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Development of Road Infrastructure in India

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Administrative Arrangement - Political

- Federal structure
- Union (central) government
- State (provincial) governments
- Local bodies (cities, districts, blocks, villages)

Administrative Arrangement - Legislation

- Union List – includes subjects on which only central government can make laws
- State List– includes subjects on which only state governments can make laws
- Concurrent List– includes subjects on which both i.e. central and state governments can make laws

Administrative Arrangement - Roads

- Expressways (NE) and National Highways (NH) - Union (central) government
- State Highways (SH), Major District Roads (MDR), Other District Roads (ODR) - State (provincial) governments
- Rural Roads, Other roads - Local bodies (cities, districts, blocks, villages)

Road Network in India

- **Total Road Length – about 4.1 million km**

• National Highways	71,772 km
• State Highways	166,130 km
• Major Districts Roads	266,058 km
• Other Roads	3,605,633 km

The NHs comprises only 1.7% of the total length of roads, but carries over 40% of the total traffic.

Lane wise distribution of National Highways

4-or more Lane	24 %	(17,182 km)
2-Lane	52 %	(37,488 km)
Intermediate/Single Lane	24 %	(17,102 km)

A standard lane is 3.5 m wide

Allocation and Expenditure (in US $ bn)

Sl. No	Scheme	11th Plan Outlays	2007-08		2008-09		2009-10		2010-11		2011-12
			Alloc.	Exp.	Alloc.	Exp.	Alloc	Exp.	Alloc	Exp.	Alloc.
1.	NH (Original)	3.67	0.42	0.42	0.64	0.63	0.97	0.96	1.04	1.00	1.10
2.	NH works under BRO	0.56	0.14	0.14	0.14	0.14	0.17	0.16	0.17	0.16	0.16
3.	NHAI (Investment)	8.05	1.45	1.45	1.55	1.55	1.65	1.65	1.88	1.88	1.83
4.	EAP	0.99	0.49	0.49	0.42	0.42	0.08	0.08	0.09	0.09	0.02
5.	Others	2.70	0.25	0.24	0.31	0.22	0.39	0.21	0.97	0.83	1.24
	Total	**15.96**	**2.77**	**2.74**	**3.06**	**2.97**	**3.25**	**3.05**	**4.14**	**3.95**	**4.36**
6.	IEBR	7.74	0.46	0.09	0.82	0.36	1.11	0.28	1.66	0.47	1.67
	Grand Total	**23.70**	**3.23**	**2.84**	**3.88**	**3.33**	**4.36**	**3.33**	**5.79**	**4.42**	**6.02**

Development phases of Roads

- In the early period of independent India, the focus was on `connectivity' – to connect parts of this geographically large country –roads constructed with minimal standards often providing for stage construction
- After some years of independence, an all inclusive overall growth set in motion raising demand for 'better and improved connectivity'
- This required improved and upgraded roads for smoother, unhindered and faster movement of goods and passengers

Development phases of Roads

- Further industrial growth only widened this existing ‘infrastructure deficit’ in road sector
- The hitherto used mode of public funding for road construction was no more sustainable
- Being a developing country, there was increasing pressure from other, especially social sectors on Government resources
- Innovative modes of financing were explored and India came out with its policies on private sector participation in the roads sector in the late nineties

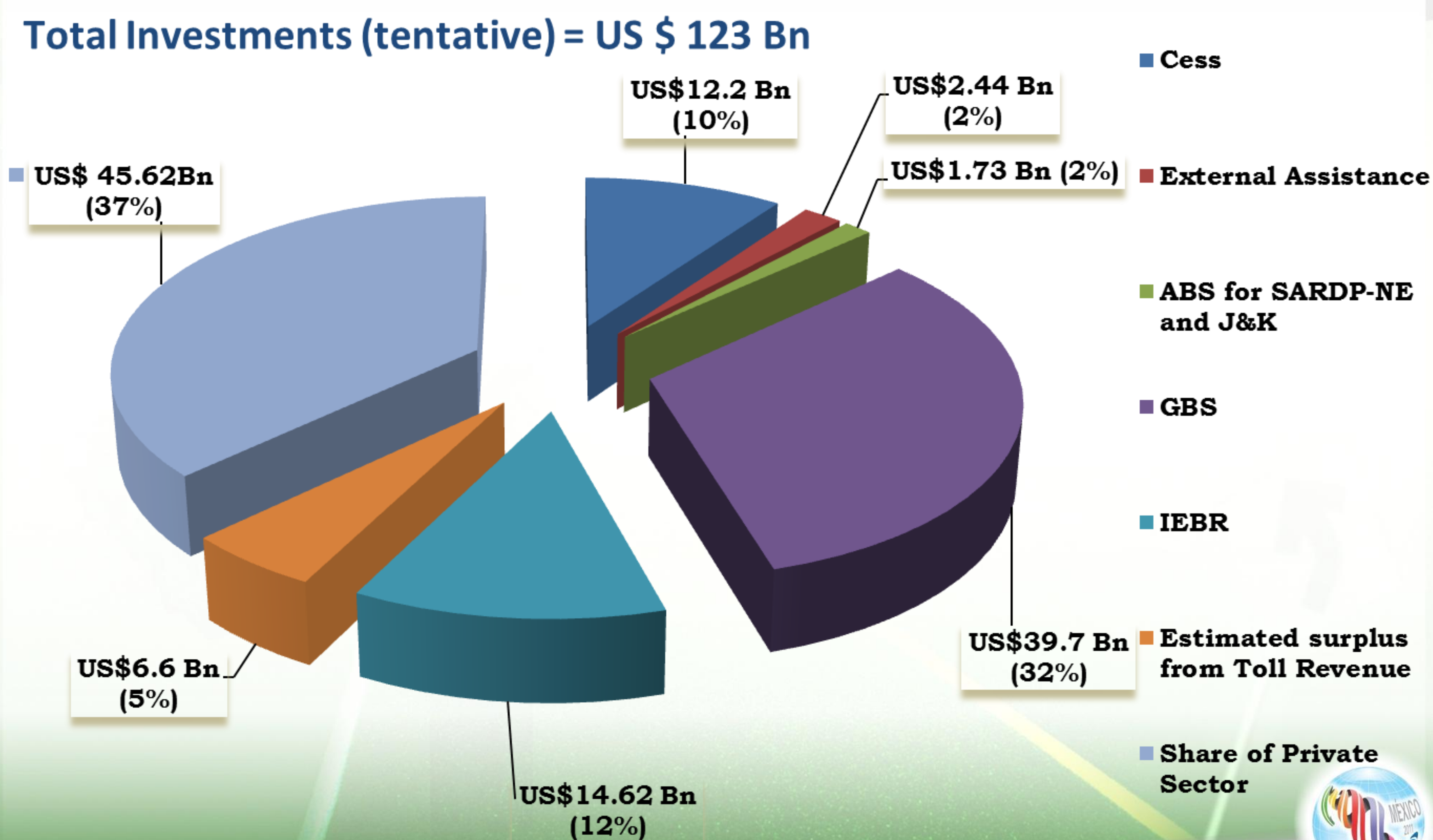
Development phases of Roads

- Besides a robust policy framework, other necessary legislative mechanism was also brought in to enable and facilitate private sector participation
- Institutional capacity building to take up road projects on PPP mode followed including sensitisation of financing sector
- This paradigm shift in mode of delivery of road projects required a lot on all fronts and early experiments with much smaller projects were all very successful boosting the country and the industry's confidence in the system

Development phases of Roads

- India’s tryst with this novel mode of delivery proved successful with implementation of major highway projects that followed in subsequent years
- So much so that it gave the courage for the planners to aim for a larger share of private sector participation in India’s road development programme
- The country’s next five year plan (2012 – 2017) aims at about 40% of the investment in roads coming from private sector

Investments for 12th Five Year Plan (2012-17) for Central Sector Roads (excluding State Govt. owned projects)



NATIONAL HIGHWAYS DEVELOPMENT PROJECT (NHDP)

The Government took major structured initiative for road development and undertook a large road development programmed titled National Highway Development Project (NHDP). It has seven phases.

Phase-I: Mainly the Golden Quadrilateral (GQ) connecting major cities of the country namely Delhi, Mumbai, Chennai and Kolkata

Phase-II: North–South and East–West Corridors

NATIONAL HIGHWAYS DEVELOPMENT PROJECT (NHDP)

Phase-III: Connection of State Capitals and important places to GQ and Corridors

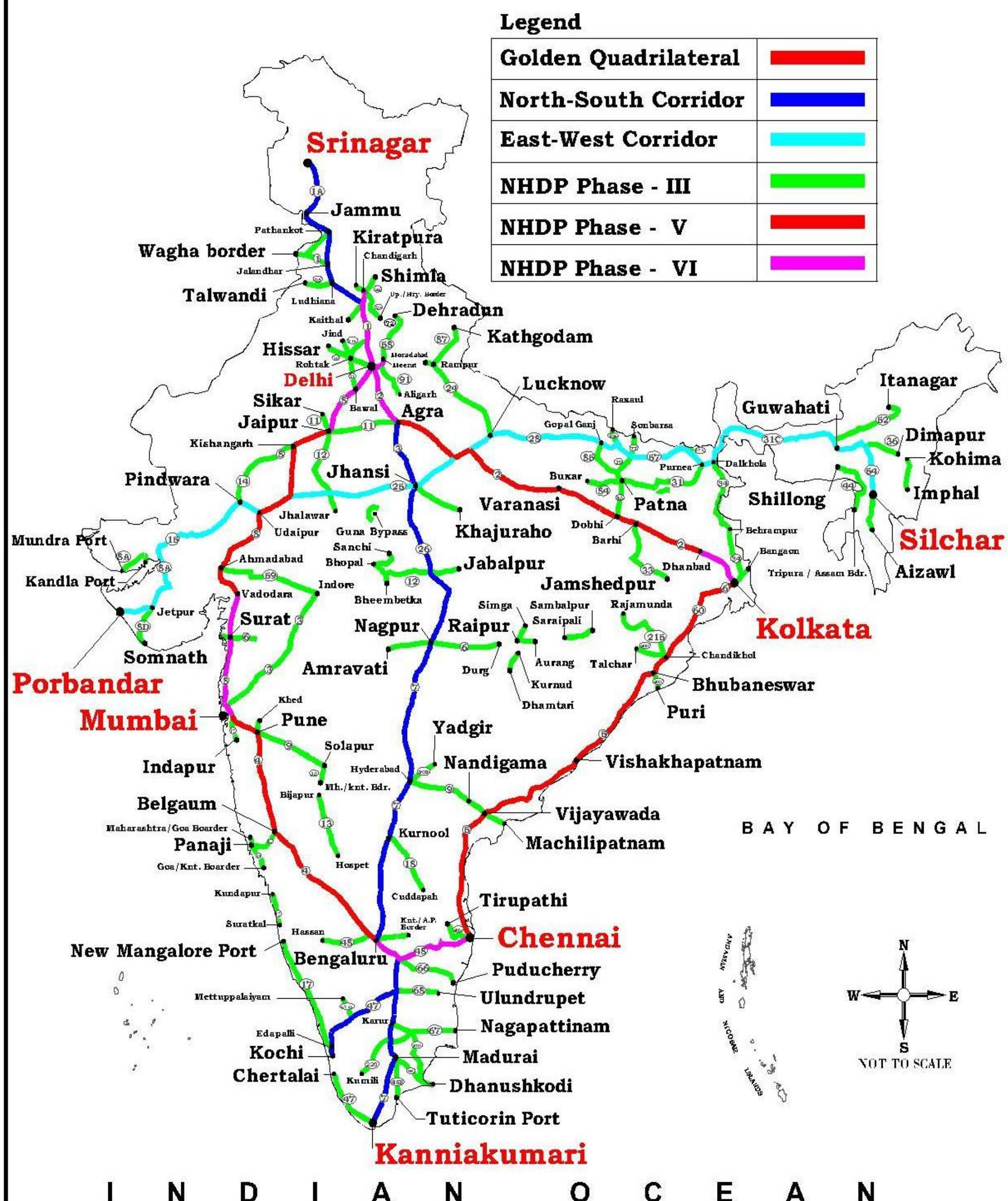
Phase-IV: Improvement of National Highways to 2-lane with paved shoulders

Phase-V: 6-laning of National Highways (5,700 km GQ + 825 km other stretches)

Phase-VI: Expressways

Phase-VII: Bypasses, Ring Roads, Flyovers

NATIONAL HIGHWAYS DEVELOPMENT PROJECT



Status of NHDP

Phases	Total Length (km)	Cost (US $ Bn)	Completed (km)	under Implementation (km)	Balance for award (km)
Phase I	7,498	6.73	7,439	83	--
Phase II	6,647	7.63	5,287	916	444
Phase III	12,109	17.92	2,487	6,079	3,533
Phase IV	20000	6.18	-	846	19,154
Phase V	6,500	9.16	651	1,986	3,863
Phase VI	1000	3.71	-	-	1,000
Phase VII	700	3.71	-	41	659

Options for PPP

BOT (TOLL)

- Defined concession period
- Good track record of timely completion
- Traffic growth factored for reduction/increase of concession period
- Good Response from builders
- Harnesses private sector efficiencies

BOT (ANNUITY)

- For low traffic density-commercially unviable stretches
- Operations & Maintenance by concessionaire – no traffic risk
- Departmental toll collection

BOT (SHADOW TOLLING)

Public Private Partnership (PPP) : Incentives

- To encourage and facilitate private sector participation in Indian road sector a conducive environment has been created
- A comprehensive study of the ‘risk allocation matrix’ in such infrastructure projects lead to policy formulation wherein the project risks were allocated / assigned to the parties that can control the risk the best
- The entire documentation related to implementation of PPP projects is based on this premise
- There are a host of other incentives

Public Private Partnership (PPP) : Incentives

- Viability Gap Funding up to 40% of project cost to make project viable
- Duty free import of high capacity and modern construction equipment
- 100% tax exemption in any 10 consecutive years within a period of twenty years after completion of the project
- Agreements to avoid double taxation with a large number of countries
- Provision of encumbrance-free land for construction of roads

PPP : Incentives (contd.)

- Procurement procedure
  - Well defined and transparent with standard tender documents RFQ, RFP and Agreement
  - Investor friendly Concession Agreement
  - International Competitive Bidding
- Foreign Direct Investment up to 100% in road sector
- Concession period up to 30 years
- Concessionaire to have the right to collect and retain user fee (toll)
- Award of PPP projects based on a Model Concession Agreement (MCA)

BOT (Toll) Projects

- Concessionaire's Responsibilities: Design, Engineering, Financing, Procurement, Construction, Operation & Maintenance.

- Concessionaires are granted the right to demand, collect and appropriate the fees (Toll) from vehicles for using the Project Highway during the operation period.

- **Criteria for Award of contract : Grant / Premium offered by Bidders**

BOT / Annuity

- Concessionaire's Responsibilities: Design, Engineering, Financing, Procurement, Construction, Operation & Maintenance.
- Concessionaire receive bi-annual payments (Annuity).
- No Traffic Risk to Concessionaire.

- **Criteria for Award: Annuity Quoted by Bidders.**

Main Features of MCA

- Sharing of Traffic Risk
- Target Traffic agreed for a target date
- For 1% shortfall – 1.5% increase in Concession period (subject to a maximum of 20%)
- For 1% excess – 0.75% reduction in Concession period (subject to a maximum of 10 %)
- Revenue Sharing
- Concessioner to pay a sum of Rs. one per annum as concession fee to the Authority
- Concessionaire free to quote an additional concession fee in the form of a share in revenue from user fee
- This additional concession fee also called as premium

Main Features of MCA – contd..

- Premium to be paid from Commercial Operation Date (COD) up to end of concession period
- Premium to increase by an additional 1% per year as compared to the immediately proceeding year
- Provision for capacity augmentation
- Six months period for Financial Closure after award of contract
- 80% required land to be made available on appointed date, remaining at mutually agreed date
- Concessionaire to undertake detailed design based on Core requirements given by the Authority
- Independent Engineer to review the design
- Performance based Operation & Maintenance

Lender’s concerns

- Non recourse financing – promoters balance sheet not attached to the debt, no collateral security – projects implemented through SPVs
- Debt by lenders secured against receivables
- Tripartite ‘Substitution Agreement’ authorizing lenders to step in the shoes of the Concessionaire in case of laters’ inability to perform
- All project transactions routed through an ‘Escrow’ account; governed by a strict withdrawal protocol – first charge for O&M followed by statutory dues, debt servicing, loan repayments etc. – equity dividend payout being down in the order

Other efforts – To make visible impact on road network

- Plan to target completion of 35,000 km of NHs @ 7,000 km per year (20 km per day) during next five years (2009-14)
- Presently only about 15,600 km is in progress under NHDP, LWE & SARDP-NE
- To achieve the target, works of about 20,000 km should be in progress at any point of time
- The target is to have works in progress under NHDP, LWE & SARDP-NE in about 23,080 km length as on 31.03.2012
- 60 to 70 % on BOT (Toll)

- **Projects worth US $ 70 bn to be taken up during 2010-14**

Investments for 12th Five Year Plan (2012-17)

- Total Infrastructure
- Total Infrastructure Investment in 11th Five Year Plan ~ US $ 500 Billion.
- This investment would need to rise to about US $ 1 trillion over the Twelfth Plan to achieve target growth momentum.
- Target Private Sector Investment (50 %) = US $ 500 Bn

Conclusion

- India has a large deficit in road infrastructure
- A determined Government to bridge this gap
- No looking back on road development
- A sound institutional (administrative, legal , financial etc.) set up
- Proven track record of successful implementation of projects
- Robust economy, country's performance during the global economic slow down of 2009 is an example

Conclusion

- Established and well ‘stocked’ lending institutions
- Lenders interest taken care of in the Concession Agreement
- Standardisation of contract documents
- A very fair, transparent and international competitive bidding process
- Foreign Direct Investment allowed and welcome
- A developed indigenous construction industry to take large EPC works
- A potential market for promoters, developers

Thank you very much

for

your attention