



# Future of TOT

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# Genesis and progress of TOT

# Asset monetisation: Critical element of India's future highway development strategy

S. No	Bharatmala Network	Length (in km)	% of total length	Amount (Rs. crore)	% of total expenditure
1	Balance works from NHDP	10,000	29%	150,000	28%
2	Economic corridors	9,000	26%	120,000	22%
3	Inter corridor and feeder route	6,000	17%	80,000	15%
4	Greenfield expressways	800	2%	40,000	7%
5	Coastal roads and port connectivity	2,000	6%	20,000	4%
6	Border roads and international connectivity	2,000	6%	25,000	5%
7	National corridors' efficiency improvement	5,000	14%	100,000	19%
	Total	34,800		5,35,000	

Source: MoRTH / PIB Release

- Phase I of Bharatmala Pariyojna, to be implemented over a five-year period, i.e., fiscals 2018 to 2022, comprising 34,800 km, requiring Rs 535,000 crore. A cost overrun is expected owing to high land acquisition costs
- Estimated Rs 1,06,000 crore of this amount expected to come from public private partnership (PPP) while another Rs 34,000 crore expected from toll operate transfer (TOT)
- Given that private investments are hard to come by in the current environment, TOT and asset monetisation are expected to play an important role in financing the Bharatmala Pariyojna

# Toll operate transfer model – the next evolution in PPP

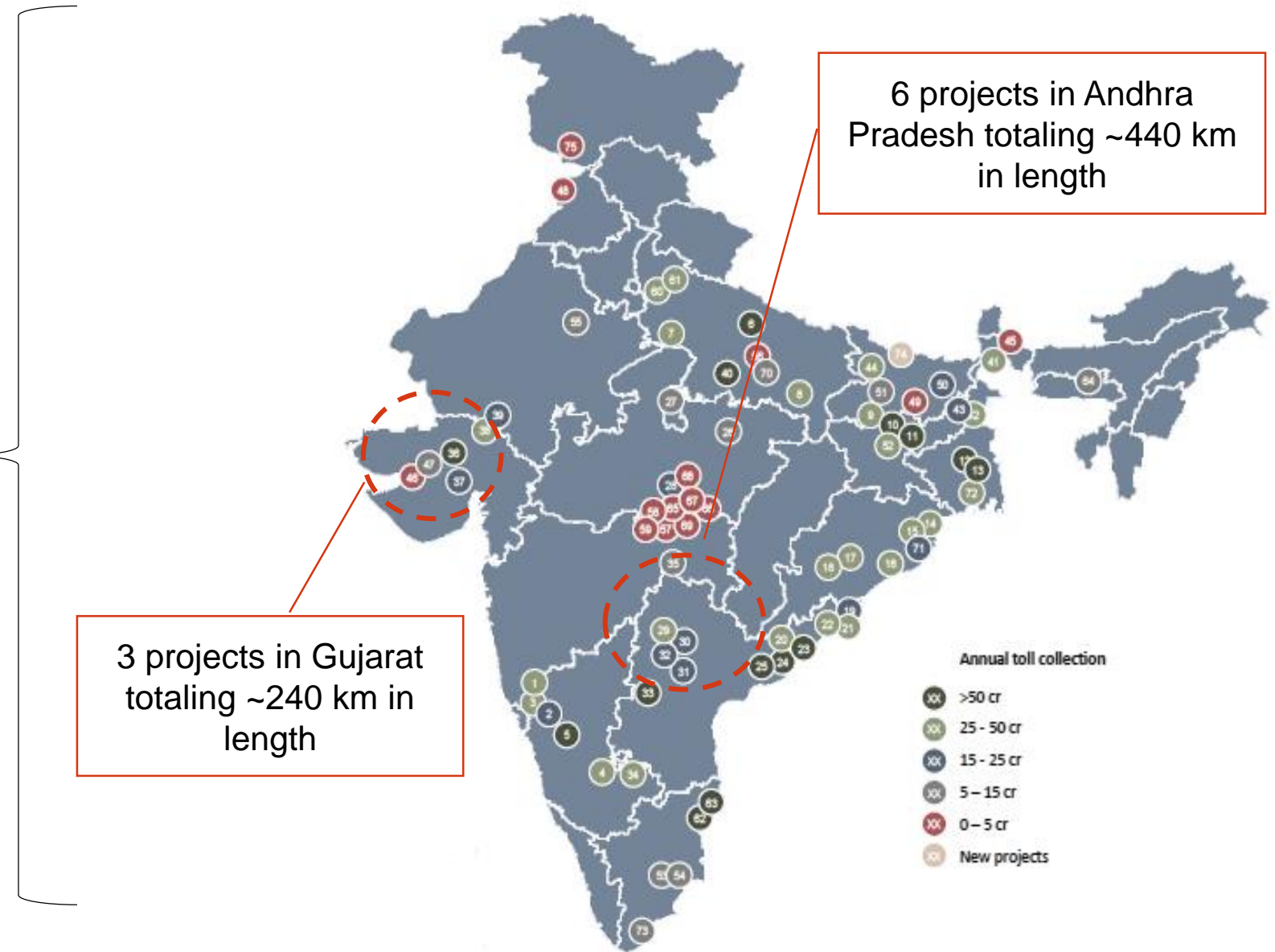
Cabinet Committee on Economic Affairs in 2016 authorised NHA to monetise 75 public-funded national highways with road length of around 4,500 km

NHA / Govt. prefer to award TOT packages to pension funds/ sovereign wealth funds to attract foreign capital

Ticket size of ~ \$1 billion for TOT Bundle 1 excluded all but the largest companies / funds in the infrastructure industry

Long concession period of 30 years aimed at attracting patient capital – flexibility to exit earlier also provided

## TOT Bundle 1 awarded



# Successful transaction of TOT Bundle 1 led to a promising start

IECV of the authority  
**Rs 6,258 crore**

## H1 Bidder

S No.	Bidder	Bidding amount (In Rs Crore)
1	Consortium of MAIF Investments India Pvt. Ltd and Ashoka Buildcon Limited	<b>9,681</b>
2	Spice Holdings Pvt. Ltd. (Brookfield)	7,511
3	Consortium of IRB Infrastructure Developers Limited and Autostrade India Infrastructure Development Private Limited	6,930
4	Consortium of ROADIS Concessions Infrastructure Holland B.V and National Investment and Infrastructure Fund	6,611

Assumptions taken by NHAI for calculating IECV

- Equity IRR (FCFE) approx. **14%**
- Debt-equity ratio at **55:45** (estimated by CRISIL)
- Discounting rate at approx. **9.25%** (i.e., bank rate + 3%)

Total capital cost of the project (IECV + initial capital works) is ~ Rs 11,000 crore, making it one of the largest single infrastructure investments

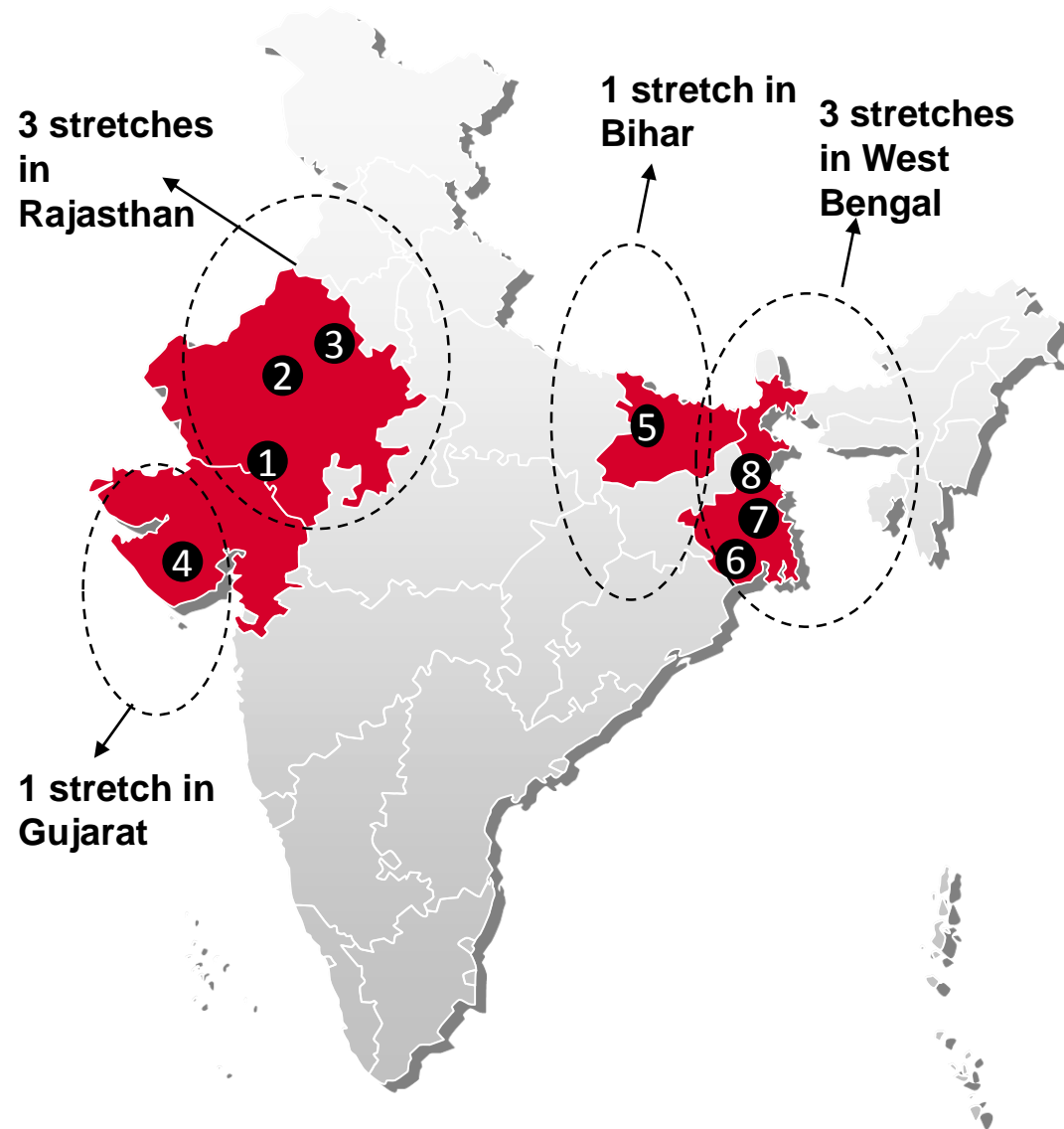
Actual debt-equity ratio was lower for the investor, and interest rate was also higher than that assumed by Authority

Significant interest among bidders as the quality of data provided by NHAI was good

Concession Agreement was signed in April 2018 and financial closure achieved in August 2018

# Subsequent action on TOT transactions

- Bids were received for TOT Bundle 2 in December 2018 for eight road stretches spread across the states of West Bengal, Bihar, Rajasthan and Gujarat
- The NHAI estimated concession value (IECV) of the bundle was Rs 5,362 crore

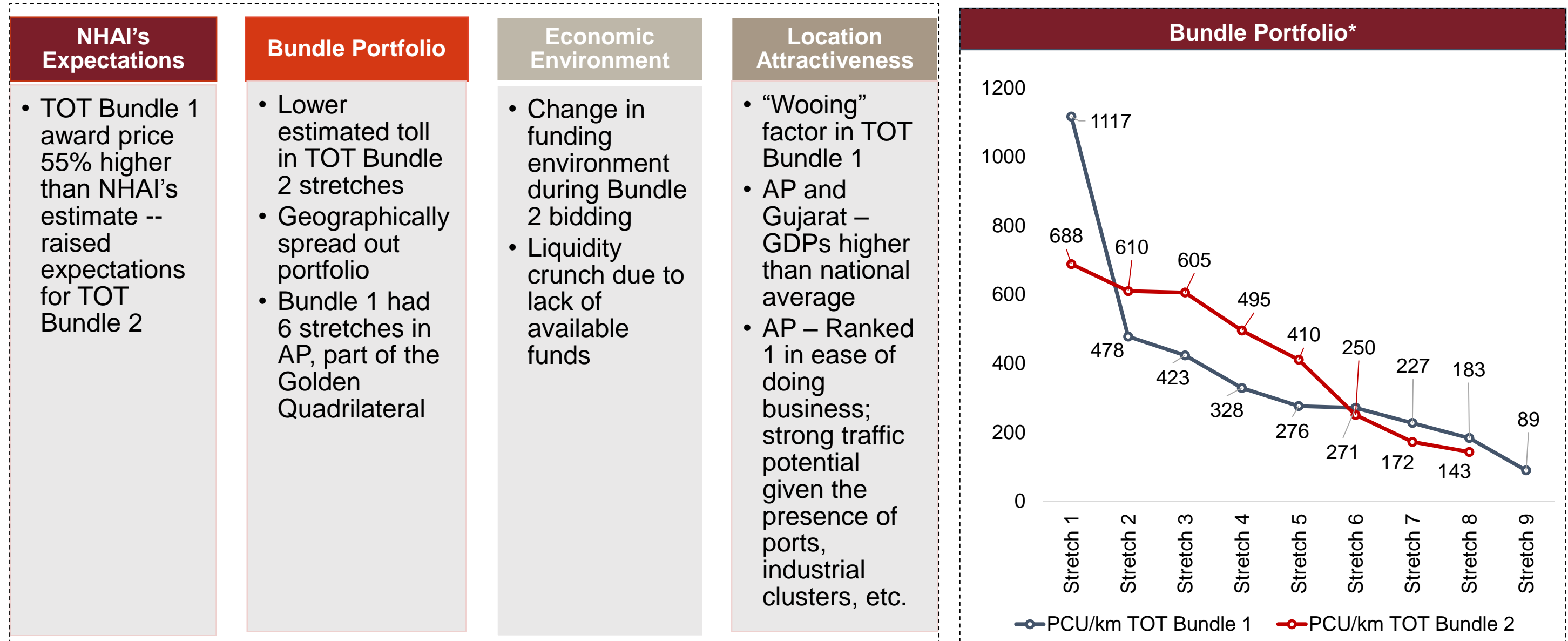


S.No	Bidder	Bidding Amount (In INR Cr)
1	Cube Highways	4,612
2	Consortium of Adani Group & Prakash Asphalting and Toll Highways	3,675
3	IRB Infrastructure Developers	2,718

- As all the bids were significantly below (>10% difference) the IECV estimated by NHAI, the bidding process was cancelled.
- However, NHAI remains positive about TOT as asset monetisation is an important component of the Bharatmala Pariyojna. NHAI expects to raise significant resources from the private sector for the Bharatmala Pariyojna and TOT will constitute an important part of the same.
- NHAI is planning to launch two TOT bundles this year. Road stretches have already been tentatively identified for TOT Bundle 3.

Geographically spread over 4 states against 2 states in TOT Bundle 1

# Potential reasons for different results in Bundle 1 and Bundle 2



\*Source: NHAI DPR data for project stretches

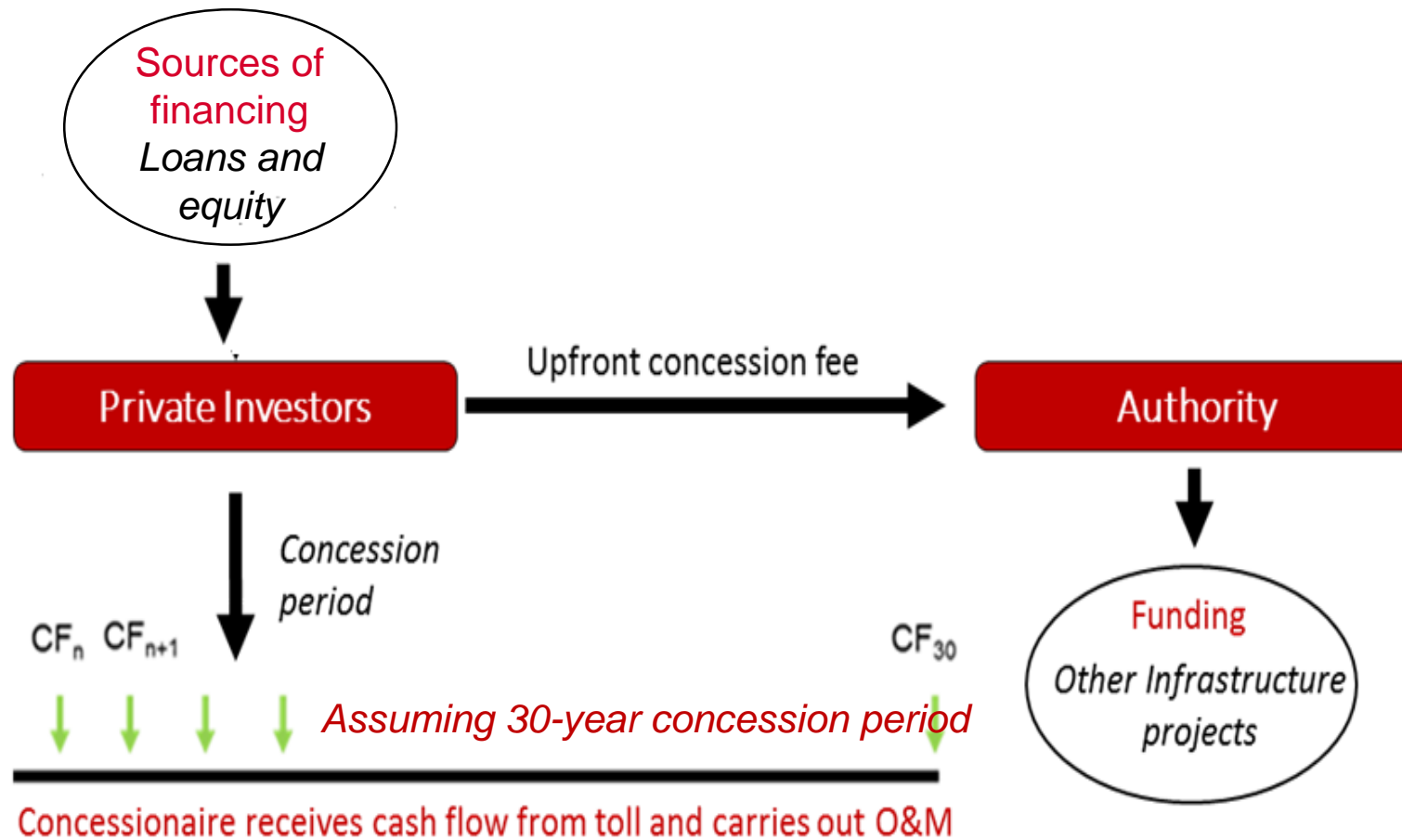
Mismatch between the investors' and NHAI's expectations from TOT Bundle 2



# TOT transaction structure and key risks

# TOT structure - Overview (1/2)

## Process flow



### Initial estimated concession value (IECV) of the authority

Free cash flow expected to be generated by the project discounted by weighted average cost of capital (WACC), derived from cost of debt and normative value for equity

### Project structuring

- Upfront payment by bidder based on its estimates of IECV
- Concessionaire responsible for maintenance and toll collection for the project over 30-year concession period

### Target fee and concession period

Concession period may be increased or decreased based on the revenue generated at predefined time period (Year 10 and 20 in the current TOT model)

Significant deliberations made before finalising the structure – well received by the market

# TOT structure - Overview (2/2)

## Selection criteria

### Highest total upfront concession fee

- Bid concession fee/project =  $\sum$ (NPV) of net free cash flow
- Selection based on “single lump sum amount” quoted by the bidder



## Technical capacity

### Bidder primarily required to demonstrate O&M strength

- Bidder can **tie up** with **O&M player**
- Tie up with O&M player to be undertaken **on or before** signing of the concession agreement
- Bidder to **declare the name** of such O&M entity in the application

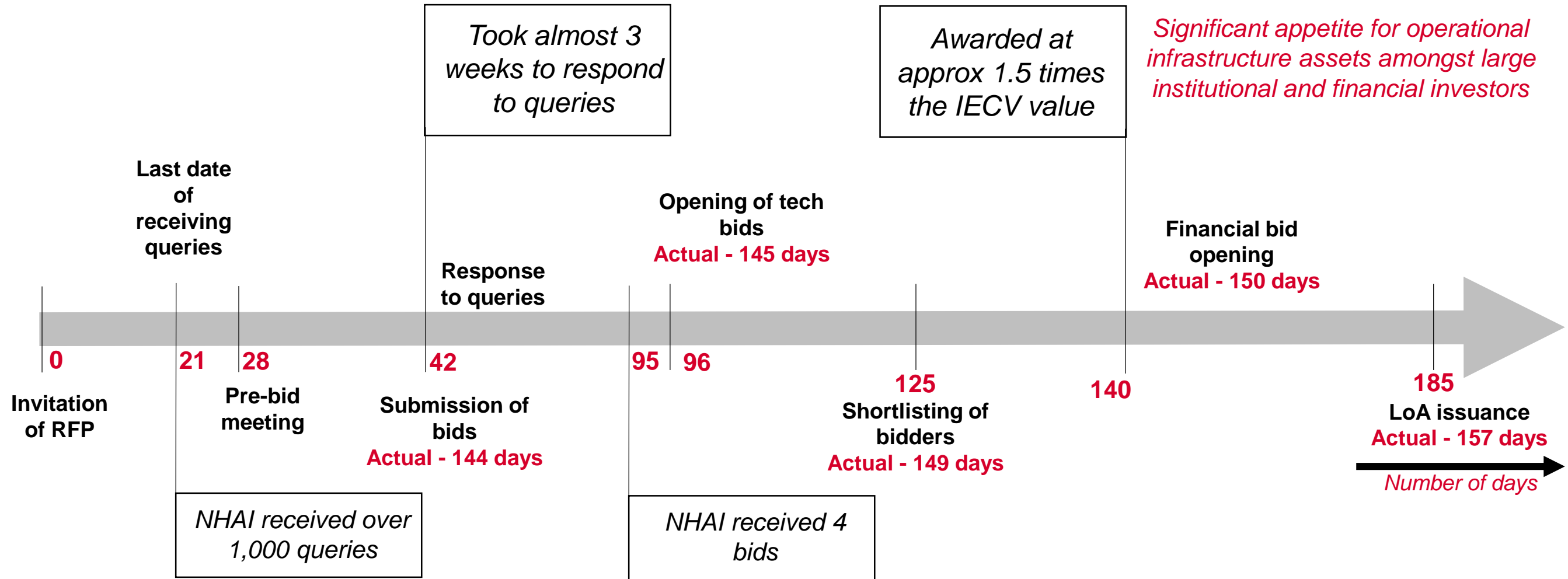
## Financial capacity

### Minimum net worth or asset under management (AUM) at the close of the preceding financial year

- In case net worth is used as criteria for evaluation, threshold financial capacity to be 40% of IECV
- In case AUM is used as a criterion for evaluation, threshold financial capacity to be 5 times IECV

Limited technical capacity requirement opens avenues for private investors and pension funds with limited road sector experience

# TOT timelines – Actual vs stated timelines for Bundle 1



For the first two bundles, NHAI provided approximately 144 and 136 days for due diligence, as against the initial ~90 day limit

# Key Draft Concession Agreement clauses and associated risks

S no.	Key clauses	Key risks	Impact
1.	Capacity augmentation	<ul style="list-style-type: none"> <li>4 to 6 laning will result in a decrease in user fee to 75%, with no escalation during construction period</li> <li>Compensation due to lane closure / traffic diversion on account of capacity augmentation only if monetary loss is greater than 20% (huge loss in free cash flow terms)</li> </ul>	High
2.	Force majeure	<ul style="list-style-type: none"> <li>Significant cost to be borne by the concessionaire in case of non-political event (Compensation only to the extent of 80% of unexpired cash flows)</li> </ul>	Medium
3.	Competing roads	<ul style="list-style-type: none"> <li>Definition of competing roads may be insufficient in nature, and the compensation for competing roads/ additional tollway only results in increase of concession period, i.e., upfront losses, but compensation after 30 years</li> </ul>	High
4.	Toll variation protection	<ul style="list-style-type: none"> <li>Target fee for Year 10 and Year 20 is fixed. Hence, decrease or increase in concession period (only in case variation is higher or lower than prescribed band) is accretive in nature. Target fee for Year 20 is not based on actuals for Year 10</li> </ul>	High
5.	Schedule B: Initial works (in case of annuity stretches)	<ul style="list-style-type: none"> <li>Poor construction and maintenance by the annuity concessionaire may result in higher O&amp;M costs for the TOT concessionaire post the O&amp;M Handover Date</li> </ul>	Medium

# Road ahead for TOT

# Why developers / investment funds are interested in TOT

Traffic figures  
already established

- Traffic surveys have been conducted and baseline traffic figures validated, reducing traffic risk
- Road stretches are currently being tolled, and hence, willingness to pay has been established

Minimal construction  
risk

- Road stretches are already operational; initial construction is restricted to improvement works
- Initial capital cost requirement is much less compared with other highway construction projects

Size & scale

- Provides an ideal opportunity for building a sizeable and scalable portfolio of operating roads with single large investment
- Limited competition in the TOT space

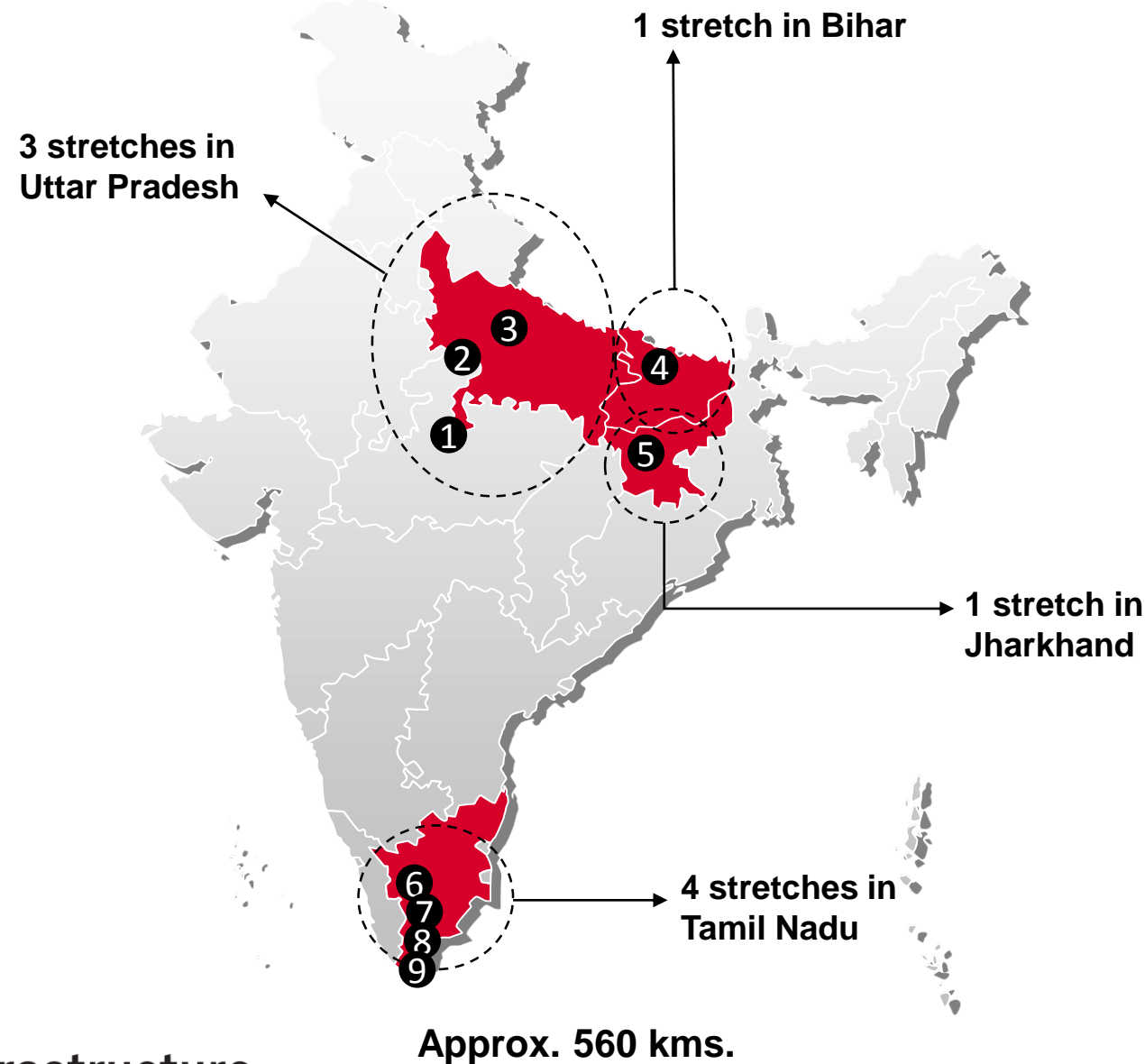
# Both private developers & NHAI looking at post-TOT strategy

- Despite setback with respect to Bundle 2, NHAI is looking to ramp up TOT, with up to two bundles to be launched this year
- Key learnings from Bundle 2 launch are being incorporated in the bid process of Bundle 3
- In addition, to attract private sector investments, NHAI is looking at other options such as Infrastructure Investment Trusts (InVITs)
- On the private side, several developers and infrastructure investment funds are exploring options for monetising their investments in road assets
- While InVIT is a good exit option for developers / investors and NHAI, the regulatory environment for it is still evolving



# Key learnings from TOT so far

## Tentative / Expected Bundle 3 locations



- **Comprehensive & robust assessment** – For asset recycling, robust assessment and sharing of information with potential bidders is essential. Any doubt in the mind of the bidder with respect to asset condition / traffic / potential toll revenue can lead to low bids
- **Bundling right assets together** – An optimum mix of financially viable and less viable assets, along with right assessment of risks, is necessary for the successful execution of bid
- **Pragmatic valuation of bundle** – Initial valuation / IECV of asset needs to be pragmatic. Too high a reference value can potentially lead to less bidders, thus reducing competition

Parameter	Sensitivity (+1%)	Sensitivity (-1%)
Change in Traffic Growth	15% to 16%	-13% to -14%
WPI	7% to 8%	-6% to -7%

# Thank You

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