



Financing Options for Implementing Urban Transport Projects

*Workshop on sharing experience in preparation of
Low-carbon Comprehensive Mobility Plans(LCMP) in Indian Cities*

Udaipur

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Investments in Urban Transport

- Investment of Rs 3,88,308 crores is required in 12th Five Year Plan - Working Group Report

Projects	Investments (Rs. Crores)
Street Infrastructure	1,67,218
Public Transport	2,02,628
ITS and ATC	8,520
Parking	1,943
Institutions and Capacity Building	5,000
Innovations, R&D & Pilot projects	1,000
NMT and IPT projects	2,000
Total	3,88,308



Need for exploring alternative sources of financing for implementing the capital intensive projects

Financing Projects- identified in the CMP

- Comprehensive Mobility Plan identifies a set of projects for implementation and prioritizes them- Immediate, Short , Medium and Long Term

Phases	Project Cost (Rs crores)
Phase I : Immediate Projects : 2014-2015	125.40
Phase II : Short Term Projects : 2016-2019	549.01
Phase III : Medium Term Projects : 2020-2025	2022.53
Phase IV : Long Term Projects : 2026-2031	3051.99
Total	5748.93

- Projects vary from :
 - Improving Public Transport system- improving city bus service, ropeways, Light capacity transit system
 - Improving NMT System- Footpaths, Cycle tracks, bike sharing, Pedestrian infrastructure
 - Network Improvement Measures
 - Parking Management Plan
 - Freight Management Measures

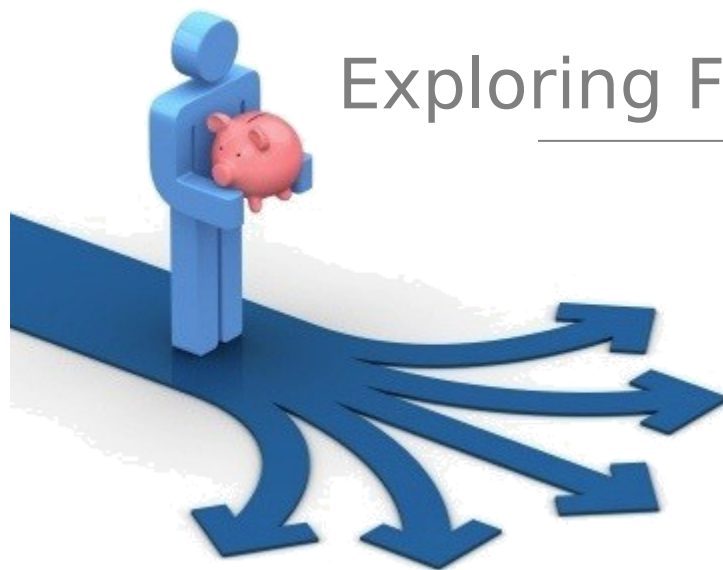
Limited public sources of funding

- State Governments have limited budget available for funding implementation of urban transport projects
- A number of smaller ULBs have limited resources available for implementation of urban transport projects

Need for exploring alternative means of financing urban transport projects



Exploring Financing Options!



Means of Finance



Cities identify urban transport projects; essential for improving urban mobility

Feasibility/ Detailed Project Report

Public Funding

Non Government Funding

Traditional Means of Finance

Alternative Means of Finance

Dedicated Urban Transport Fund

- Grants/ Loans from agencies such as World Bank/ADB
- Financial Institution/ Banks
- Advertisements
- Commercial development

At National/State Level
 General budget funding
 National level funding (like JnNURM)
 Viability gap funding upto 40% of the project cost

At Local Level
 ULBs own resources
 Advertisement
 Fare box revenue

- Cess on fuel, private vehicle taxation/green cess on existing private vehicles
- Parking
- Congestion pricing
- Property development
- Land value capture/ Betterment charges/ Vacant land tax

Municipal bonds

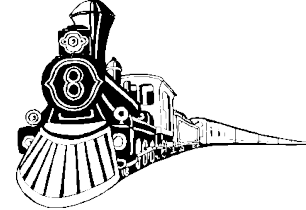
Preparing Bankable DPRs

- Cities identify and prioritize projects for implementation
- Feasibility Reports/ Bankable DPRs prepared for individual projects, covering following aspects:

- Technical and Physical feasibility
- Technical system specifications
- Detailed engineering specifications
- Detailed capital cost & O&M estimates
- Potential revenues sources
- Financial and economic viability
- Project structuring
- Means of finance
- Phasing and implementation plan



- Submit DPR to various agencies for funding; GoI, VGF, ADB, World Bank, Banks and Financial Institutions etc.



Project Financing Options

Mode of Transit	Implementation Options	Case Studies	Sources of Revenue
Urban Rail Transit	<ul style="list-style-type: none"> – Primarily Government funded except in case of high density and above ground construction where PPP maybe feasible with VGF <p>Public Sector Model; Revenue Share Model; PPP Model</p>	<ul style="list-style-type: none"> • Hyderabad Metro (VGF) • Delhi Airport Express (Revenue Share) 	<ul style="list-style-type: none"> • Fare box revenue • Property development • Advertisements • Transit Oriented Development
Bus Rapid Transit System / City Bus Service	<ul style="list-style-type: none"> – Buses funded by Central Government/State Government./ Financial intermediaries – Infrastructure provisioning by Government on a PPP basis or development of infrastructure on EPC – Operations and Maintenance preferably on PPP with revenue risk with Government /private <p>Permits to private buses for public carriage; Management contract; Net Cost; Gross Cost</p>	<ul style="list-style-type: none"> • Indore City Bus service • Bhopal City Bus Service • Ahmedabad BRTS 	<ul style="list-style-type: none"> • Fare box revenue • Property development • Advertisements • Transit Oriented Development
Multilevel Parking Projects	<ul style="list-style-type: none"> – Infrastructure provisioning by Private sector on BoT basis or development of facility by Government on EPC basis – Operations and Maintenance preferably on PPP with revenue risk with Government /private <p>On-street & Off-street Parking Concession; DBFOT</p>	<ul style="list-style-type: none"> • Sarojini Nagar Market, Delhi • Ramniwas Gardern , Jaipur 	<ul style="list-style-type: none"> • Parking Charges • Commercial development • Advertisements



Project Financing Options

Mode of Transit	Implementation Options	Case Studies	Sources of Revenue
Public Bicycle Scheme	<ul style="list-style-type: none"> – Cycle stations , Cycles, Control Centre by Government – Operations and Maintenance by PPP 	Delhi Green Bike scheme	<ul style="list-style-type: none"> • Rental revenue • Advertisements (Integrated with development of a transit network)
Bus depots/Terminal and workshops	<ul style="list-style-type: none"> – Land by Government – Development preferably on PPP 	<ul style="list-style-type: none"> • Amritsar • Ludhiana • Manali 	<ul style="list-style-type: none"> • Adda fees etc • Property development • Advertisements
Network Improvement	<ul style="list-style-type: none"> – Existing roads up-gradation by Government – New roads/ links : Government or PPP basis 	<ul style="list-style-type: none"> • Surat Ring Road • Urban roads in Thiruvananthapuram 	<ul style="list-style-type: none"> • Toll tax • Advertisement
Bus-Queue-Shelter	<ul style="list-style-type: none"> – Private Sector Party (PSP) develop Bus-Q-Shelters by undertaking Construction, Operation & Maintenance and Transfer (BOT) to Government agency thereafter 	<ul style="list-style-type: none"> • Bus Q Shelters in Delhi (DTC) 	<ul style="list-style-type: none"> • Advertisement





Tapping Private sector for implementing urban transport projects

Case Examples

Operating City Bus Service in Bhopal



- Routes rationalized- 3 trunk routes, 8 standard routes, 7 complimentary routes, 10 IPT routes
- SPV contracts and monitors
- Buses procured by SPV (funded under JnNURM) and contracted to private operator on **net cost basis**
- Private operator to pay an upfront fee for buses and bid an route authorization fees
- No subsidy from SPV
- Exclusivity provided on routes initially but not enforced
- Automatic fare revision formula but not implemented

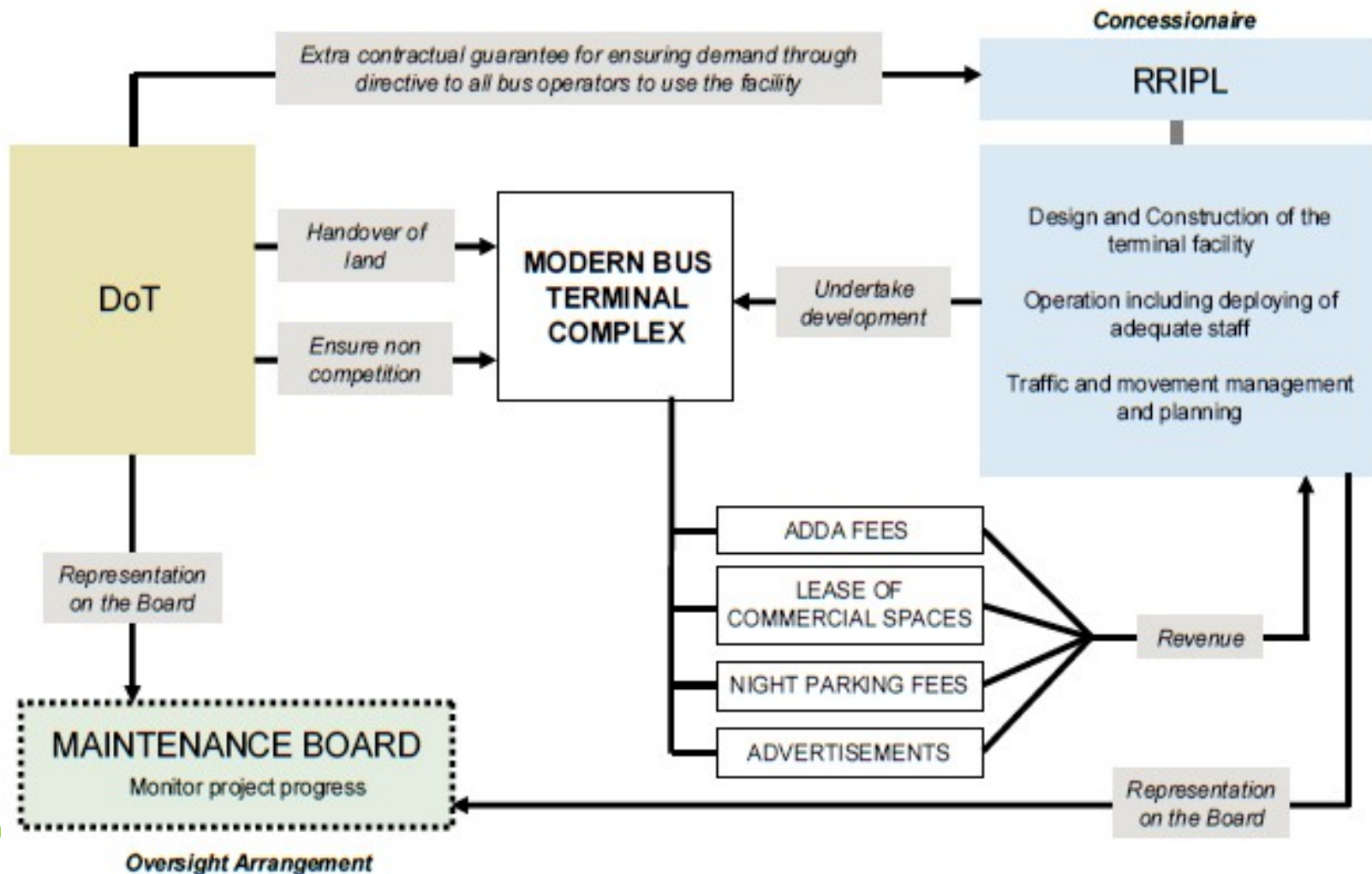
Operating City Bus Service in Bhopal- Impact

- Service Introduced in November 2010
- 140 buses in operation (Jan 2013)
- 25 Lakh passengers carried per month
- Share of city bus services improved from 5% to 21% in 2 years
- Fleet utilization : 93%
- Load factor : 85%
- Vehicle utilization : 217 kms/ day
- Cost per km : Rs 31.73
- Revenue per km : 32.36

Intercity Bus Terminal- Amritsar

- Spread over an area of 8.5 acres, the existing bus terminal of Amritsar city
- As per Government of Punjab ,there were as many as 1,800 to 2,000 bus arrivals per day at the Amritsar bus terminal.
- PIDB decided on modernising and developing the existing Amritsar bus terminal through the Build, Operate, Transfer (BOT) route.
- The project is under operation by a private operator for a period of 11 years and 5 months, which includes the construction period.
- The private operator would pay a project development fees of Rs 35 lakhs + lease rental of Rs 50,000 per month
- Bidding parameter- Concession period
- Highlight of the operational modern bus terminal, Amritsar:
 - 53 embarkation and 8 disembarkation bays
 - Parking provision for 54 cars, 102 rickshaws/autos and 1838 two-wheelers / cycles and 300 passenger seating berths.
 - For the convenience of passengers as well as drivers, provision for 10 dormitories has been made.

Implementation Framework



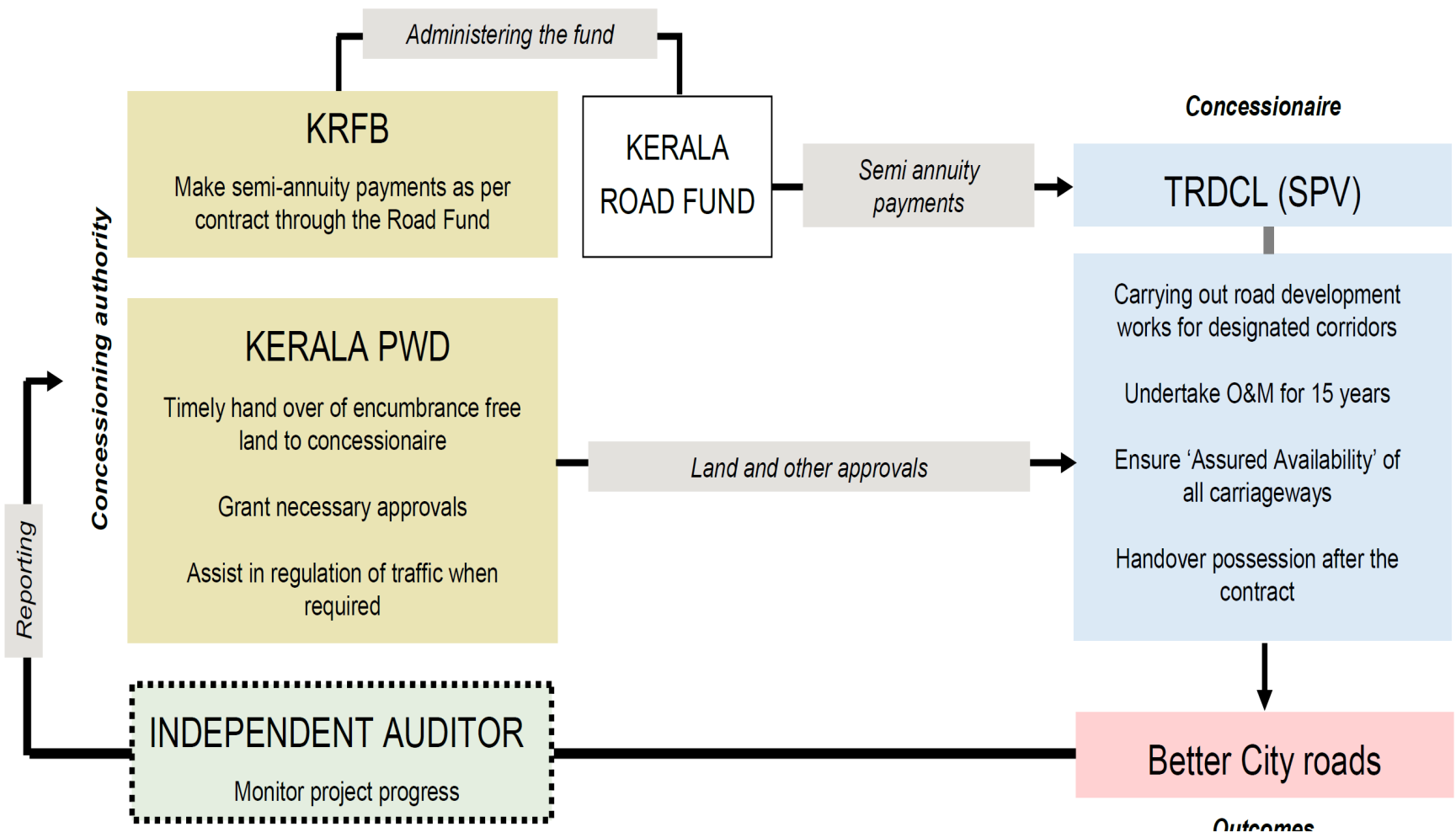
Urban Roads – Ring Road, Surat

- Surat has planned a self-financing model of development their Outer Ring Road (66km long and 90 m wide)
- Envisioned a special purpose vehicle (SPV) to build and maintain the Outer Ring Road project.
- The developer would get FSI of 0.6 on the Outer Ring Road and he can further purchase FSI on payment at 40 per cent of circle rate.
- Land within 500 m of the proposed ring road corridor was demarcated
 - 40% of the land is taken for physical and social infrastructure
 - 60% of land is given back to landowners as final plot
 - Permitted chargeable FSI upto 4
 - Sale of commercial plots
 - Levy of incremental contribution (one time)
 - Levy of toll

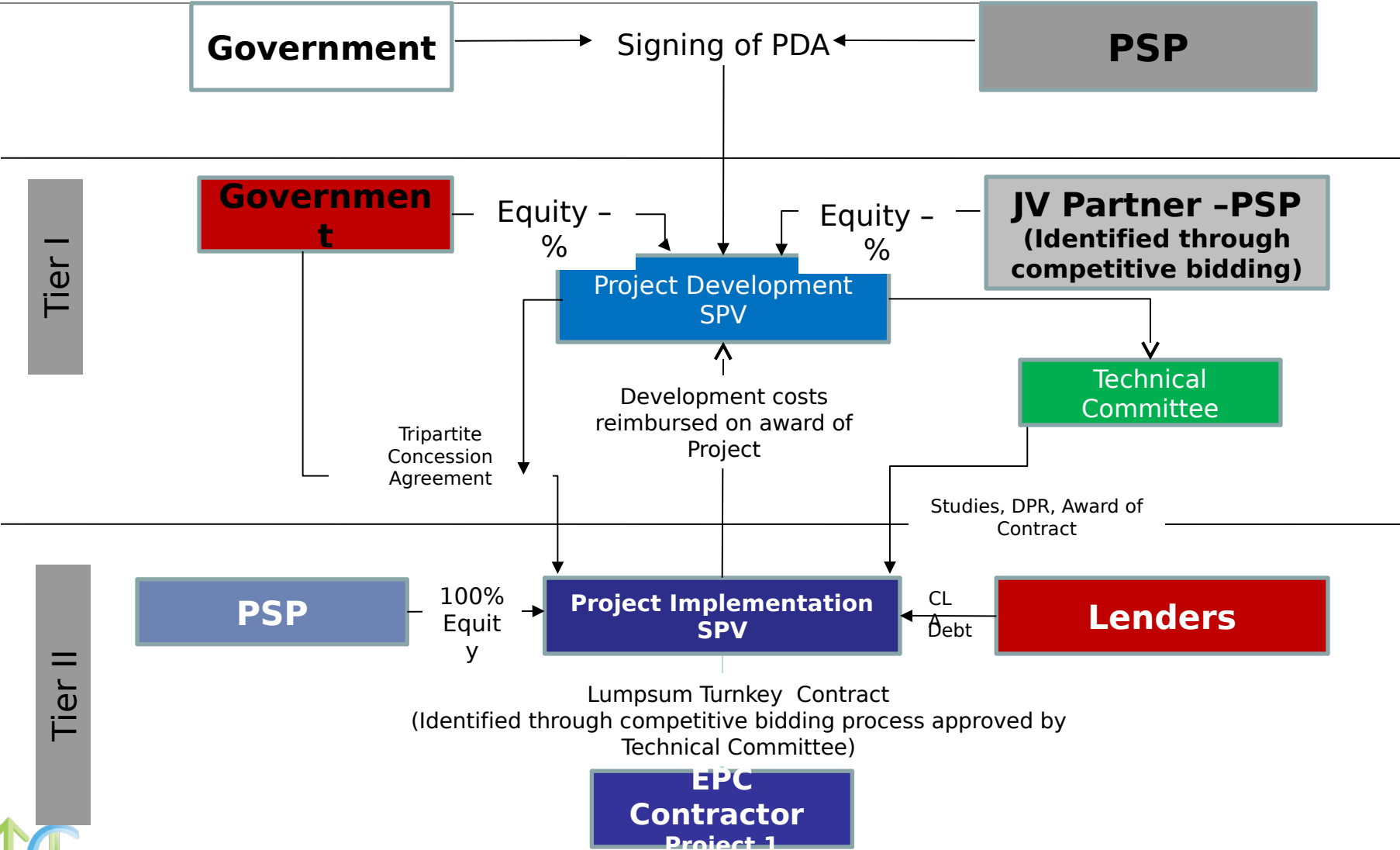
Thiruvananthapuram City Roads Improvement Project (TCRIP)

- TCRIP is attempted as a 'life cycle' approach for urban road improvement
- Making the Private Developer (concessionaire) responsible for long term maintenance of the roads
- The salient features of the project are:
 - Concessionaire responsible for development cum operation and maintenance
 - Land acquisition and financial risks borne by the Government agency (concessioning authority)
 - Financially backed by the Kerala Road Fund Act of the Kerala State Government
 - The Road Fund was to be constituted of 10% of motor vehicles taxes, tolls collected under the Kerala Tolls Act of 1986 and contributions from the Central Road Fund. Rules were issued in 2003 for carrying out the provisions of the Act.
 - Concessionaire responsible for all investments, recovery for the Concessionaire was envisaged through annuity payments

Implementation model for road projects in Thiruvananthapuram



Implementation option for road projects - Annuity based



Public Bike Sharing Scheme

- For implementation of Bike Sharing Scheme in Indian cities, MoUD has prepared a model concession agreement on Public Bicycle Scheme on Built Operate and Transfer Basis (BOT) format
- As per this concession agreement, Public Bicycle Scheme shall be developed on Public Private Partnership (PPP) format on Design, Build, Finance, Operate and Transfer (DBFOT) basis.
- Act as a feeder to the PT system and can be implemented on a hub and spoke model
- Government can provide the land, docking stations etc and the private sector can provide the cycles and operate and maintain the system. The various sources of revenue are user fees and advertisement revenue.
- However, the implementation structure could vary project to project basis.



Innovations in Financing

Indian Context

National Urban Transport Fund



- A **Green Surcharge** of Rs. 2/lt. on petrol sold across the country- the rationale behind the fact that petrol is consumed exclusively by the personalized vehicles
- A **Green Cess** on existing personalised vehicles at 3% of the annual insured value both for car and two wheelers
- **Urban Transport Tax** on purchase of new cars and two-wheelers at 7.5% of the total cost of the petrol vehicles and 20% in case personalised diesel cars

12th Five Year Plan period

Total annual yield : Rs 42,199 Crore in the first year

Rs 1, 93, 542 Crore in four years

Initiative in Karnataka : Metro Infrastructure Fund

Government of Karnataka while sanctioning Phase II of Bangalore Metro project has decided the following sources to be credited to Metro Infrastructure fund :

- Levy of cess and surcharge under Karnataka Town and Country Planning Act at 5% of market value of land/ building
- Extend benefit of 4 FAR for all properties lying within a distance of 500 meters from metro alignment
- Levy cess of 10% for residential and 20% for commercial on the additional FAR granted
- Issue TDR in lieu of compensation for acquisition of land for Metro Rail project
- Revenue from additional FAR and levy of cess on transaction : Rs 432 crores in 5 years
- Revenue from cess of 5% of the market value : Rs 1250 crores in 5 years

Options for Land value capture

- Value capture is the quantification of induced or activated benefits (*from public infrastructure*) and the mechanism for returning them to defray the cost of the infrastructure investment
- Some of the land value capture measures include:
 - Revenue from sale of increased FSI in the catchment area (200m-750m)
 - Revenue from Property Tax (accessibility tax)- Annual letting value of all the land holdings and properties
 - Revenue from Transport Betterment Charge- 25% profit over and above the normal increase in property value
 - Revenue from Tax on Property Transactions – 0.5% Tax on each transaction
 - Air Rights
 - Issue TDR in lieu of compensation for acquisition of land for transit project
 - Imposition of Vacant Land Tax on land as well as un-utilised FSI in the specified TOD area

However, different measures shall have different outcomes and applicability.



Thank You

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