



**VFM**  
Value For Money

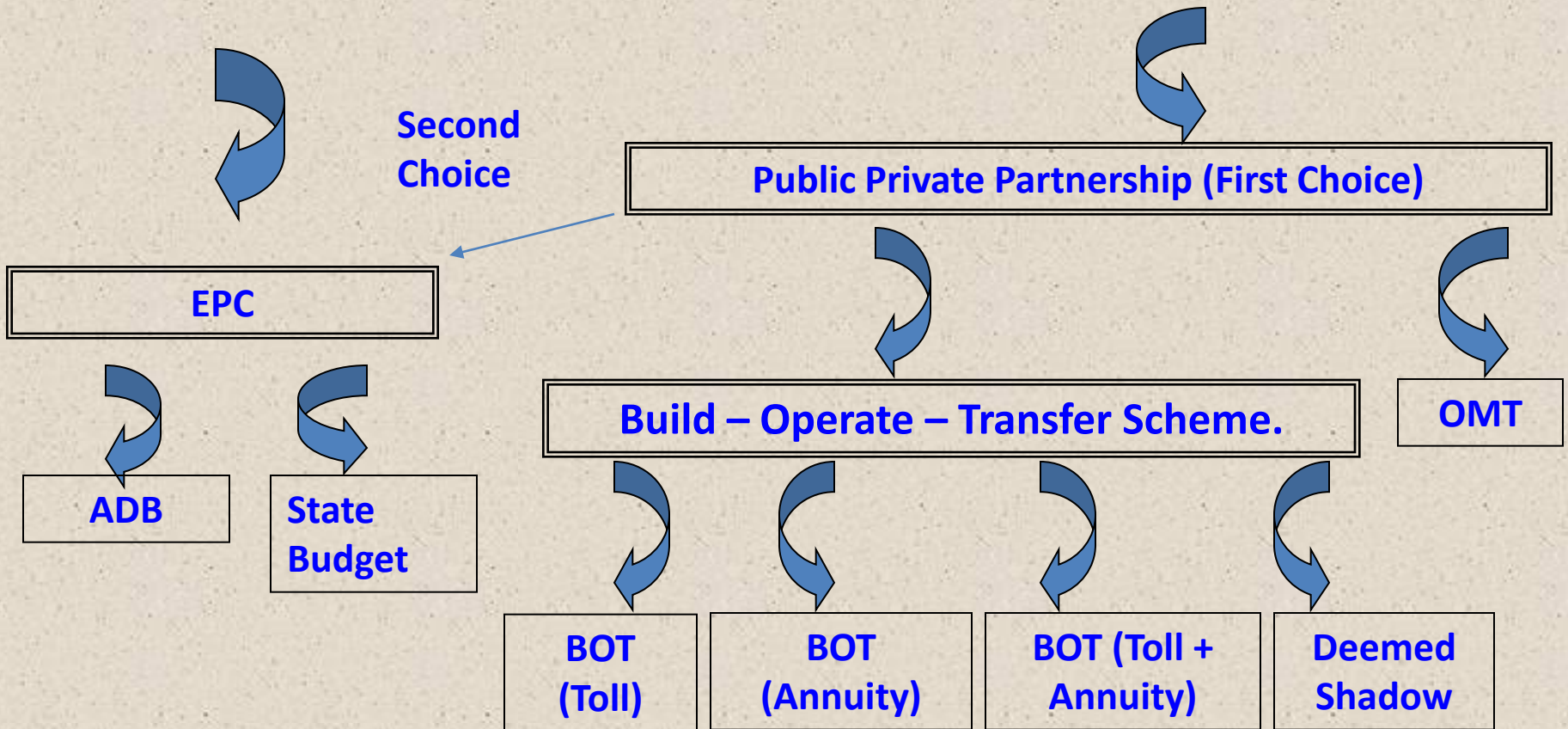
**Vivek Aggarwal**  
Managing Director,  
MP Road Dev. Corporation  
Bhopal (M.P.), INDIA

# Madhya Pradesh Road Development Corporation

- MP Road Development Corporation Ltd. incorporated in July 2004.
- Chief Minister heads the Board of Directors with PWD minister and Chief Secretary as Vice Chairperson.
- Acts as State Highway Authority.
- Upgrades, constructs and strengthens the total length of State Highways.
- Develops projects in the State on public private partnership basis.

# MPRDC Projects

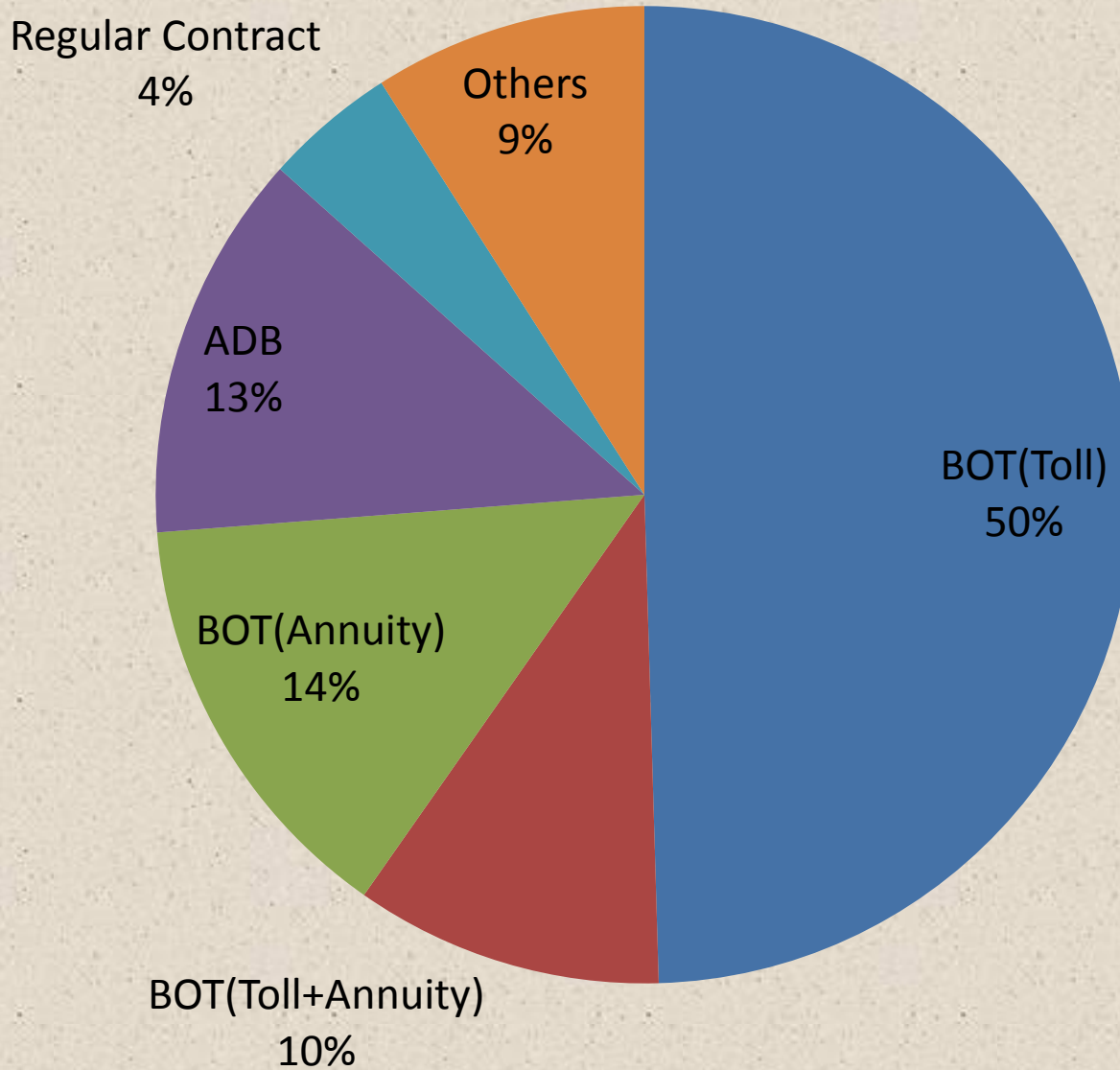
Invite private investment by providing grant/ premium to/by the concessionaire on competitive bidding



# Portfolio of MPRDC

Category/Model	Cost (Rs.in Cr.)	Cost (in Million \$)
BOT (Toll)	16047	3209.4
BOT (Toll+Annuity)	3302	660.4
BOT (Annuity)	4550	910
ADB	4160	832
Regular Contract	1408	281.6
ROB/RUB	1644	328.8
Border Checkpost	1094	218.8
OMT	64	12.8
Building Works	128	25.6
<b>Grand Total</b>	<b>32397</b>	<b>6479.4</b>

# Portfolio of MPRDC





# Application of VFM in MPRDC

- The concept of VFM was considered during conceptualization of Annuity projects.
- Earlier MPRDC was executing BOT (Toll) Projects.
- Annuity model was envisaged for the projects which were not viable on BOT(Toll) mode.
- Under Annuity mode, BOT(Toll+Annuity) & BOT (Annuity) models are developed.

# Application of VFM in MPRDC

- Annuity model was first developed for development of 2100Km.

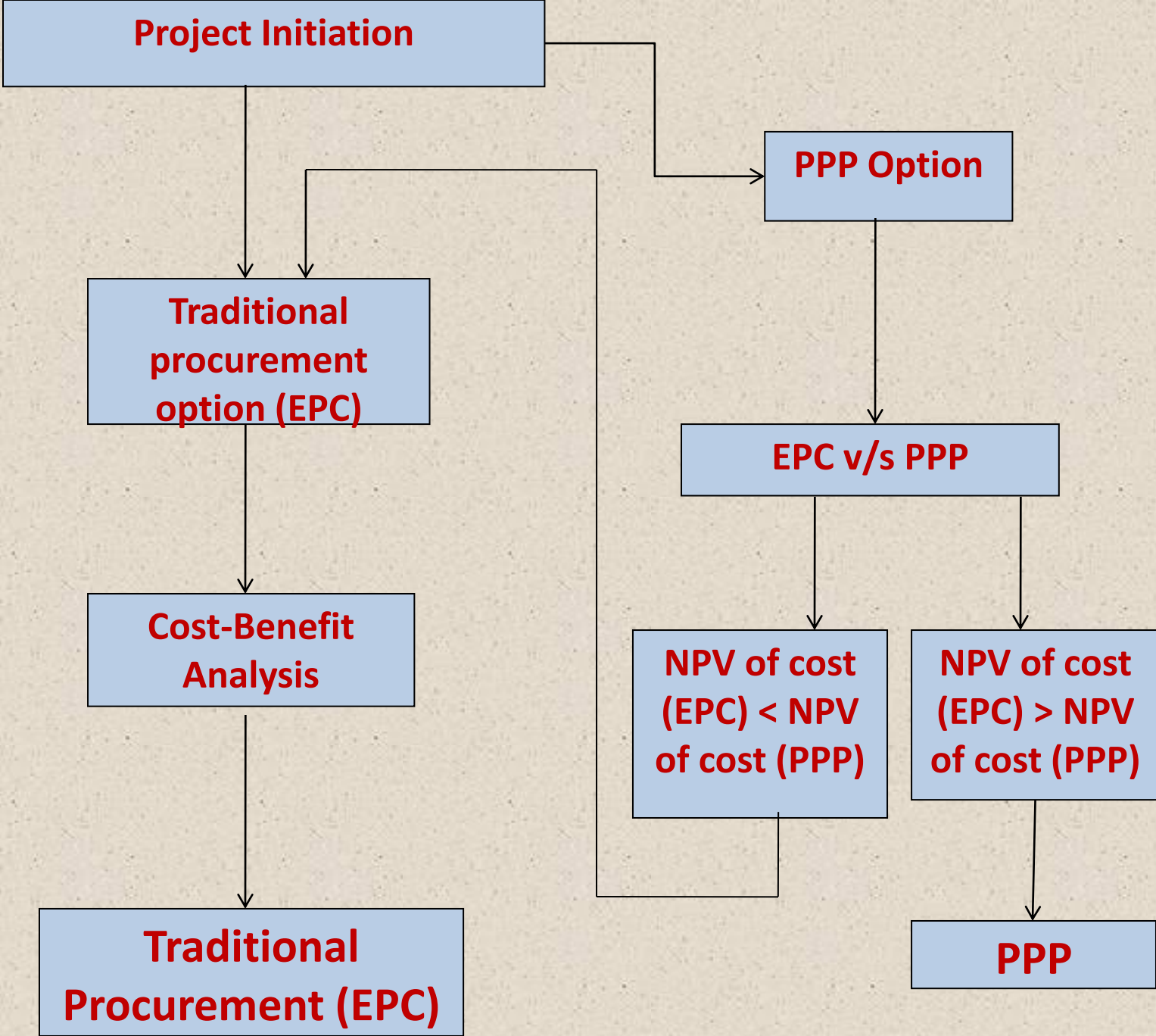
MDRs worth project cost \$600 Million.

- Then it was applied for State Highways also.
- The model was tested in market through Bidding.
- After successful bidding, Annuity model has been adopted for execution of BOT Road projects.



# Application of VFM in MPRDC

- During VFM analysis of MDRs, 22% Annuity for BOT (Annuity) Projects was envisaged.
- However, after bidding, the projects have been awarded on Annuity of 18.30% under BOT(Annuity) projects & 12.88% as on average under BOT (Toll+Annuity) projects.
- Projects having cost of \$476.66 Million & length of 1520.03 Km have been awarded on BOT (Annuity) mode whereas projects of \$433.34 Million are in development & bidding process.
- Projects having cost of \$592.10 Million & length of 1462.87 Km have been awarded on BOT(Toll+Annuity) whereas projects of \$68.33 Million are in bidding process.



# VFM Analysis

## Project Details

Total Project Cost	\$476.66 Million
Total Length of the Projects	1520.03 Km
Average Annuity (actual)	18.30% of Project Cost

Parameters	EPC	BOT -Annuity
Construction Cost	\$595.80 Million (Escalation by 25%)	\$476.66 Million (Including 25% of TPC for financing cost, contingency & other charges)
Construction Period	2 & ½ Years	1 & ½ yrs
O & M Exp		
Routine Maintenance	0.004M\$/km/p.a.	-
Periodic Maintenance	0.02M\$//km/p.a..	-
Electricity & Patrolling	0.002M\$/km/p.a.	-

# VFM Analysis

Parameters	EPC	BOT -Annuity
Interest	9.00%	13%
Debt:Equity Ratio	100	70:30
Funds Requirement	Immediately	6 months after COD
Discount Rate for NPV Calculation	15%	15%
Loan Repayment Period( in years)	10	10
Quality of Roads	Average	Excellent
Efficiency of private sector	Not availed	Availed
Technology	Traditionally applied	Latest available
Setting up of full infrastructure & staff	Required	Not required

# VFM Analysis

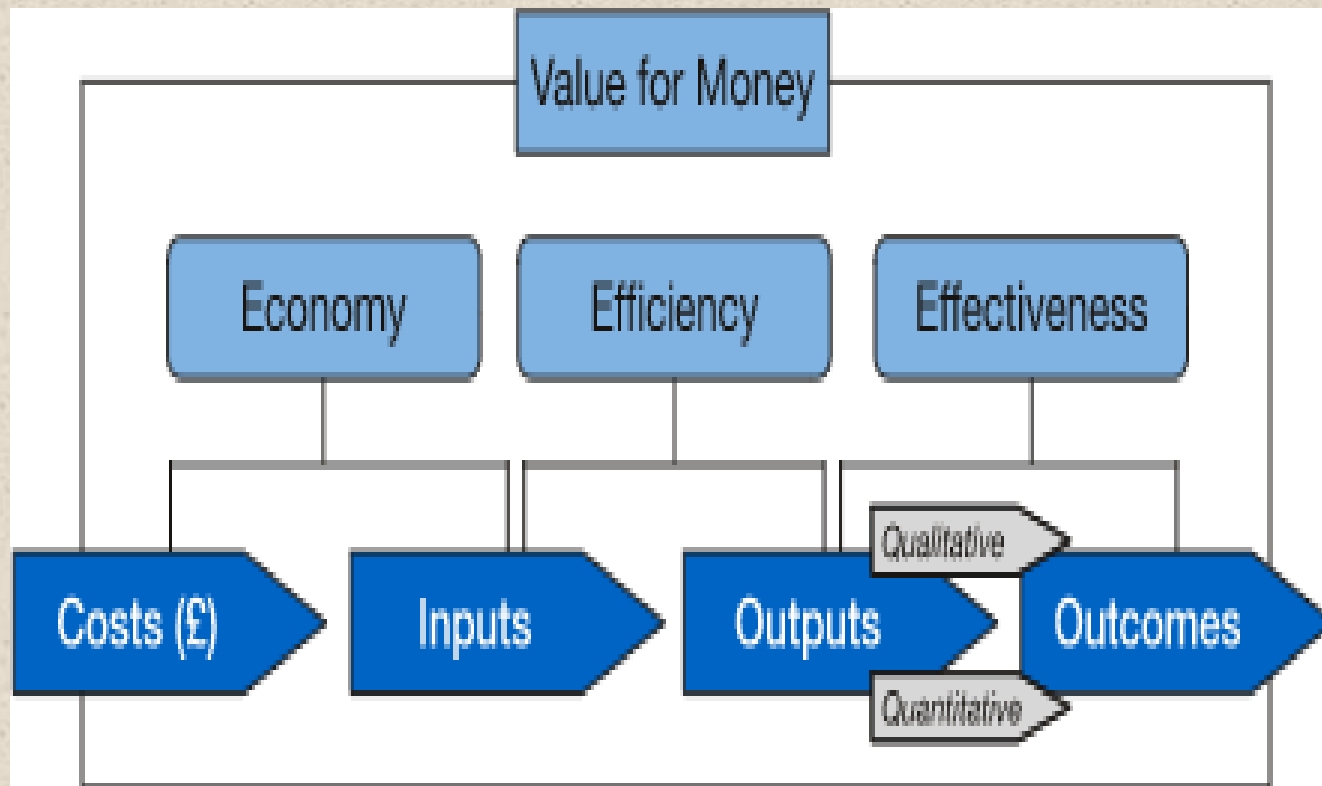
Figure in \$Million

<b>Parameter</b>	<b>EPC</b>	<b>BOT-Annuity</b>
NPV calculated	456.40	401.23
<b>Value for Money ( NPV of EPC – NPV of Annuity)</b>	<b>55.17</b>	

# VFM Analysis

- It is observed in VFM analysis of 1520.03 Kms of road having cost of \$476.66 Million awarded on average annuity of 18.30% of TPC that
  - NPV of Annuity model < NPV of EPC model.
  - Annuity model provides Value for Money.
  - Annuity model is Economic, Efficient & Effective.

# 3 E's of Value for Money



# VFM of Annuity Projects v/s ADB Projects

MPRDC executes road projects through EPC with budgetary support of the state government & also with the funding of ADB.

<b>Parameters</b>	<b>EPC through ADB funding</b>	<b>BOT-Annuity</b>
<b>Preparation of DPR/Feasibility Report</b>	6 Months	3 Months
<b>Procurement &amp; Award of the project to successful bidder</b>	Consume more time due to requirement of approval of ADB	Consume less time
<b>Construction Period</b>	2- 2½ years	1½ years



# VFM of Annuity Projects v/s ADB Projects

<b>Parameters</b>	<b>EPC through ADB funding</b>	<b>BOT-Annuity</b>
<b>Cost Escalation</b>	15%	Incorporated as an element under 25% of the project cost along with financing cost, environment mitigation cost, contingency charges etc.
<b>Cost of Supervision Consultant/Independent Engineer</b>	Borne by ADB	Borne by Concessionaire
<b>Maintenance</b>	Remains with MPRDC	Maintained by the concessionaire during entire concession period
<b>Quality of roads</b>	Average	Excellent

# Conclusion

- Thus, BOT(Annuity) projects derive VFM in terms of Economy, Efficiency & Effectiveness in comparison with EPC projects whether they are funded by the state government or by ADB.
- Not only BOT(Annuity) projects but also BOT (Toll+Annuity) & BOT(Toll) projects provide Value for Money.
- MPRDC is largely into Public Private Partnership projects which ensure Value for Money over the project lifecycle.

## PPP Project Lifecycle





*A country has to pay for its roads, whether it has them or not, it pays more for those it does not have.*

*So Lets Have them.....*

*Thanks.....*



**Our commitments remains...**

*Connecting People Through Quality Infrastructure*