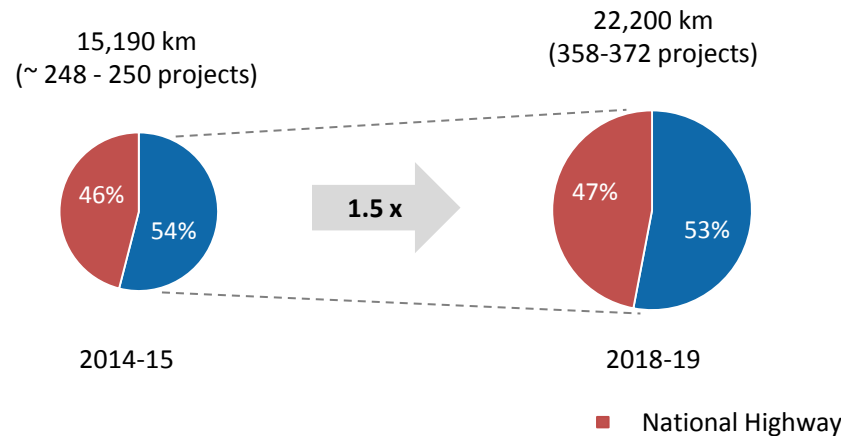
### Market Opportunity (Rs bn)



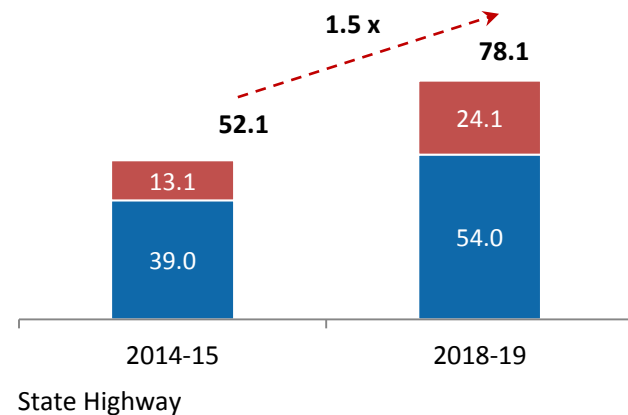
- According to CRISIL estimates, the total stretch under OMT model for NHAI and key states (combined) is expected to double from ~ 5,600 km in 2014-15 to ~ 11,600 km by 2018-19. The total number of OMT projects is expected to increase from ~49-50 in 2014-15 to 95-105 in 2018-19.
- The OMT market will be primarily driven by:
  - Increasing number of BOT players exiting their current projects, creating opportunity to contract these projects on an OMT basis.
  - Rising penetration of OMT stretches in state highways, especially in Karnataka, Madhya Pradesh and Bihar.
    - Karnataka is expected to account for around 73% of this additional length whereas Madhya Pradesh and Bihar are expected to account for around 23% and around 4%, respectively.

## Outlook For The Toll Collection Model

### Market Size (Km) on bids invited basis



### Market Opportunity (Rs bn)

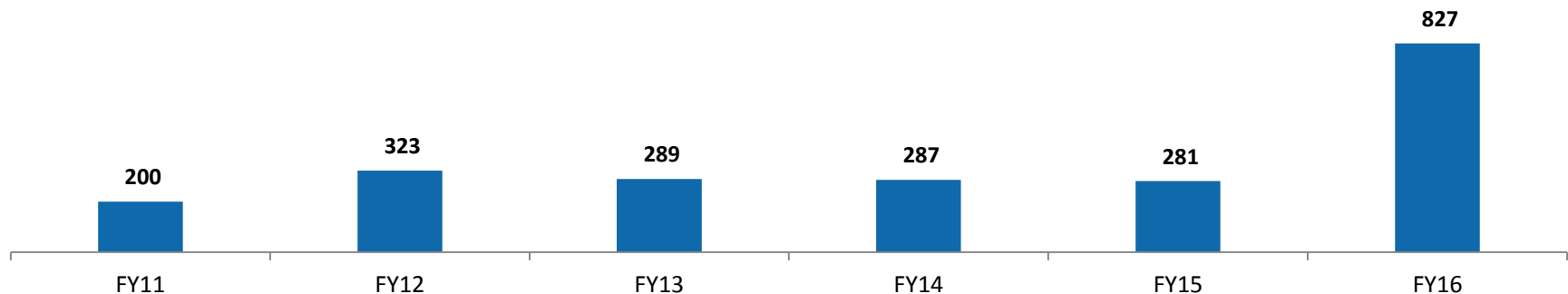


- Tolling market is expected to increase 1.5 times from ~ 15,190 km in 2014-15 to ~ 22,200 km by 2018-19 primarily driven by:
  - Rising penetration of tolling stretches in State highways, especially in Karnataka, Rajasthan and Haryana.
  - Increasing number of stretches being awarded by NHAI on tolling basis.
- Number of projects bid out by NHAI and State Highway Authorities on tolling basis are expected to increase from 102-104 and 146 projects respectively in 2014-15 to 128-132 and 230-240 projects respectively in 2018-19.

The total investment in roads during FY17 is expected to be Rs 970 billion, which will include budgetary support of Rs 550 billion, Rs 150 billion through NHAI bonds and balance Rs 270 billion allocation under PMGSY (Pradhan Mantri Gram Sadak Yojana) from both Centre and States.

- **Budgetary Support:** Budgetary support to MoRTH has registered a CAGR of 33% between 2010-11 and 2015-16. The Government increased the financial support to NHAI to Rs 426.9 billion for 2015-16 as against Rs 171.9 billion in 2014-15. The Government has allocated Rs 550 billion under the Union Budget 2016-17 for road sector.
- **Market borrowings by NHAI:** There is continued focus to issue tax-free bonds for servicing fund requirements. In 2015, bonds worth Rs 39 billion were issued by NHAI. Further, an issue worth Rs 10-100 billion was floated for subscription in December 2015. This issue was subscribed by over two times with Rs 210 billion being raised. In the Union Budget 2015-16, NHAI has been allowed to issue tax-free bonds amounting to Rs 240 billion and capital gains bonds of Rs 40 billion, respectively.
- **Multilateral funding:** The World Bank and ADB's total commitment to state roads currently stands at \$4.5 billion involving 14 projects and \$3.5 billion involving 15 projects respectively. As on date, multilateral organisations have been involved in financing 76 national highway projects with total award cost of Rs 182 billion.
- Partial funding to road sector through increase in cess on petrol and diesel from Rs 2 per litre (Rs 250 billion annually) to Rs 6 per litre (Rs 850 billion annually).

Central Plan Outlay to MoRTH (In Rs billion)



Source: India Infrastructure Research 2016

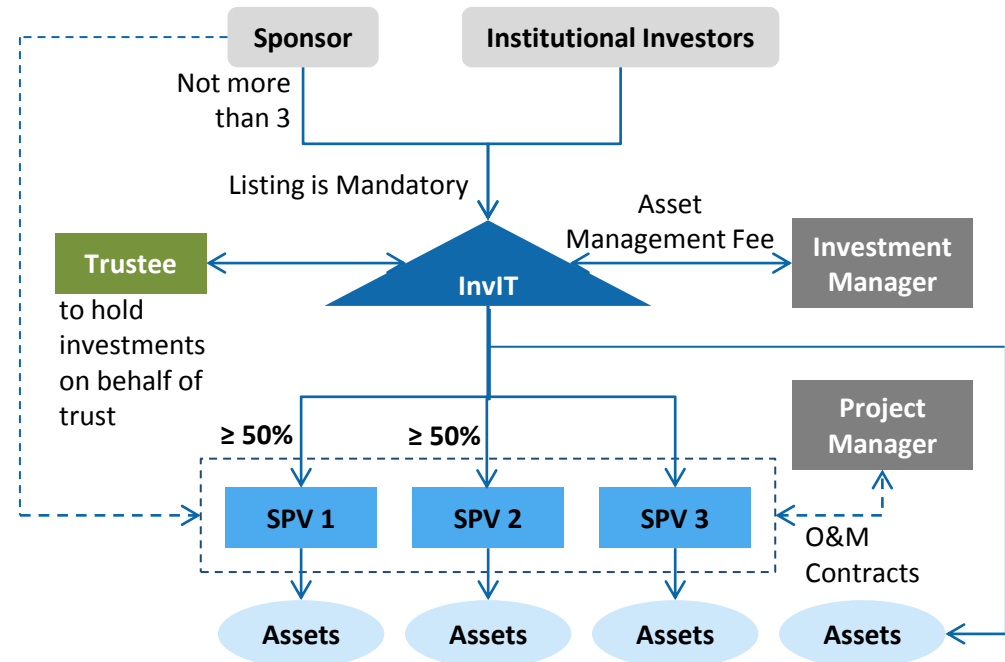
NHAI – National Highways Authority of India, PPP – Public Private Partnership, EPC – Engineering, Procurement, Construction, MoRTH – Ministry of Road Transport & Highways, ADB – Asian Development Bank

## Key Highlights

- The Sponsor is required to hold a minimum of 25% stake in the InvIT. SEBI has proposed to relax the minimum Sponsor holding to 10%.
- Sponsor is required to have net worth of at least Rs 1 bn and minimum experience of at least 5 years with at least two completed projects.
- The overall borrowings of the InvIT net of cash and cash equivalents shall never exceed 49% of the value of the InvIT assets.
- Revenue generating projects for a period of more than a year are eligible for forming an InvIT.
- 90% of distributable cash flow of InvIT / SPVs needs to be distributed in form of dividends to unit holders.
- The Union Budget 2016-17 has proposed to exempt the SPVs from the levy of dividend distribution tax.

Source: E&Y Report on InvITs

## InvIT Framework



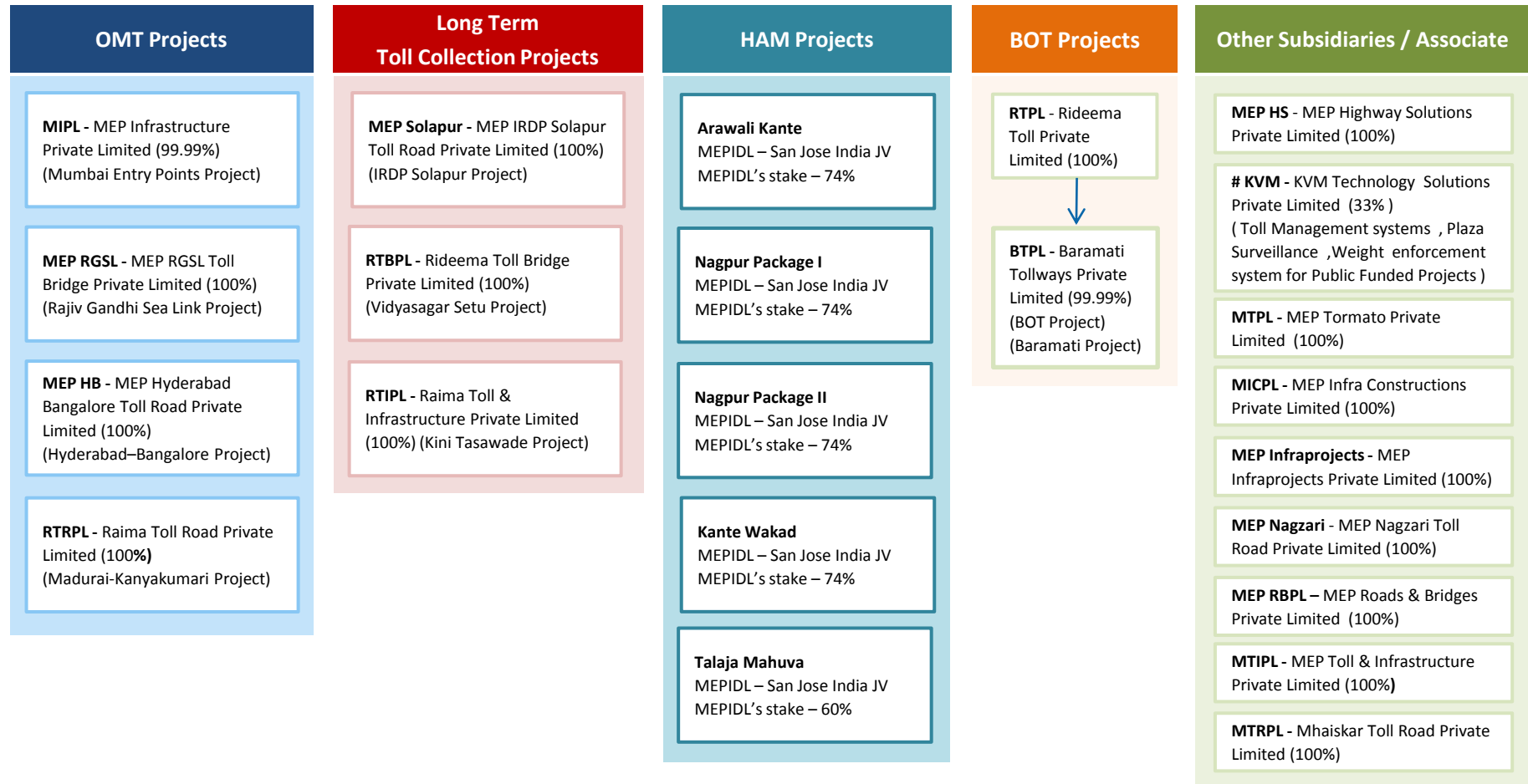
## Advantages

- Enables financing / refinancing of infrastructure projects
- Un-locks tied up capital of developers
- Lowers domestic financial institutions' loan exposure
- Helps attract foreign capital

# Annexure



## MEP Infrastructure Developers Limited



Particulars	Madurai – Kanyakumari	Hyderabad - Bangalore	Rajiv Gandhi Sea link	Mumbai Entry Points
<b>Description</b>	Four lane carriage way located on NH-7, which is a major highway running through U.P, M.P, Maharashtra, Andhra Pradesh, Karnataka & Tamil Nadu	Four lane carriage way located on NH-7, passes through industrial districts such as Kurnool and Anantapur in Andhra Pradesh	Links Bandra in the Western Suburbs of Mumbai with Worli in South Mumbai	Five entry points located on <ul style="list-style-type: none"> <li>▪ Sion–Panvel Highway,</li> <li>▪ Western Express Highway,</li> <li>▪ Eastern Express Highway,</li> <li>▪ LBS Marg and</li> <li>▪ Airoli Bridge corridor in Mumbai</li> </ul>
<b>SPV</b>	RTRPL	MEP HB	MEP RGSL	MIPL
<b>Authority</b>	NHAI	NHAI	MSRDC	MSRDC
<b>Company's stake</b>	100.00%	100.00%	100.00%	99.99%
<b>State</b>	Tamil Nadu	Andhra Pradesh	Maharashtra	Maharashtra
<b>Concession Commencement</b>	September 22, 2013	May 16, 2013	February 6, 2014	November 20, 2010
<b>Tenure</b>	9 years	9 years	156 weeks	16 years
<b>No. of Toll plazas</b>	Four	Three	One	Five
<b>Amount Paid to Authority</b>	Rs 1,108.7 mn for the first year of the concession period with 10% escalation every year to be paid in 12 equal monthly instalments	Rs 1,059.3 mn for the first year of the concession period with 10% escalation every year to be paid in 12 equal monthly instalments	Rs 690 mn for first year of concession period along with an additional one time payment of Rs 5 mn. The annual payment is subject to 10% escalation for second year & 20% for third year, to be paid in 12 equal monthly instalments	Upfront Payment of Rs 21,000 mn

Projects are located in major cities or on the road connecting major metropolitan cities of India

# Long Term Toll Collection Projects



	IRDP Solapur	Vidyasagar Setu	Kini Tasawade	Rajiv Gandhi Salai <sup>(1)</sup>	Kalyan Shilphata <sup>(1)</sup>
<b>Description</b>	Located in Solapur district	18 lane toll plaza at Vidyasagar Setu, links Howrah to Kolkata	Located on Satara – Kolhapur section of NH-4	Previously known as the IT corridor	Connecting Mumbai Pune Highway (NH-4) at Shilphata & Mumbai - Nashik Highway (NH-3) at Bhiwandi
<b>SPV</b>	MEP Solapur	RTBPL	RTIPL	NA	NA
<b>Authority</b>	MSRDC	HRBC	MSRDC	ITEL	MSRDC
<b>Stake</b>	100.00%	100.00%	100.00%	NA <sup>(1)</sup>	NA <sup>(1)</sup>
<b>State</b>	Maharashtra	West Bengal	Maharashtra	Tamil Nadu	Maharashtra
<b>Concession Commencement</b>	January 2, 2013	September 1, 2013	May 29, 2014	March 8, 2014	September 27, 2013
<b>Tenure</b>	156 weeks	5 years	104 weeks	3 years	156 weeks
<b>No. of Toll plazas</b>	Four	One	Two	Five	Two
<b>Amount paid to Authority</b>	Rs 208 mn, to be paid in three equal annual instalments	Rs 2,610 mn to be paid in five equal annual instalments consisting of upfront payment of Rs 522 mn and payment of remaining amount in four equal instalments in advance	Rs 2,270.70 mn, to be paid in upfront monthly instalments	Rs 14.62 mn for the first year with escalation of 5% per annum during each subsequent year for a period of two years	Rs 633.60 mn, to be paid in upfront monthly instalments

(1) MEPIDL is the concession operator for the project and we are paid by the authorities for providing manpower services.

## Short Term Toll Collection Projects

Sr. No	Toll Plaza	State	Client	Term	Payment to Authority
1	Surajbari	Gujarat	NHAI	October 12, 2015 to October 12, 2016	Rs 740.7 mn to be paid in Weekly Instalment of Rs. 14.20 mn
2	Athur	Tamil Nadu	NHAI	March 26,2016 to March 25,2017	Rs 723.6.0 mn to be paid in weekly instalments of Rs 13.87 mn
3	Paduna	Rajasthan	NHAI	May 17,2016 to May 16,2017	Rs . 1,280 mn to be paid in weekly instalments of Rs 24.56 mn
4	Garau	Uttar Pradesh	NHAI	July 22,2015 to July 21,2016	Rs 594.0 mn to be paid in weekly instalments of Rs 11.36 mn
5	Semri	Uttar Pradesh	NHAI	October 28, 2015 to October 27, 2016	Rs . 400.5 mn to be paid in weekly instalments of Rs 7.66 mn
6	Dasna	Uttar Pradesh	NHAI	November 27, 2015 to November 26,2016	Rs 280.8 mn to be paid in weekly instalments of Rs 5.37 mn
7	Surjapur	West Bengal	NHAI	November 27, 2015 to November 26,2016	Rs 420.3 mn to be paid in weekly instalments of Rs 8.04 mn
8	Brijghat	Uttar Pradesh	NHAI	January 4, 2016 to January 3, 2017	Rs 518.4 mn to be paid in weekly instalments of Rs 9.91mn
9	Pundag	Jharkhand	NHAI	March 29, 2016 to March 29, 2017	Rs. 566.1mn to be paid in weekly instalments of Rs 10.85mn
10	Lalsot Kota	Rajasthan	NHAI	April 1, 2016 to March 31, 2017	Rs. 303.3mn to be paid in weekly instalments of Rs 5.8mn
11	Alwar Sikandra	Rajasthan	NHAI	April 1, 2016 to March 31, 2017	Rs. 190.8mn to be paid in weekly instalments of Rs 3.7mn

\*Dastan in Maharashtra has been foreclosed by NHAI as on 30<sup>th</sup> April 2016 after being operated for 5 months

# Hybrid Annuity Model Projects

Project Asset	Arawali Kante	Kante Wakad	Nagpur Package I	Nagpur Package II	Talaja Mahuva *
Scope of Project	Four-laning of NH66 (km 241.3 – 281.3) under NHDP Phase-IV	Four- laning of NH66 (km 281- 332) under NHDP Phase IV	Four-laning standalone Ring Road / Bypass (km 0.5- 34.0) for Nagpur city package	Four-laning standalone Ring Road / Bypass (km 34.5- 62.035) for Nagpur city package	Four laning of the Talaja-Mahuva section of NH-8E (Km 53.6-100.1)
Authority	MoRTH	MoRTH	NHAI	NHAI	NHAI
State	Maharashtra	Maharashtra	Maharashtra	Maharashtra	Gujarat
Bidder	MEPIDL – San Jose India JV	MEPIDL-San Jose India JV	MEPIDL – San Jose India JV	MEPIDL – San Jose India JV	MEPIDL – San Jose India JV
MEPIDL's Stake	74%	74%	74%	74%	60%
Bid Project Cost (BPC)	Rs 5,929.8 million	Rs 8,262.8 million	Rs 5,310.0 million	Rs 6,390.0 million	Rs 6,430.5 million
Bid O&M Cost	Rs 56.7 million for Year 1	Rs 116 million for Year 1	Rs 63.0 million for Year 1	Rs 67.5 million for Year 1	Rs 90 million for Year 1
Project NPV	Rs 5,565.6 million	Rs 8055.9 million	Rs 4,938.9 million	Rs 5,878.2 million	Rs 6,242.4 million
Construction Period	2 Years	2 Years	2.5 Years	2.5 Years	2.5 years
Concession Period	15 Years	15 Years	15 Years	15 Years	15 years

\* MEPIDL – Sanjose India JV recently won projects in Hybrid Annuity mode. The projects are currently in process of achieving financial closure

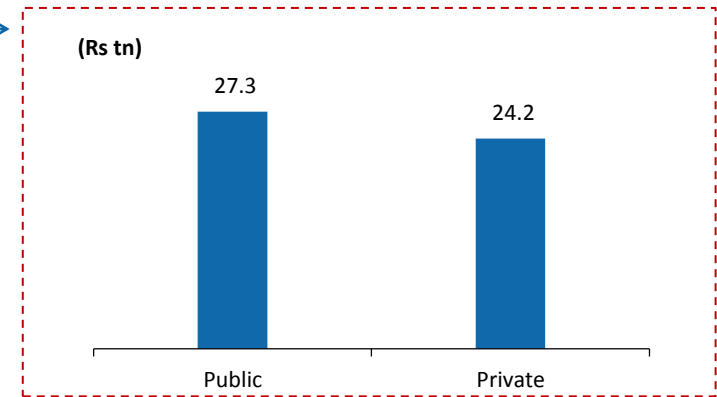
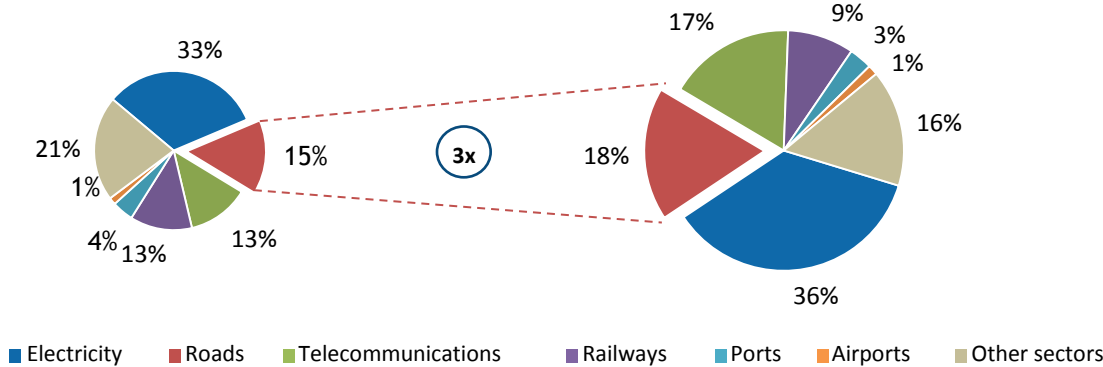
Sanjose India: Sanjose India Infrastructure & Construction Pvt. Ltd.

# Industry Overview: Investment in Infrastructure Sector

## Investment In The Indian Infrastructure Sector

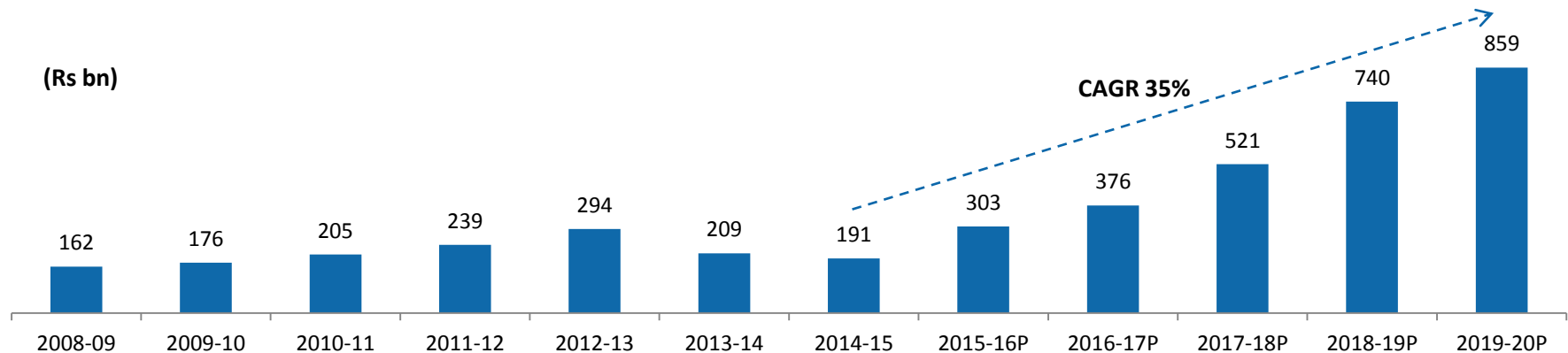
**11<sup>th</sup> FYP: Rs 20.6 trillion**

**12<sup>th</sup> FYP: Rs 51.5 trillion**



## Investments in Road Sector – National Highways

(Rs bn)

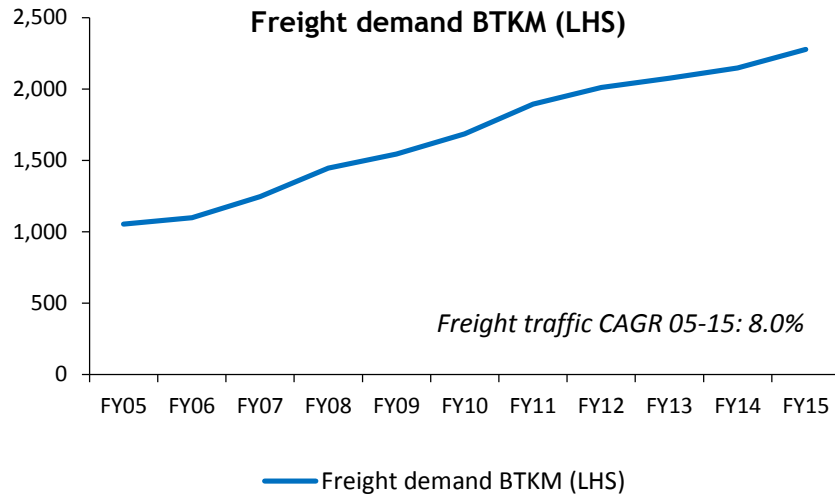


Source: Assessment of Operate-Maintain-Transfer (OMT) and Toll Collection Market for Road Projects in India” dated April 2016 by CRISIL Limited

# Industry Overview:

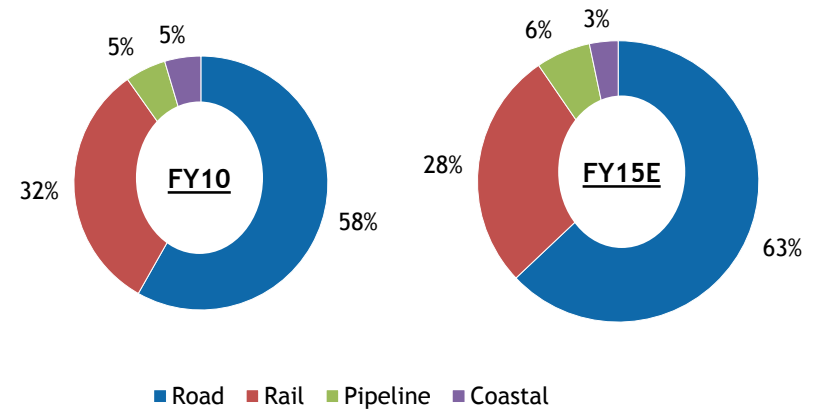
## Growth Drivers For Investment In Roads And Highways

### Moderate Growth In Freight Demand

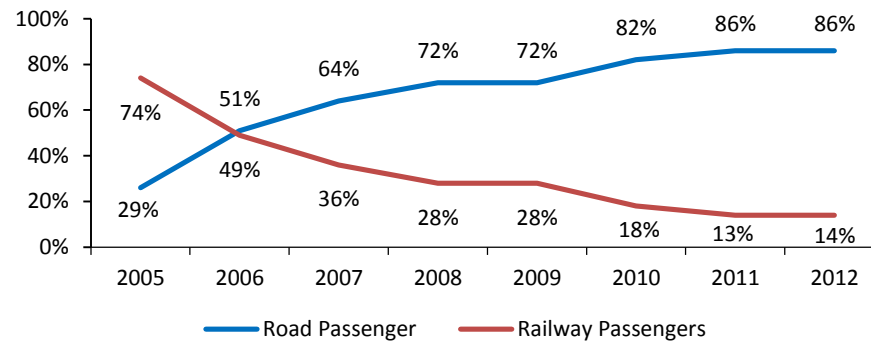


### Road Freight Traffic Gaining Preference

#### Proportion of Freight Traffic Across Modes of Transport



### Increasing Vehicular And Passenger Traffic





# Industry Overview:

## OMT And Toll Collection Model



### OMT - Overview

- OMT model was introduced by NHAI in 2009 for select existing and near completion four-lane National Highways
- It provides consistent revenues to NHAI and Just-in-Time maintenance of the project
- Typically, the concession period for NHAI projects is 9 years after which the project stretch is transferred back to the Government Authority
- As of 2014-15, ~ 5,600 km of road projects have been provided under the OMT model by NHAI and State Authorities

### Risk Sharing Mechanism

Type of Risk	Allocation
Traffic	Entire traffic risk is to be borne by the concessionaire
Toll Collection	Entire toll collection risk is to be borne by the concessionaire
Financing	Entire financing risk is to be borne by the concessionaire
Political	All direct and indirect risks are allocated to the government authority

### Toll Collection - Overview

- In 2009, NHAI handed over the toll collection process to private specialist toll management companies.
- Contracts awarded are usually for a short period of time: 3-24 months in case of NHAI projects & in case of state authorities, ranges from 12-36 months.
- The user fee is pre-determined by the contracting authority and the right to collect the fee during the concession period lies with the private player.
- As of 2014-15, ~6,990 km of National Highways constructed on EPC and BOT Annuity basis are tolled under this model.
- Over 359 – 374 projects adding up to ~20,440 km with a cumulative potential collection of Rs ~ 108.0 billion have been awarded by NHAI on tolling basis during FY12-FY15.

### OMT Project Activity

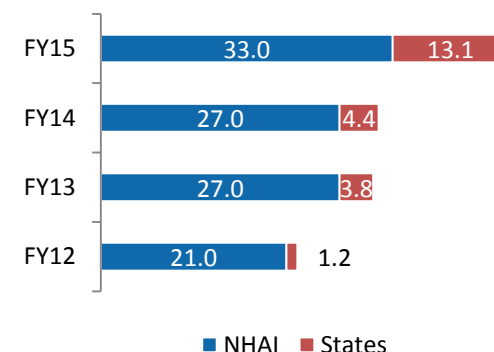
#### Under NHAI – FY10 to FY15



#### Under State Authorities – FY14 to FY15



### Annual Potential Collection (Rs Bn)



## Revised Tolling Policy

- **The National Highways Act, 1956** authorises levy of toll (fee) –
  - Under Section 7 for public-funded projects
  - Under Section 8-A for private investment projects.
- **Toll rates notified by the Government** for National highways with four or more lanes for the base year 2007-08 are as below –

Vehicle Category	Rs / km
Cars, Jeep, Van, Light Motor Vehicle	0.65
Light Commercial Vehicle	1.05
Bus or Truck	2.20
3-Axle Commercial Vehicle	2.40
Heavy Construction Machinery, Multi-axle Vehicle	3.45
Oversized Vehicle	4.20

- The toll rates are revised every year, effective from 1<sup>st</sup> April as per the following rules –
  - Increase of 3% without compounding (on base rates of 2007-08).
  - 40% of the increase in WPI over the previous year.

### Amendments made to the National Highway Fee (determination of rates and collection) Rules 2008 –

- In case of upgradation of highway from 4-lane to 6-lane, the toll hike will be limited to 75% of the fee specified as revised as per applicable rules.
- The rate of fee for use of an expressway shall be 1.25 times the rate specified in the applicable rule.
- In the case of private investment projects, the rate of fee shall be as specified under the applicable rule or such lower rates as the concessionaire may determine by giving public notice to the users
- The rate of fee for use of a standalone structure as well as a structure (more than 60 meters of length) forming part of a linear highway/expressway shall be calculated by converting the length of structure into an equivalent length of highway/expressway, by multiplying by a factor of ten.
- In the amendments of December 2013, NHAI empowered the concessionaire to collect 10 times the applicable fee from overloaded vehicles. The December 2015 amendments further allowed concessionaire to stop the vehicles plying on the section of National highway without payment of fee due, not allowing them to use the national highway or cross the toll plaza till the excess load is removed or a fee of 10 times the applicable amount is paid. Moreover, the concessionaire can detain the vehicle till all dues are cleared.

# Industry Overview:

## Policy And Regulatory Framework – State Level



- State road development is undertaken by respective Public Works Department or other dedicated agencies like road development authorities, highways corporation, etc.
- Most of the Indian states have formulated road development policies.
- There also exist legal and institutional frameworks to encourage private sector participation in the development of State road network. Some of these include amendments of enabling acts, introduction of bills and policies and setting up of PPP cells to mobilize private investment.

### Acts, Policies And Agencies At The State Level

#### Acts

- **Gujarat Infrastructure Development Act, 1999:** Facilitates flow of funds from the private sector into infrastructure sectors and ensures coordination amongst various agencies.
- **Andhra Pradesh Infrastructure Development Enabling Act, 2001:** Enables private developers to secure much-needed administrative approvals, arbitrations and fiscal regulations.
- **Punjab Infrastructure Act, 2002:** Stipulates the setting up of a dedicated agency responsible for the entire procedure of planning, development and implementation of infrastructure projects; and stipulates creation of the Punjab Infrastructure Development Fund and the Infrastructure Initiative Fund.
- **Bihar State Infrastructure Development Enabling Act, 2006:** Provides for the development of infrastructure and guidelines for attracting private sector participation (PSP) in the design, financing, construction and operation and maintenance of infrastructure projects.
- **Tamil Nadu Highways Act, 2001:** To undertake the construction, maintenance, and development of highways, including prevention and removal of encroachments

#### Policies And Legislations

- **Gujarat** (Road Policy, 1996); **Andhra Pradesh** (Road Policy Draft, 2005-15); **Karnataka** (Road Policy, 1998-2012); **Madhya Pradesh** (Road Policy, 2001); **Rajasthan** (Road Development Act, 2002 and State Highways Act, 2014); **Tamil Nadu** (Highway Act, 2001); and **Kerala** (Road Development Policy, 2009-21).

#### PPP Cells

- More than 15 states have setup PPP Cells for mainstreaming private investments in infrastructure projects, including road projects, with technical assistance from the Asian Development Bank (ADB). The states are Andhra Pradesh\*, Arunachal Pradesh, Assam\*, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Odisha\*, Punjab, Rajasthan, Tamil Nadu, Uttarakhand\* and Uttar Pradesh.

# Industry Overview:

## Key Features Of Existing PPP And EPC Contracts



- As per the MCA, roles of the implementing agencies, concessionaires and contractors have been clearly defined.
- The concession period varies with the kind of contracts and toll rates are fixed as per the Tolling Policy – NHAI or State highway notified rules.

### BOT (Toll)

- Implementing agency: Road alignment, location of structures, land acquisition and environment clearance.
- Concessionaire: Structural design, finance, construction and O&M.
- Tolling by concessionaire on the basis of Government-notified tolling policy.
- Concession period: Depending on road capacity, subject to maximum of 30 years.

### BOT (Annuity)

- Implementing agency: Road alignment, location of structures, land acquisition and environment clearance.
- Concessionaire: Structural design, finance, construction and O&M.
- Tolling is done by the Authority separately, concessionaire is paid fixed semi-annual annuity .
- Concession period : Generally 20-25 years.

### Hybrid (Annuity)

- Implementing agency: Site specifications , Road alignment, location of structures, land acquisition and environment clearance, project facilities to be constructed
- Concessionaire: Structural design, project facilities , finance, construction and O&M.
- Tolling is done by the Authority separately, concessionaire is paid fixed semi-annual annuity .
- Concession period : Generally 15 years.

### OMT

- Implementing agency: Site specifications, project facilities to be constructed, both major and routine maintenance work required .
- Concessionaire: Project facilities, design, finance, construction and O&M.
- Tolling by Concessionaire on basis of Government's notified tolling policy.
- Concession period: Generally 6-9 years.

### EPC (Turnkey Contracts)

- Implementing agency: Items and output specification.
- Contractors : Design engineering and quantity estimation.
- Contractors quote lump-sum amount, payment to contractors based on quantum of work and tolling, if any, is done by the Authority.

### EPC (Item Rate Contracts)

- Implementing agency: Items and output specification including the design, engineering and quantity estimation.
- Contractors need to quote rates against each item.
- Payment to contractors is based on quantum of work and tolling, if any, is done by the Authority.

<b>ADB</b>	Asian Development Bank
<b>BRO</b>	Borders Road Organization
<b>BSRDC</b>	Bihar State Road & Bridges Development Corporation
<b>CCEA</b>	Cabinet Committee on Economic Affairs
<b>EPC</b>	Engineering, Procurement, Construction
<b>ETC</b>	Electronic Toll Collection
<b>GQ</b>	Golden Quadrilateral
<b>HRBC</b>	Hooghly River Bridge Commissioners
<b>IFC</b>	International Finance Corporation
<b>KRDC</b>	Karnataka Road Development Corporation Limited
<b>LBS</b>	Lal Bahadur Shastri Marg
<b>LT</b>	Long term projects
<b>M.P</b>	Madhya Pradesh
<b>MCA</b>	Model Concession Agreement
<b>MJPRCL</b>	Mumbai – JNPT Port Road Company Limited
<b>MoEF</b>	Ministry of Environment and Forest
<b>MoRTH</b>	Ministry of Road Transport & Highways
<b>MSRDC</b>	Maharashtra State Road Development Corporation Limited
<b>NH</b>	National Highway
<b>NHAI</b>	National Highways Authority of India
<b>NHIDCL</b>	National Highways and Infrastructure Development Corporation
<b>NSEW</b>	North-South and East-West Corridor
<b>OMT</b>	Operate, Maintain, Transfer
<b>PPP</b>	Public Private Partnership
<b>RBI</b>	Reserve Bank of India
<b>RFID</b>	Radio frequency identification technology
<b>RIDCOR</b>	Road Infrastructure Development Company of Rajasthan Limited
<b>RSRDC</b>	Rajasthan State Road Development & Construction Corporation Limited
<b>SAROD</b>	Society for Affordable Redressal of Disputes
<b>SDMC</b>	South Delhi Municipal Corporation
<b>ST</b>	Short term projects
<b>U.P</b>	Uttar Pradesh

For Further Queries:



Thank You



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