

WHY PPPs

**INFRASTRUCTURE DEVELOPMENT
AND FINANCING**

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Outline

- ☞ What is Infrastructure
- ☞ Characteristics of Infrastructure
- ☞ Drivers for Commercial Outlook
- ☞ Implications of Commercialisation/PPPs

What is Infrastructure

What is Infrastructure ?

- ❖ Social Overhead Capital

- ❖ Infrastructure Supports

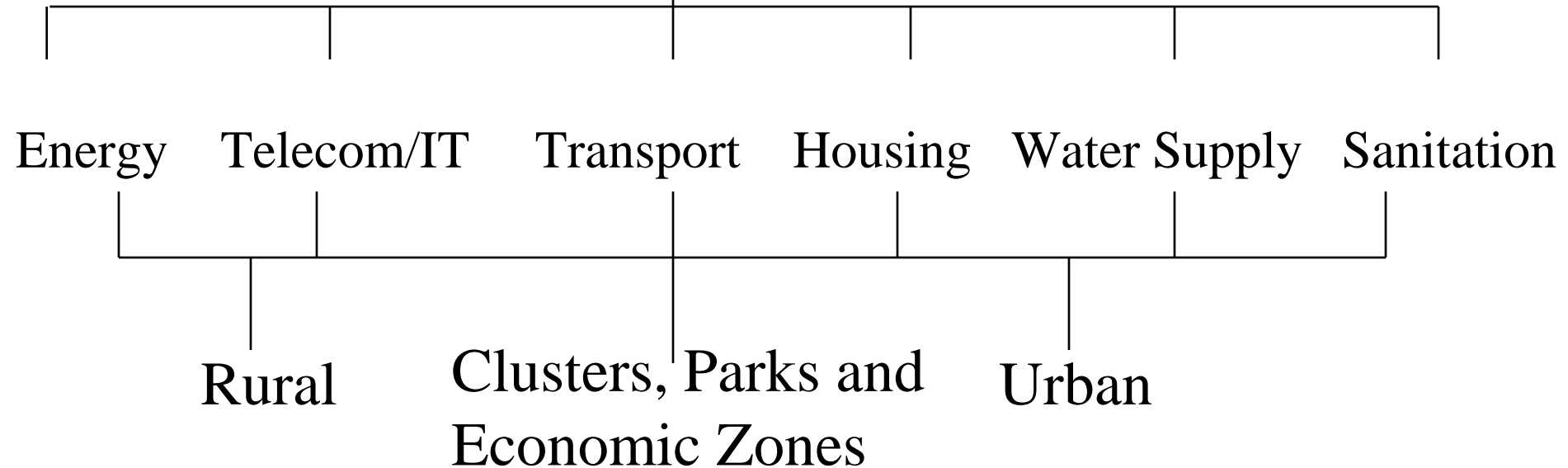
- ❖ Economic growth
- ❖ Poverty alleviation
- ❖ Sustainable natural environment

Source: World Bank

Infrastructure

Economic

Social



Infrastructure service essential to derive the benefit of economic infrastructure.

However, service 'cost' is relatively less [if high: Social infrastructure like Health, Education, Police, Judiciary]

Characteristics of Infrastructure

Characteristics of Infrastructure

- ☞ High investment costs : decreasing average costs
 - Economies of scale & scope leading to natural monopolies: need for regulation
- ☞ Use of a key “national” resource
 - Need for regulation
- ☞ Benefits from users to non users
 - Framework for fiscal cycle and concessions

Characteristics of Infrastructure

- ☞ Hence, infrastructure was traditionally developed by public sector
- ☞ However, governments have not achieved their own goals
- ☞ Hence, there is need for commercial outlook (managerial effectiveness, financing and incentive compatibility)

Drivers for Commercial Outlook

Framework for Commercialization

Improve Asset Creation Efficiency	Improve Asset Management Efficiency	Improve Service Delivery Effectiveness & Efficiency
Increase Stakeholding	Increase Accountability	Increase Autonomy

Issues of incentive compatibility

Increase Stake Holding



Privatization ← Monopoly



Appropriate Bundling ←

- Horizontal
- Vertical

Increase Accountability



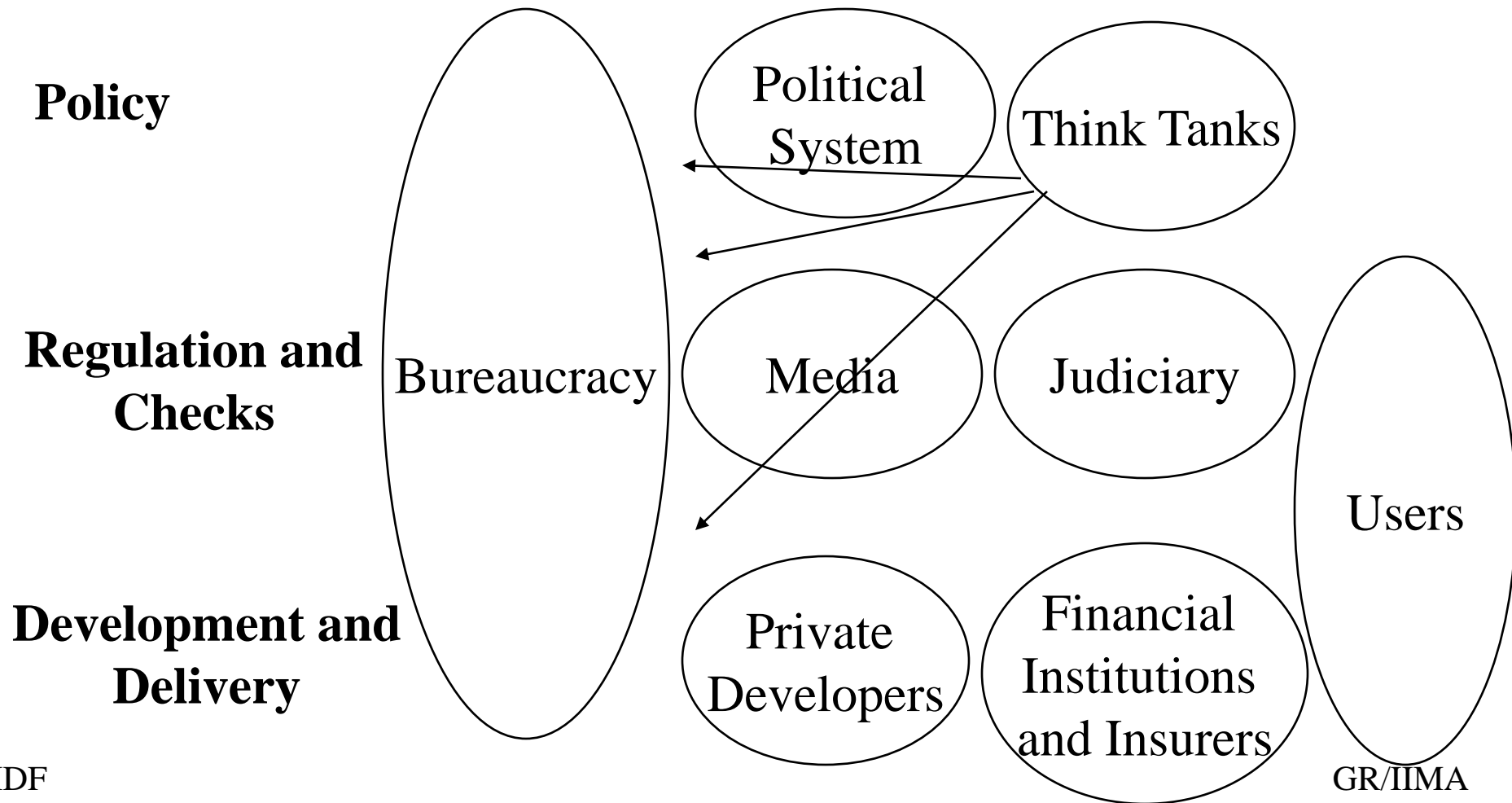
Competition

- From substitutes
- From markets
(Multiple providers)
- From right to access the market

Increase Autonomy

- ☞ Corporatisation
- ☞ Focused goals & accountable management
 - Performance
 - Management contracts
 - Service contracts

Actors in Infrastructure



Implications of Commercialisation

Key Implications

- ❖ Project structuring: (Appropriate bundling)
- ❖ Risk assessment and management
- ❖ Project financing: (Appraisal, sourcing and engineering including taxes/subsidies)
- ❖ Tendering and Bidding
- ❖ Agreements
- ❖ Project management: (Implementation)
- ❖ Financial restructuring, and mergers and acquisitions
- ❖ Regulatory and institutional framework

Appropriate Bundling

- ☞ To attract commercial interest
- ☞ Cherry picking vs Social responsibility
 - Subsidy and Cross-subsidy
- ☞ Retention of control
- ☞ Transparency of transactions

Risks

Political

Force Majeure

Performance

Completion

Overruns

Policy

Market

Credit

Supply

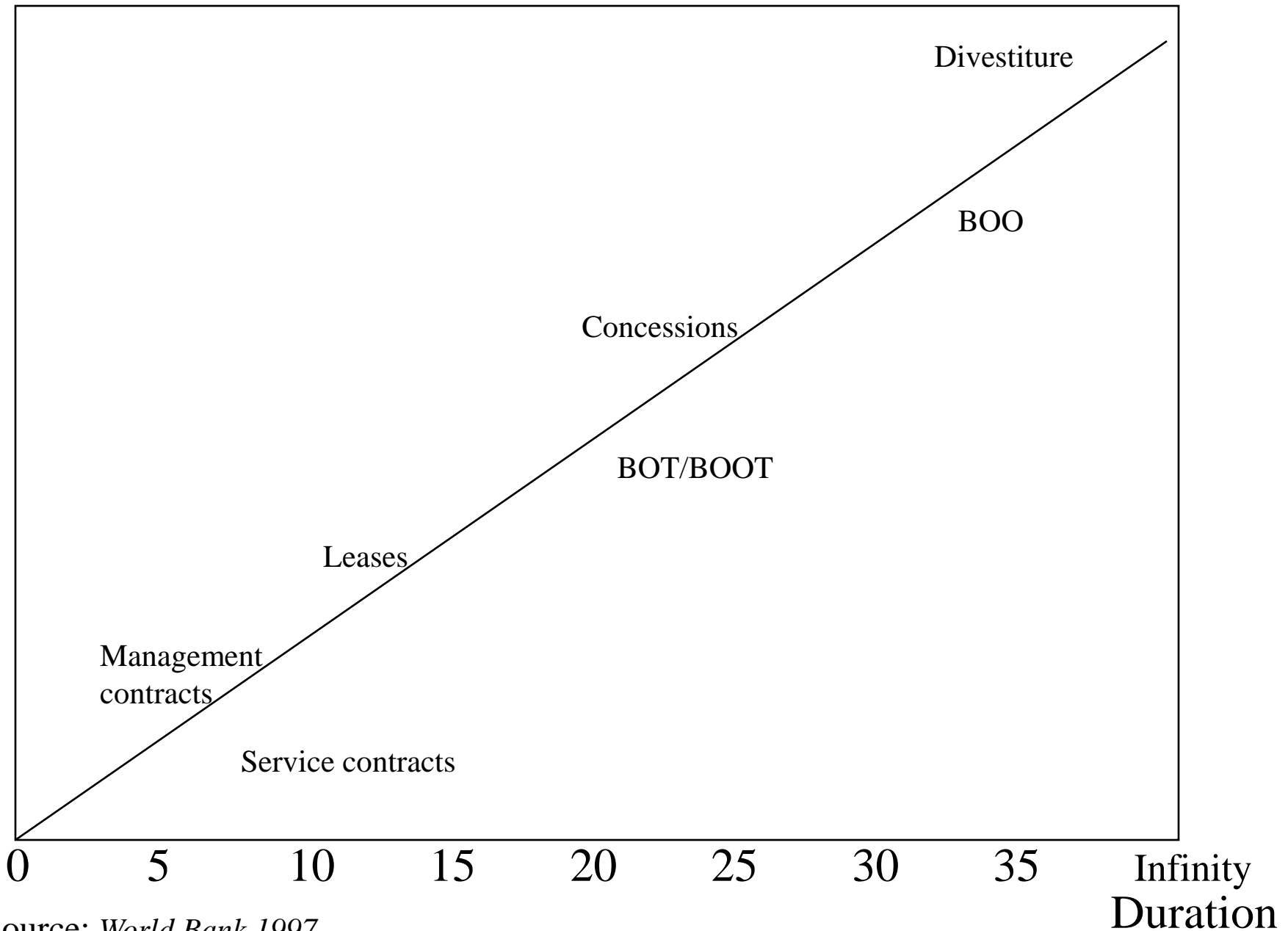
Operating

Financial

Risk Management/Financing

- ❖ Build Own Operate
- ❖ Build Own Operate Transfer
- ❖ Build Operate Transfer
- ❖ Build Operate Transfer (Annuity)
- ❖ Build Own Lease/Use Transfer
- ❖ Invest and Contract
- ❖ Lend

Private Participation Options



Agreements

- ☞ Specification
- ☞ Time frames
- ☞ Review triggers
- ☞ Termination conditions
- ☞ Consistency

Issues in Agreements

- ☞ Competition
- ☞ Scope Increase
- ☞ Other Revenue Sources
- ☞ Tariff Setting
- ☞ Ownership
- ☞ Common Use Vs Captive
- ☞ Targetting the BoP/Non Viability
- ☞ Step In/Termination/Transfer

Competition

Protect vs Induce

(Competition for vs Competition in)

Airport

- ❖ Closure of existing airports
- ❖ First Right of Refusal if bid is within 10% for airports within 150 kms

Port

- ❖ At least two private players in one of the four product categories (Earlier: at least two private players, no more than two terminals per player, and no next)
- ❖ No new project until 80% capacity utilization (In Mormugao Port)

Road

- ❖ Desire to have ‘reasonable non-tolled alternative’ - not tested
- ❖ Existing alternative also bid by same party
 - Mumbai Pune Expressway + NH4 (Ideal RB)
 - Athupalam Bridge Coimbatore (L&T)
 - Vatrak Bridge – NH8 (L&T)

Rail ?

Metro ?

Telecom - Open

Container Train Operations - Open

Scope Increase

☞ **Airport**

☞ **Port**

☞ **Road**

- ❖ Variations

- ❖ Additional Works

- ❖ 2 lane to 4 lane

 - Additional Work

 - New Project

☞ **Rail**

- ❖ Sidings Vs New links

- ❖ Doubling

Other Revenue Sources

- **Airport**
 - ❖ Non Aero for Airports, land use
- **Ports**
 - ❖ None
- **Road**
 - ❖ Related activities of Road, land use
- **Rail**
 - ❖ Stations: Yes
- **Metro**
 - ❖ Use airspace
- **VGF/Annuity**

Tariff Setting

- ☞ **Airport** – Regulated
- ☞ **Port** – Regulated to Predecided
- ☞ **Road** – Regulated to Predecided
- ☞ **Rail** – Regulated
- ☞ **Metro** – Open?
- ☞ **Container Train** – Open

Ownership

Airport

- ❖ Airlines (Users) Limited
- ❖ AAI
- ❖ FDI Limits

Ports

- ❖ User Okay
- ❖ FDI ?

Roads

- ❖ Limited Cross Ownership among bidders (5% to 25%)

Rail

- ❖ Key Users brought in

Common Use Vs Captive

☞ **Airport**

☞ **Port**

☞ **Rail**

Targetting the BoP/Non Viability

- ☞ Bundle vs Unbundle
- ☞ If unbundled, who pays?
- ☞ (Airlines, Telecom, Roads)

Step In/Termination/Transfer

- ☞ Condition at the end of concession period
- ☞ Concession period a function of viability
- ☞ Inadequate performance
- ☞ Ethical issues
- ☞ Significant change in project scope

Regulatory and Institutional Framework

- ☞ Market failures
 - Licensing
 - Environmental Impact
 - Safety
 - Pricing
 - Service Levels
 - Dispute resolution
- ☞ Institutions and Instruments

Infrastructure Investments: XII Plan

Sector	X Plan (Actual)		XI Plan (Original Projections)		XI Plan (Revised Projections)		XII Plan (Projection)	
	Rs cr	%	Rs cr	%	Rs cr	%	Rs cr	%
Total Infrastructure	906,074		2,056,150		2,054,205		4,099,240	
Public	680,854	75.14	1,436,559	69.87	1,311,293	63.83	2,049,620	50.00
Private	225,220	24.86	619,591	30.13	742,912	36.17	2,049,620	50.00

Share of Infrastructure as % of GDP: X Plan 5.15
: XI Plan (Original) 7.60
: XI Plan (Revised) 7.55
: XII Plan (Projected) 9.95

Projected Investments in Infrastructure- Twelfth Plan

Rs billion	X Plan	XI Plan	2012-13	2013-14	2014-15	2015-16	2016-17	XII Plan
Total	9061	27747	7480	8601	9962	11645	13777	51464
Centre	6809 (75.1)	9652 (34.8)	2467	2778	3130	3529	3981	15885 (30.9)
State		7683 (27.7)	1929	2103	2294	2501	2728	11554 (22.5)
Private	2252 (24.9)	10412 (37.5)	3084	3720	4539	5616	7068	24025 (46.7)
GDP		384249	94757	102338	111548	121587	132530	562760
% of GDP	5.2	7.2	7.9	8.4	8.9	9.6	10.4	9.1

Source: Interim Report of the High Level Committee-Financing Infrastructure

Infrastructure Investments: Major Sectors

Sector	X Plan (Actual)		XI Plan (Original Projections)		XI Plan (Revised Projections)	
	Rs cr	%	Rs cr	%	Rs cr	%
Electricity (incl NCE)	340,237		666,525		658,630	
Public	203,403	59.78	481,013	72.17	371,085	56.34
Private	136,834	40.22	185,512	27.83	287,546	43.66
Telecom	101,889		258,439		345,134	
Public	48,213	47.32	80,753	31.25	61,503	17.82
Private	53,676	52.68	177,686	68.75	283,631	82.18
Roads and Bridges	127,107		314,152		278,658	
Public	117,884	92.74	207,360	66.01	232,771	83.53
Private	9,223	7.26	106,792	33.99	45,887	16.47
Railways (incl MRTS)	102,091		261,808		200,802	
Public	101,422	99.34	211,454	80.77	192,486	95.86
Private	669	0.66	50,354	19.23	8,316	4.14
Other						
Public						
Private						
Total Infrastructure	906,074		2,056,150		2,054,205	
Public	680,854	75.14	1,436,559	69.87	1,311,293	63.83
Private	225,220	24.86	619,591	30.13	742,912	36.17

Infrastructure Investments: Other Sectors

Sector	X Plan (Actual)		XI Plan (Original Projections)		XI Plan (Revised Projections)	
	Rs cr	%	Rs cr	%	Rs cr	%
Irrigation, Water Supply and Sanitation	166,851		397,031		136,323	
Public	165,833	99.39	391,610	98.63	135,839	99.64
Private	1,018	0.61	5,421	1.37	484	0.36
Oil and Gas Pipelines	32,367		16,855		127,306	
Public	31,367	96.91	10,327	61.27	74,545	58.56
Private	1,000	3.09	6,528	38.73	52,761	41.44
Ports	22,997		87,995		40,647	
Public	4,670	20.31	33,516	38.09	8,130	20.00
Private	18,327	79.69	54,479	61.91	32,517	80.00
Airports	6,893		30,968		36,138	
Public	4,523	65.62	9,338	30.15	12,983	35.93
Private	2,370	34.38	21,630	69.85	23,155	64.07
Storage	5,643		22,378		8,966	
Public	3,539	62.71	11,189	50.00	351	3.91
Private	2104	37.29	11,189	50.00	8,615	96.09

Thank You

Conclusions

Projected Investment in Infrastructure

	X Plan		XI Plan	
Sectors	US \$ billion	Share (%)	US \$ billion	Share (%)
Electricity (incl. NCE)	72.96	33.49	166.63	32.35
Roads and Bridges	36.22	16.63	78.54	15.25
Telecommunication	25.84	11.86	64.61	12.54
Railways (incl. MRTS)	29.91	13.73	65.45	12.71
Irrigation (incl. Watershed)	27.88	12.80	64.34	12.49
Water Supply and Sanitation	16.20	7.44	35.93	6.98
Ports	3.52	1.61	22.00	4.27
Airports	1.69	0.78	7.74	1.50
Storage	1.20	0.55	5.59	1.09
Gas	2.43	1.11	4.21	0.82
Total	US \$ billion	217.86	515.05	
	<i>Rs. crore</i>	871,445	2,060,193	100

- ☞ Private sector investment increasing (18.5% in the Xth plan to 29.7% in the XIth plan)
- ☞ Electricity has the maximum share of investments
- ☞ Gaps in most infrastructure with respect to developed countries

Refinance

Objective

The primary objective of IIFCL's refinance scheme is to facilitate the flow of funds in an increasing manner for the development of infrastructure in the country. Under the scheme IIFCL will provide refinance for term loans sanctioned by Banks for only new commercially viable projects in road and port sectors.

Extent of Refinance

IIFCL shall provide refinance upto 60% of the loans provided by the Banks to infrastructure projects in the roads and port sectors

Refinance

Rate of Interest

The Banks will not charge more than 2.50% over and above the rate charged by IIFCL. The IIFCL rate of refinance at present would be 7.85% p.a.

Tenor of Refinance

Tenor of refinance shall be 10 years with a reset after 5 years. However, if the Government of India considers necessary may allow an extension with reset for 5 more years after 10 years. The Banks will have to lend for tenors exceeding 15 years on 'best endeavour' basis.

Take Out Finance

- ☞ IIFCL can take over the loans of projects that have a residual debt tenor of at least six years or are yet to achieve financial closure. Projects in sectors such as roads, railways, airports, seaports, urban transport, gas pipelines, SEZs, convention centres and tourism would be eligible . The state-owned company can take over as much as 75% of the loan from a bank, or up to 50% of the total residual loan of the project, whichever is less.

What Needs to Happen

- ❖ Manage infrastructure like a business, not a bureaucracy
- ❖ Introduce competition - directly if feasible, indirectly - if not
- ❖ Give users and other stakeholders a strong voice and real responsibility
- ❖ Leverage Public - Private partnerships

Role of State

- ❖ Identify stake holders
- ❖ Develop appropriate risk sharing schemes including ‘subsidies’ as required
- ❖ If continuing as a player, then corporatise/commercialise the play
- ❖ Develop umpires
- ❖ Clearly delineate roles of

Policy maker (and regulator)

Licenser

Player

What Will Happen

- ❖ Inevitability of involving private sector
- ❖ Experience is still raw in project structuring, contractual & legal implications
 - ❖ Hence awareness of issues more important than ‘specific solutions’
- ❖ Case law build up
- ❖ Mistakes will be made and learning must take place
- ❖ Governments will have a continuing, if changed role in infrastructure

Thank You

System of State Involvement

Infrastructure	Owner	Contractor
1. Ownership and asset creation <ul style="list-style-type: none">- Right of Way- Terminals- Rolling stock and equipment		

System of State Involvement

Services	Principal	Agent
1. Maintenance -Right of way -Terminals -Rolling stock and equipment		
2. Operations -Right of way -Terminals -Rolling stock and equipment		
3. Customer services -Basic services -Special services		

System of State Involvement

Regulation	
1.	Licensing
2.	Environmental impact
3.	Safety
4.	Pricing
5.	Service levels
6.	Dispute resolution

System of State Involvement

For each mode

And further segmentation possible based on market considerations

- Passenger vs Freight
- Urban vs Rural
- Domestic vs International

Transport Sector Components and Involvement of the State and Private Sector:

INFRASTRUCTURE	Ownership			
	Air	Rail	Road	Water
Right of Way	(State controlled) DGCA, AAI	(State controlled) Indian Railways	(State controlled) NHAI, PWD, Urban Administrations, Local Governments, Defense	(State controlled) Major Ports - Govt. of India, State Maritime Boards, Port Directorates
Terminals	(State controlled) AAI, Defense	(State controlled) Indian Railways, Large Industries for Captive Sidings	(Open to all) SRTUs, Large Industries, Trucking Companies, etc	(Partly Open) Major Ports - Govt. of India, State Maritime Boards, Port Directorates, Some Private and Captive Ports
Rolling Stock and Equipment	(Open to all) IA, AI, Other Private Airlines	(State controlled) Indian Railways	(Open to all) SRTUs, Private Vehicle Owners	(Open to all) SCI, Great Eastern, Essar & Others

SERVICES	Maintenance			
	Air	Rail	Road	Water
Right of Way	- NA -	(State controlled) Indian Railways	(State controlled) NHAI, PWD, Urban Administrations	(State controlled) Major Ports - Govt. of India, State Maritime Boards, Port Directorates
Terminals	(State controlled) AAI	(State controlled) Indian Railways, Large Industries for Captive Sidings	(Open to all) SRTUs, Large Industries, Trucking Companies, etc	(State controlled) Major Ports – Govt. of India, State Maritime Boards, Port Directorates, Some Private and Captive Ports
Rolling Stock and Equipment	(Open to all) IA, AI, Other Private Airlines	(State controlled) Indian Railways	(Open to all) Innumerable Small scale garages, Large organized work shops for SRTUs, few private sector large workshops	(Open to all) Port Dry Docks, HSL, CSL, Chokhani & Others

SERVICES	Operations			
	Air	Rail	Road	Water
Right of Way	(State controlled) DGCA, AAI	(State controlled) Indian Railways	(State controlled) Police Department in case of high traffic density	(State controlled) Major Ports - Govt. of India, State Maritime Boards, Port Directorates, Light House Authority
Terminals	(State controlled) DGCA, AAI	(State controlled) Indian Railways, Large Industries for Captive Sidings	(Open to all) SRTUs, Large Industries, Transport Companies, Control and State Warehousing Corporation	(Partly open) Major Ports - Govt. of India, State Maritime Boards, Port Directorates, Some Private and Captive Ports, Stevedores, Agents, etc
Rolling Stock and Equipment	(Open to all) IA, AI, Private Airlines	(State controlled) Indian Railways	(Open to all) SRTUs, Private Vehicle Owners	(Open to all) SCI, Great Eastern, Essar & Others

SERVICES	Customer Services			
	Air	Rail	Road	Water
Basic Services	(Open to all) IA, AI, Private Airlines	(State controlled) Indian Railways	(Open to all) SRTUs, Private Bus Operators, TCI, Patel Roadways, Forwarding Agents, etc	(Open to all) Brokers, Chartering Agents, Forwarding Agents
Special Services	(Open to all) IA, AI, Private Airlines	(State controlled) Indian Railways	(Open to all) SRTUs, Private Bus Operators, Tour Operators, TCI, Patel Roadways, Forwarding Agents, etc	(Open to all) Brokers, Chartering Agents, Forwarding Agents

	Regulation			
	Air	Rail	Road	Water
Licensing	DGCA	IR	RTO	DG Shipping
Environmental Impact	DGCA	Department of Environment	RTO	DG Shipping
Safety	DGCA	CRS	Traffic Police	DG Shipping
Pricing	-	Parliament Railway Rates Tribunal,	-	DG Shipping, TAMP
Service Levels	DGCA	IR, Railway Claims Tribunal	-	DG Shipping

Thank You

Cost of Congestion (2004-05) at Major Ports

Approx no of port calls	:	18,000
Avg turnaround time	:	3.5 days
International 'good' avg	:	1.0 days

Extra time in India per Port Call	:	2.5 days

No of ship days lost	:	45,000

Cost of Congestion (2004-05) at Major Ports

45,000 Ship days @ \$10,000/day
\$450 m \approx Rs 20.3 b/year
(@ Rs 45/\$)

Net foreign exchange
earnings of shipping (2002-03) : Rs 36.5 bn/year
(excluding cost of buying ships)

Repatriated earnings of 'shippees' : Rs 10 bn/year

Cost of Congestion (2005-06) at Major Ports

No of port calls	: 19,796
Avg turnaround time	: 3.5 days
International 'good' avg	: 1.0 days

Extra time in India per port call	2.5 days

No of ship days lost	: 49,490

Cost of Congestion (2005-06) at Major Ports

49,490 Ship days @ \$10,000/day
\$494.9 mn \simeq Rs 21.8 bn/year
(@ Rs 44/\$)

Net foreign exchange
earnings of shipping : Rs 36.5 bn/year
(2002-03)

(excluding cost of buying ships)

Repatriated earnings
of 'shippees' : Rs 10 bn/year

Cost of Congestion (2007-08) at Major Ports

No of (major) port calls	: 21,949
Avg turnaround time	: 3.87 days
International 'good' avg	: 1.0 days

Extra time in India per port call	: 2.87 days

No of ship days lost	: 62,994

Cost of Congestion (2007-08) at Major Ports

62,994 Ship days @ \$20,000/day
\$1.3 b : Rs 57 b/year
(@ Rs 46/\$)

Net foreign exchange
earnings of shipping : Rs 70 b/year
(excluding cost of buying ships)

Repatriated earnings
of 'shippees' : Rs 10 b/year