

Contracting Models : Highway Operators' Perspective

Dr Esther Malini Victor

Head – Client Relations & Contract Administration
Epic Transnet Project Management Pvt Limited
(Sekura Roads Group)

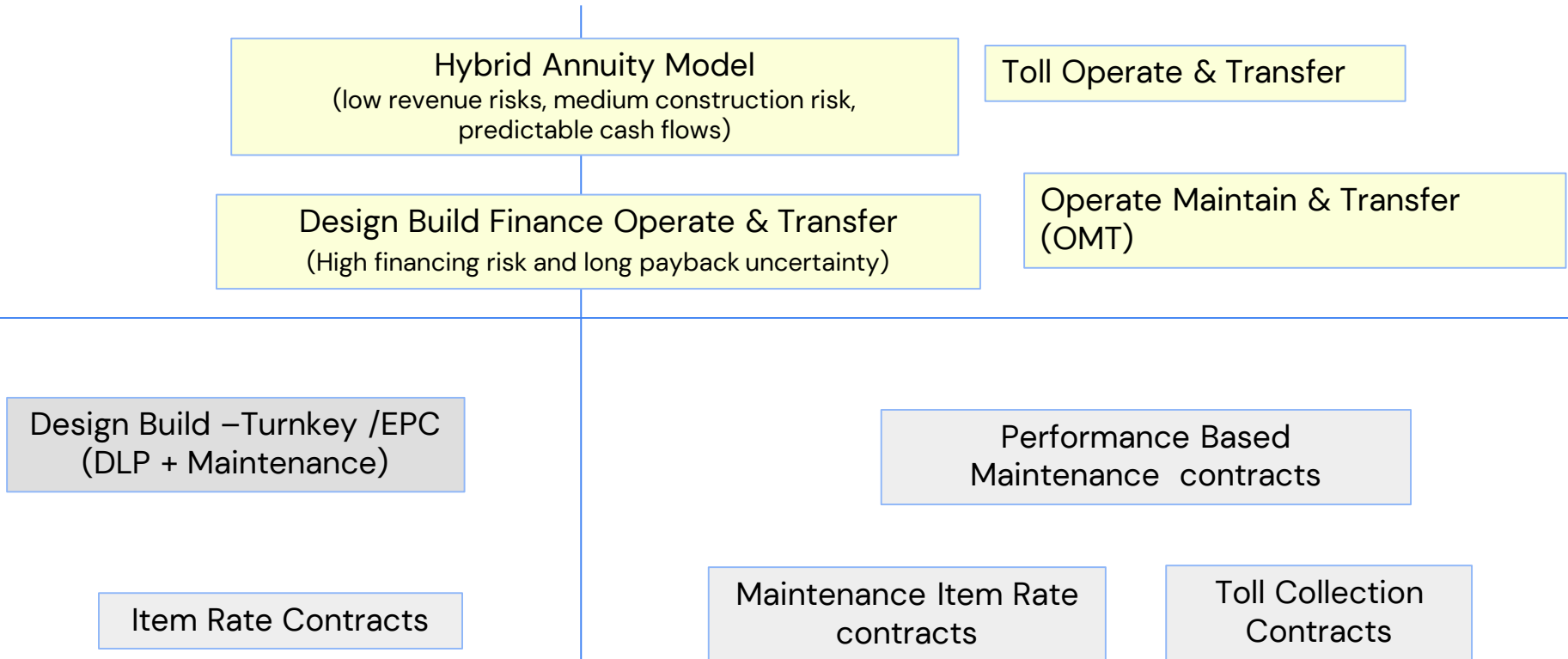
Esthermalini.victor@roads-srl.com

Agenda

- **Contracting Models – Focus on PPP**
- **Key Reforms and Course Corrections**
- **Impact of Reforms**
- **Changing Landscape of Contractual Frameworks**
- **Technology & AI in Contract Life Cycle Management**
- **Road Ahead**



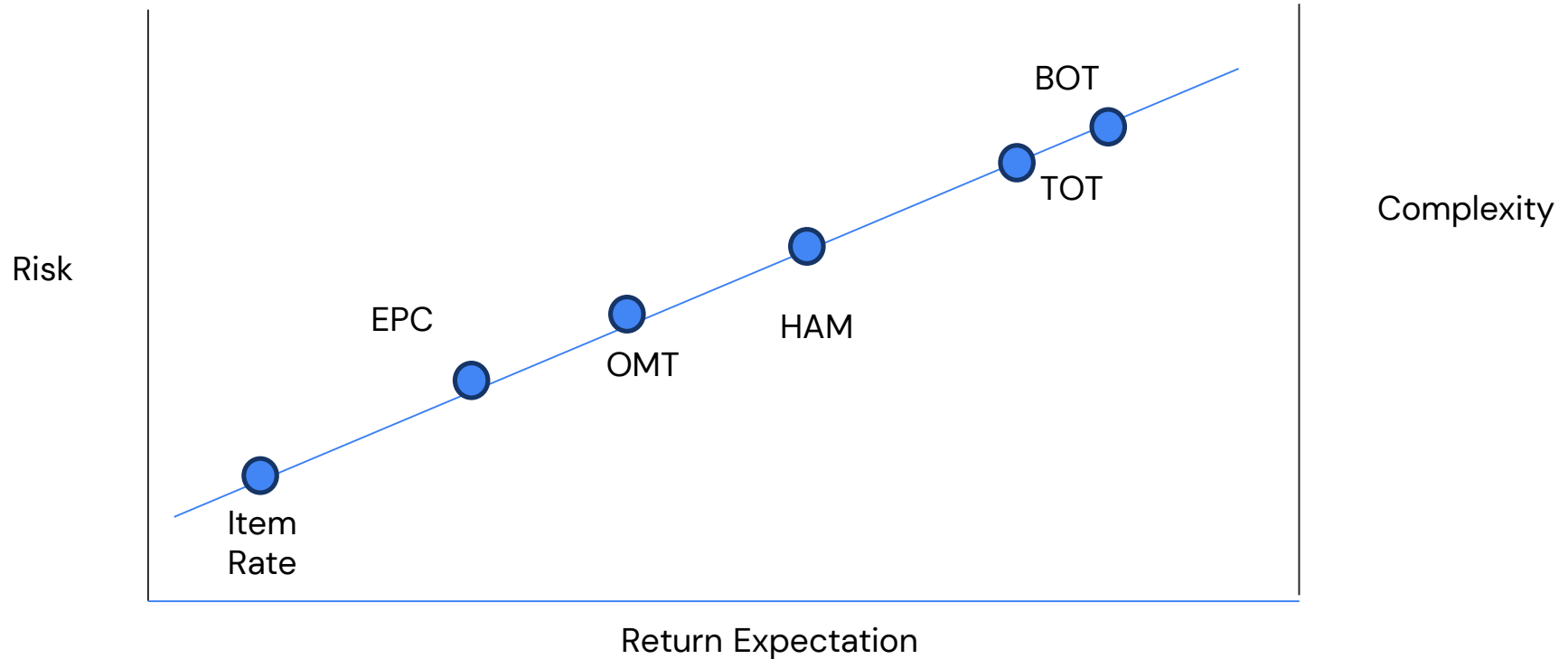
Contracting Models



Construction

Operation & Maintenance

Risk, Return Expectation & Complexity Continuum



PPP Contract Models

- First set of 5 BOT Projects rolled out in 1995 by MoRTH. The contractual terms were not uniform.
- Some early projects faced stiff resistance from Users.
- Concession Agreement was refined for Jaipur Kishangarh Project in 2002.
- After stakeholder consultation, Model Concession Agreement (MCA) was released by MoRTH in 2006 – Gajendra Haldia
-
- MCA brought balance, equity and bankability to the projects (max projects awarded post MCA)
- Refinements and equitable risk sharing mechanisms introduced over the years however the basic framework of MCA remains intact.
- Other models such as BOT (Annuity), HAM, TOT have all been evolved on the basic MCA Contractual Framework.



Key Reforms in PPP

- BK Chaturvedi Committee Report (2009)
- Rangarajan Committee Report (2014)
- Kelkar Committee Report (2015)

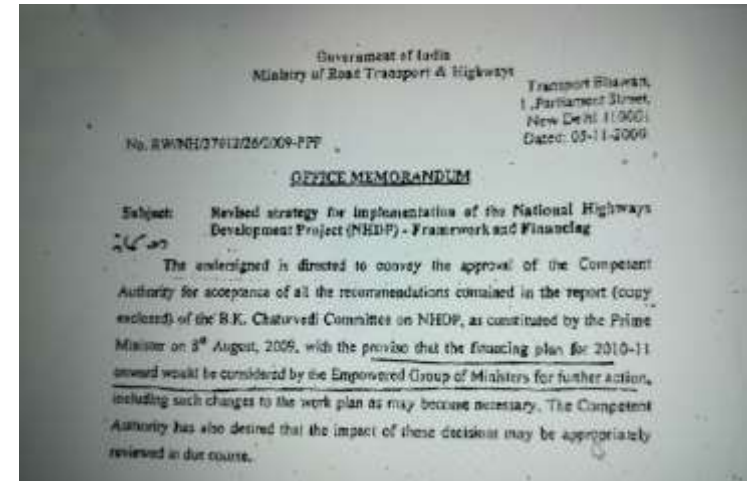
Dispute Resolution

- NITI Ayog's Scheme for providing liquidity - 75% of AT Award with BG (2016)
- Vivad se Vishwas Schemes (II & III) (2023-25, 2026)



B K Chaturvedi Report Aug 2009

- Report of the B K Chaturvedi Committee on NHDP (27/08/2009)
- BKC Report was accepted in toto by MoRTH in November 2009 and were incorporated in the MCA post 2009.
- Highlights inter alia include:
 - **Recommended 100% Exit of Developer two years after COD – recognised the distinct roles of developer and Highway Operator in PPP space**
 - Lenders allowed to create a charge on Escrow account as per the waterfall in MCA, bringing lending to PPP projects under “**secured category**”.
 - Recommending a total of 40% Grant during the Construction period by merging 20% equity support and 20% O&M support.
 - Absolute amount introduced to **Premium** with a 5% increase year on year instead of the % revenue share
 - **Annual Pre-qualification process** instead of project wise RFQ
 - Introduction of Capacity Augmentation in lieu of Termination on account of exceeding Design Capacity with a max of 5 years extension in Concession Period.

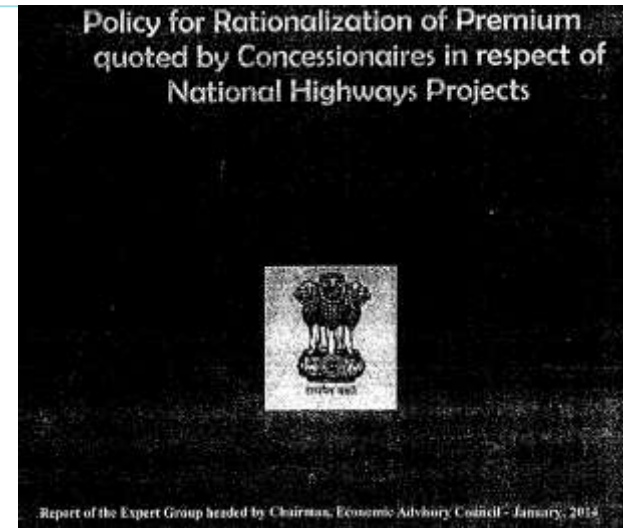


Rangarajan Committee Report

- Policy for Rationalization of Premium quoted by Concessionaire in respect of NH Projects (January 2014)

Key Highlights:

- **Rescheduling Premium Payments:** to postpone payments during initial low-revenue years and pay more later in the concession period.
- **Interest on Deferred Premium:** calculated at the prevailing bank rate plus 2%
- **Case-by-Case Approval:** NHA to evaluate projects individually to determine eligibility for restructuring, rather than applying a blanket policy.
- **Strict Criteria for Deferment:** It explicitly stated that premium rescheduling should only be considered if a project's annual toll revenues is below Subsistence Revenue (insufficient to cover its costs –debt servicing, operations, maintenance, and premium).
- **Restricted Dividend Payments:** Companies not allowed to pay dividends to their parent companies until they have cleared their dues to NHA



- For a set of about 23 stressed projects



REPORT
OF THE
COMMITTEE ON REVISITING AND REVITALISING
PUBLIC PRIVATE PARTNERSHIP MODEL
OF INFRASTRUCTURE

November, 2015

Department of Economic Affairs
Ministry of Finance

Kelkar Committee Report



- A very learned report, its recommendations ahead of the times.
- Report was not fully implemented
- Some pathbreaking recommendations:
- **Change in Attitude:** The government must shift from treating private partners as mere transaction agents to viewing them as partners in service delivery, moving from "contract management" to "relationship management".
- **Independent Regulators:** Set up independent regulators for different sectors (like airports, ports) to ensure fair treatment between the government and private developers.



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- **Renegotiation Allowed:** Contracts should have in-built mechanisms to renegotiate terms, acknowledging that long-term projects face unpredictable economic changes
- **Faster Dispute Resolution:** Proposed formation of Independent Settlement Advisory Committee (ISAC) consisting of retired high court judge and two other members with sufficient experience in administration, finance and technical fields.
- **Protecting Integrity:** The Prevention of Corruption Act, 1988, should be amended to differentiate between genuine commercial decisions that went wrong and corrupt practices.



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- Sowed the seeds for Monetisation of Assets

“Monetisation of viable projects that have stable revenue flows after EPC delivery may be considered. This should be seen as a monetisation opportunity that can attract risk averse long-term funding like pension and institutional investors.

By providing O&M PPP opportunities, the authority will be able to free up budgetary funds for fresh EPC and start a virtuous cycle of fresh investment fed by additional revenues...”

Introduction of TOT Model

- Cabinet Committee on Economic Affairs (CCEA) on August 3, 2016, authorized National Highways Authority of India to monetize public funded national highway projects
- Proposed to monetize public funded National Highway (NH) projects which are operational and are generating toll revenues for at least two years after the Commercial Operations Date (COD) through the Toll Operate Transfer (TOT) Model.
- Around 75 operational NH projects completed under public funding have been preliminarily identified for potential monetization using the TOT Model.
- The first Bundle of TOT projects was awarded in March 2018

<https://www.pib.gov.in/newsite/PrintRelease.aspx?relid=148306®=3&lang=2>

Conciliation Committee of Independent Experts

- CCIE was constituted in 2017 for one time settlement of disputes – adoption of recommendation of Kelkar Committee
- Success of CCIE is well documented by NHA
- Till 2021-22, 155 out 251 cases settled leading to 61.8% resolution rate *
- Rs 13076 Cr settled as against total claim of Rs 38747 Cr (approx. 33%) *

Disputes with NHA Settled through CCIE (2019-2024)							
Sl.No.	Year	Claim Rs in Cr	EOCP in days	Counter Claim Rs in Cr	Claim settled Rs. in Cr	EOCP in days	Counter Claim Settled in Rs Cr
1	2019	3,096	-	-	1,238	-	
2	2020	9	-	-	1	-	
3	2021	493	-	-15	112	-	
4	2022	1,019	93	-59	56	70	
5	2023	228	-	-	136	-	
6	2024	56	293	-2,071	-50	71	-13
		4,901	387	-2,146	1,493	141	-13
Realisation%					30%	36%	1%

* <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1814074®=3&lang=2>

Contractual Disputes –NHAI BOT (Toll) Projects

Nature of Claims:

- Delays of Authority;
- Low Traffic compared to Financial Model;
- Change in Law resulting in low revenue;
- PCU factor in Extension of Concession Period;
- Debt Due in Termination Payment;
- Loss of Traffic due to increase in Axle Load Limits;
- Revision in Penalty on overloaded vehicles

182*

BOT Projects

(6 completed, 44 terminated, 125 PCC/CC, 7 under construction)

112*

Arbitral Awards

Rs 14205 Cr against Rs 46634 Cr (30%)

81*

Arbitrations in

Progress – Claims of Rs 1.14 lakh Cr

* Source: Presentation on Modifications in MCA of BOT(Toll) Projects, by MoRTH, April 2026

Current Dispute Portfolio of NHAI *

- Assuming a 30% award ratio, a sum of Rs 37000 Cr may be the likely outgo for NHAI.
- VSV II was very successful (65% of Award sum or 85% after Appeal H/C)
- VSV III in progress

Category	Years	No. of Matters	Total Awarded Amount (In Cr)	Interest Amount till date (In Cr)	Total Amount with Interest till date (In Cr)
Supreme Court	2004-2026	6	354	322	677
High Court u/s-34	2008-2026	164	24109	1896	25910
High Court u/s-37	2008-2025	22	1410	824	2231
Amount Involved	Years	No. of Matters	Claim Amount (In Cr)	Counter Claim Amount (In Cr)	
Ongoing Arbitrations	2012	1	521	0	
	2015	1	2092	1398	
	2016	3	2621	1118	
	2017	3	8231	292	
	2019	3	2566	906	
	2020	6	7226	2068	
	2021	9	21346	20940	
	2022	17	21779	8954	
	2023	18	14194	8634	
	2024	43	32824	18361	
	2025	41	9951	780	
	2026	2	95	0	
Total		147	123446	63451	

*Source: Presentation on Modifications in MCA of BOT(Toll) Projects, by MoRTH, April 2026

Proposed Modification in MCA– Dispute Resolution

Dispute Resolution

- Dispute less than Rs.10 Cr. – arbitration under SAROD or IIAC rules
- Dispute Rs.10 Cr. or more (including declaratory/ non-monetary disputes) – Conciliation or Mediation (not to be referred to arbitration) – parties are free to resolve such disputes through Civil Courts.)

Future of Dispute Resolution – Digital Evidence

*NHAJ Successfully Defends Arbitration Claim, Safeguards Public Funds in a National Highway Project

Posted On: 08 MAY 2026 5:53PM by PIB Delhi

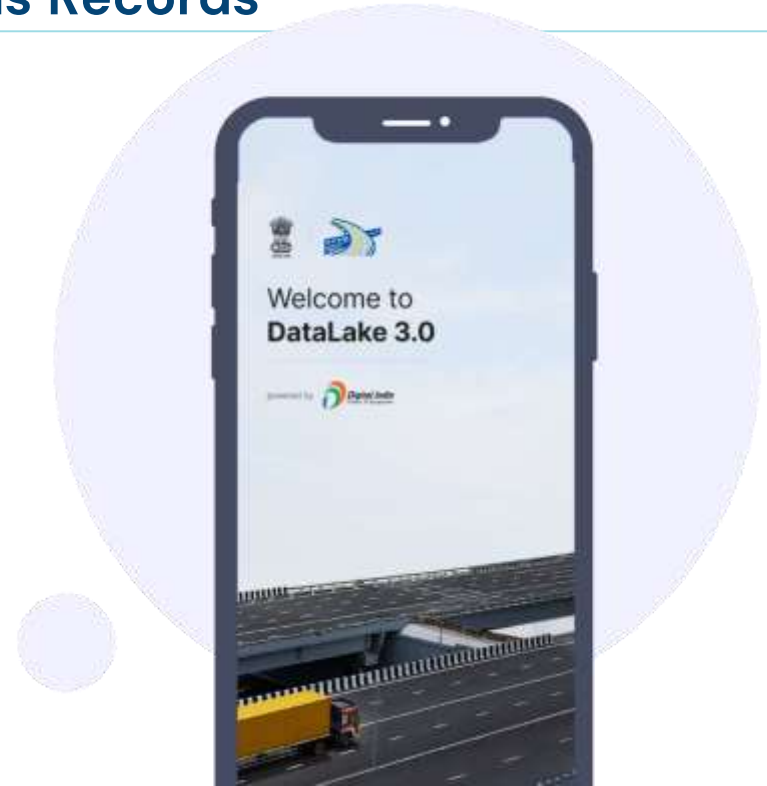
“.....During the arbitration proceedings, NHAJ presented **detailed documentary and digital evidence** before the Arbitral Tribunal. This included drone videography, digital project records, and technical documentation demonstrating that sufficient land was available for execution of the six-laning works and that substantial drainage work along the edge of the Right of Way has already been completed.”

“.....The evidence further established that the contractor had not undertaken key and challenging components of the project, including major structures and flyovers, which significantly contributed to the foreclosure of the contract.”

<https://pib.gov.in/PressReleasePage.aspx?PRID=2259120>

Digital Evidence & Contemporaneous Records

- The NHA Data Lake 3.0 initiative by Digital India Corporation is designed as a next-generation, end-to-end Highway Project Lifecycle Management solution integrating key platforms such as Infracon, RAMS, iRAD/EDAR, ATMS, Bhoomirashi, e-Procurement, Parivesh, and PM Gati Shakti.
- Increased efficiency and automation
- Improved system stability and user adoption
- Faster releases with reduced defects
- Better visibility and decision-making



<https://dic.gov.in/datalake-3-0/>

Specialized dashboard cameras mounted on Route Patrol Vehicles (RPVs) to conduct weekly surveys on the National Highway stretches (March 20, 2026)

“Taking a significant step towards transforming Operations & Management of National Highways, NHA will deploy advanced **AI Powered Dashcam Analytics Services (DAS)** on around 40,000 km of the National Highway network. This initiative leverages Artificial Intelligence (AI) and Machine Learning (ML) to enhance use of high-tech, data-driven Operations & Maintenance (O&M) for the National Highways and Expressways across the country.”

“...**the major focus will be on Pavement condition** which includes detection of potholes, rutting, and severe cracking. The adopted method will also cover Road Furniture incorporating Real-time identification of damaged or faded lane markings, crash barriers and non-functional streetlights. Special focus will be on Safety & Encroachments through monitoring for illegal median openings, unauthorized signboards, and illegal parking or encroachments.”

“**The solution also allows for side-by-side comparisons of road conditions over time, enabling NHA to precisely track maintenance progress and repair efficiently.** The AI generated results shall also be integrated to central NHA Data Lake platform for seamless monitoring and ensuring timely rectification of defects....”

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2243028®=3&lang=1>

Calculation of Damages

Damages are typically calculated per day of delay till defects are cured, as higher of

BOT (Toll)

0.5 % of the Average Daily Fee and 0.1% of the estimated cost of repairs

HAM

2% of Performance Security and 0.1 % of cost of repair

TOT

0.5% of Performance Security and 0.1% of cost of repair



Risk of automatic generation of records for levying maintenance damages has increased with digital records being maintained by the Authority.

Technology and AI in Contracts Management



- **Automated Drafting and Review:** AI analyzes contract language to identify missing clauses, flag non-compliant terms, and suggest changes based on company standards.
- **Risk Analysis and Management:** AI systems instantly scan contracts to identify risky clauses, providing prioritized recommendations for negotiation.
- **Intelligent Repository and Search:** AI digitizes and categorizes contract repositories, allowing teams to search for key data points (e.g., SLAs, KPIs, renewal dates).
- **Performance Tracking:** AI monitors contractual obligations and sends alerts for critical deadlines, preventing missed renewals.

<https://aavenir.com/benefits-of-ai-in-contract-lifecycle-management/>

Does AI pose an existential risk for Contract Managers?



Waleed Tariq
NEC4/ FIDIC Specialist

AI won't replace contract managers. But contract managers who use AI will replace those who don't.

Obsolescing Bargains*

- This is the phenomenon in a contract where one party often loses its bargaining power after investing in the Project.
- This could expose the Party to situations where the other party may have a stronger position.
- One way to regain the bargaining position is through collective advocacy with the Authority.
- HIA, NHBF

Eg: COVID Claims, Stamp Duty advocacy, WPI impact etc.

Advocating for what you believe in
is crucial – if you don't ask for it,
people assume you don't need it!

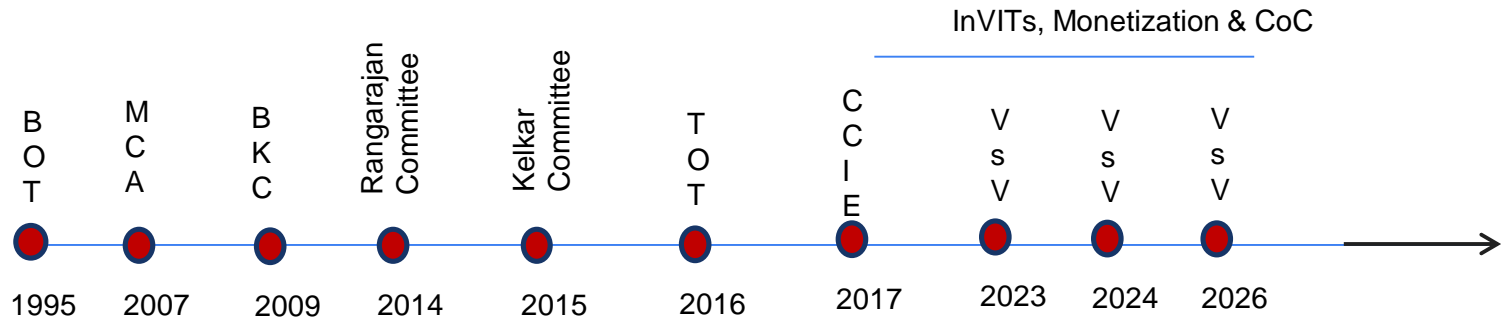
* Chapter 4 of Kelkar Committee Report, 2015

Wheels will turn....

- Independent Regulator for Road Sector
- Contracts which provide an enabling framework for collaboration, trust and true spirit of partnership
- Real time resolution of issues before they mature to a disputes.
- Timely decision making (empowering officers of the authority to take decisions)



Private and confidential



Internal

Thank You.

