



WELCOME
to the
Distinguished Delegates
Pravasi Bharath Divas
Jan 2010

Infrastructure
in
Karnataka

Railways, Roads, other Logistical & Industrial
Infrastructure Development Department
Govt. of Karnataka



a few Infrastructure Indices

o	Sector	Index	Target Index	Invest (Rs Cr)
1	Railways (railkm/ 1000sq km)	16	41	23300 (by 2020)
2	Roads (km/ Sqkm)	1.07	1.50	125000 (by 2020)
3	Energy (units per capita-annum)	700 (7800MW)	1400 (18500MW)	85000 (by 2020)
4	Airports Districts(No)	4	29	1500 (by 2012)
5	Rapid Mass Transportation (km)- Bangalore	0	693km (Metro-103+HSRL-34+Mono-60)	27000 (by 2017)

2/1/2010

Infrastructure investment

- Presently 4.5% of GSDP
- Target 8-9 % of GSDP
- India Competitive Index- 25
- Huge deficit in Tax- GDP ratio 22 %(35 %)
- Investment requirements
(@ 2006 prices):
plan)
 - Rs 92462 cr(11th)
 - Rs 186275 Cr(12th)
 - Rs 315657 Cr(13th)
- Required Annual Investment of upto Rs 25000 Crore

2/1/2010



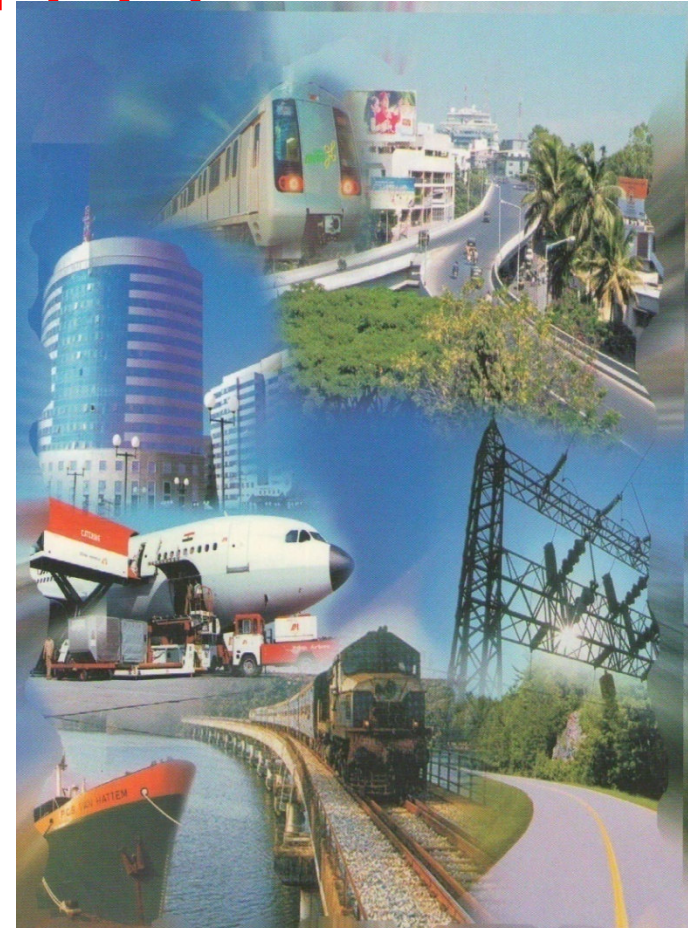
Karnataka- Growth Drivers

- **Policy Drivers**
 - **New Infrastructure Policy of 2007**
 - **New Industrial Policy of 2009**
- **Institutions to Support**
 - **PPP- as a vehicle**
 - Regular Procurement**
 - Swiss Challenge**
 - **PPP Cell in Infrastructure Dept- Infrastructure**
 - **Karnataka Udyoga Mitra- Industry**



Sector Focus in PPP

- Agri-Infrastructure
- Education
- Energy
- Healthcare
- Industrial Infrastructure
- Irrigation
- Public Markets
- Tourism
- Transportation & Logistics
- Urban and Municipal Infrastructure



Industrial Zones



Sl. No.	Industrial Zones	Districts
1	Steel	Bellary, Koppal, Bagalkot, Haveri, Gadag & Raichur
2	Cement	Gulbarga, Bagalkot, Chitradurga, Belgaum and Others
3	Food Processing	Bangalore (R), Kolar, Belgaum, Gadag, Koppal, Shimoga, Bagalkot, Bijapur, Davangere, Mandya and Dharwad
4	Information Technology/Bio-Technology	Mysore, Mangalore, Hubli-Dharwad, Belgaum, Shimoga, Gulbarga, Kolar and Mandya
5	Automobile	Ramanagara, Shimoga, Dharwad and Kolar
6	Readymade garments	Bangalore (R), Tumkur, Kolar, Mandya, Belgaum, Bidar, Dharwad & Others
7	Sugar and co-gen, power	Bidar, Belgaum, Bagalkot, Shimoga, and Mandya
8	Pharmaceutical/Bio-Technology	Bangalore, Mysore and Hassan
9	Power Generation	Raichur, Bellary, Bijapur and Chitradurga
10	Media & Entertainment	Bangalore (R)and Ramanagar

Suvarna Karnataka Development Corridor (SKDC)

Sl. No.	Corridor
1	Bidar – Bangalore via Chitradurga
2	Tumkur – Honnavar via Shimoga
3	Chitradurga – Mangalore via Shimoga, Udupi
4	Bangalore – Belgaum via Davangere, Hubli

Additional corridor will also be developed to cover Bidar, Bijapur and Other potential locations.



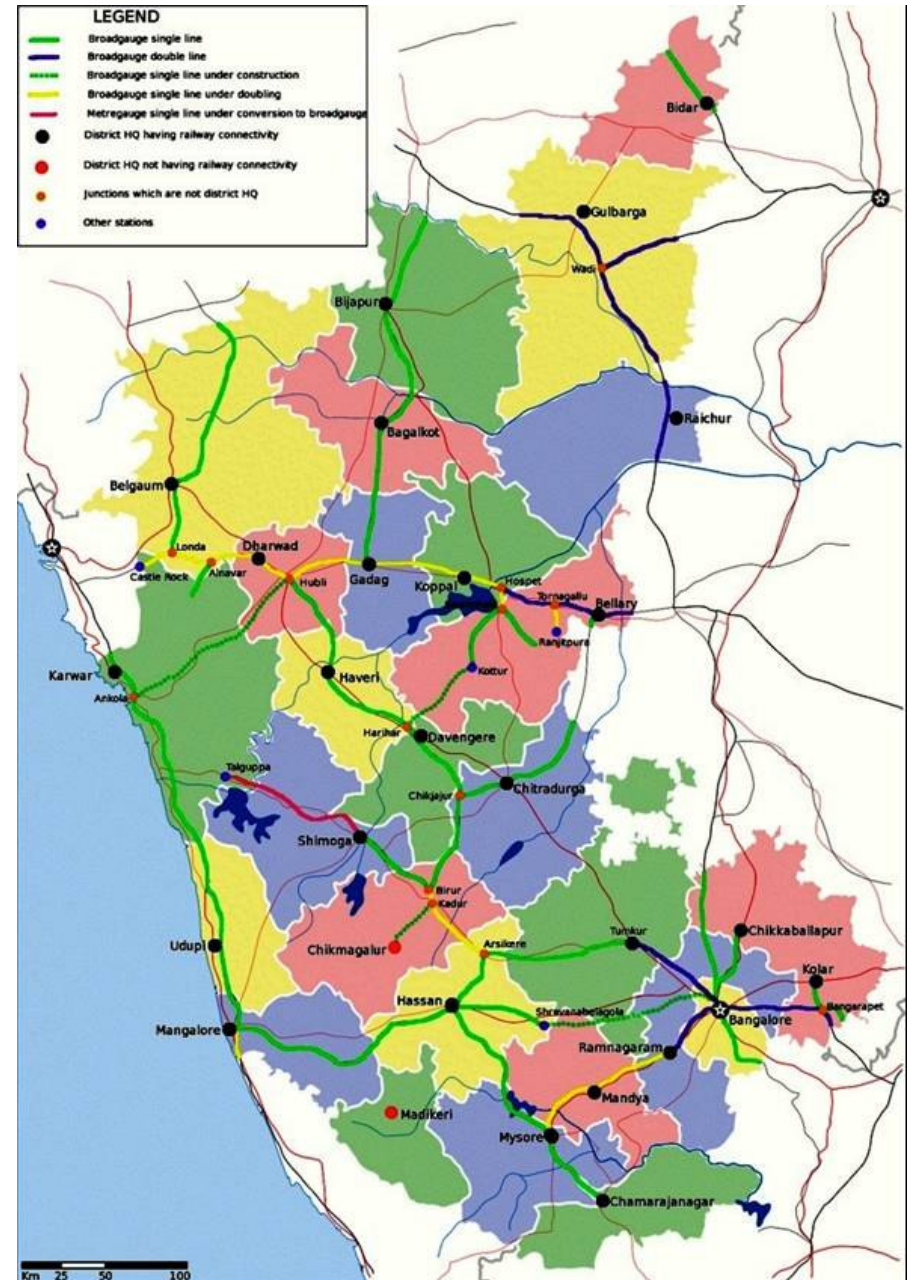
RAILWAY NETWORK



2/1/2010

The need

- To provide impetus for development of:
 - Connectivity with ports & industrial zones
 - General development: commerce, industry, tourism
 - Movement of Labour Force
 - Connectivity to power plants
 - Connectivity to Habitations

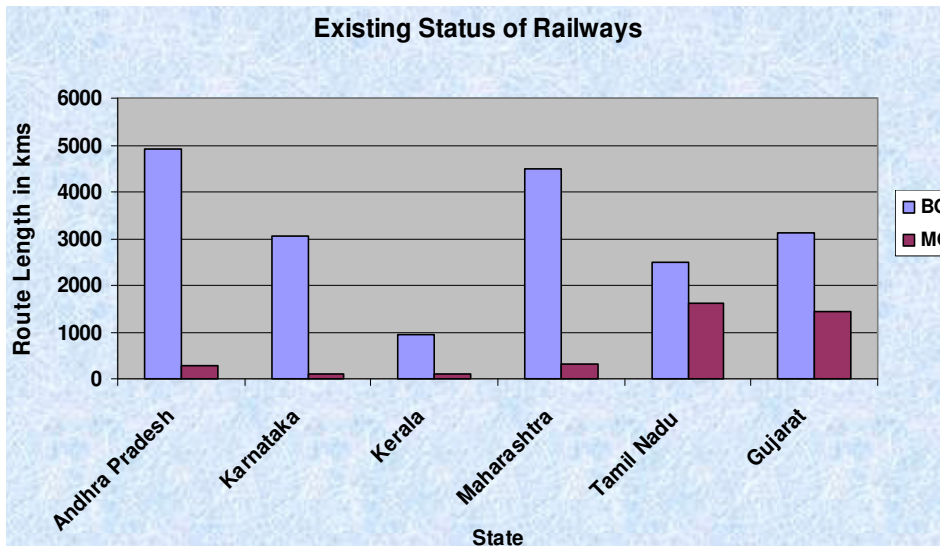


Existing Railway Network



Comparison with other States

State/Gauge-wise Total Length of Railways Lines in Indian Railways					
States	Area (Sq km)	Route length in Kilometers			
		BG	MG	NG	Total
Andhra Pradesh	2,75,045	4904	268	0	5172
Gujarat	1,96,024	3119	1422	787	5328
Karnataka	1,91,791	3069	97	84	3250
Kerala	38,863	933	117	0	1050
Maharashtra	3,07,713	4489	313	733	5535
Tamil Nadu	1,30,058	2507	1624	0	4131



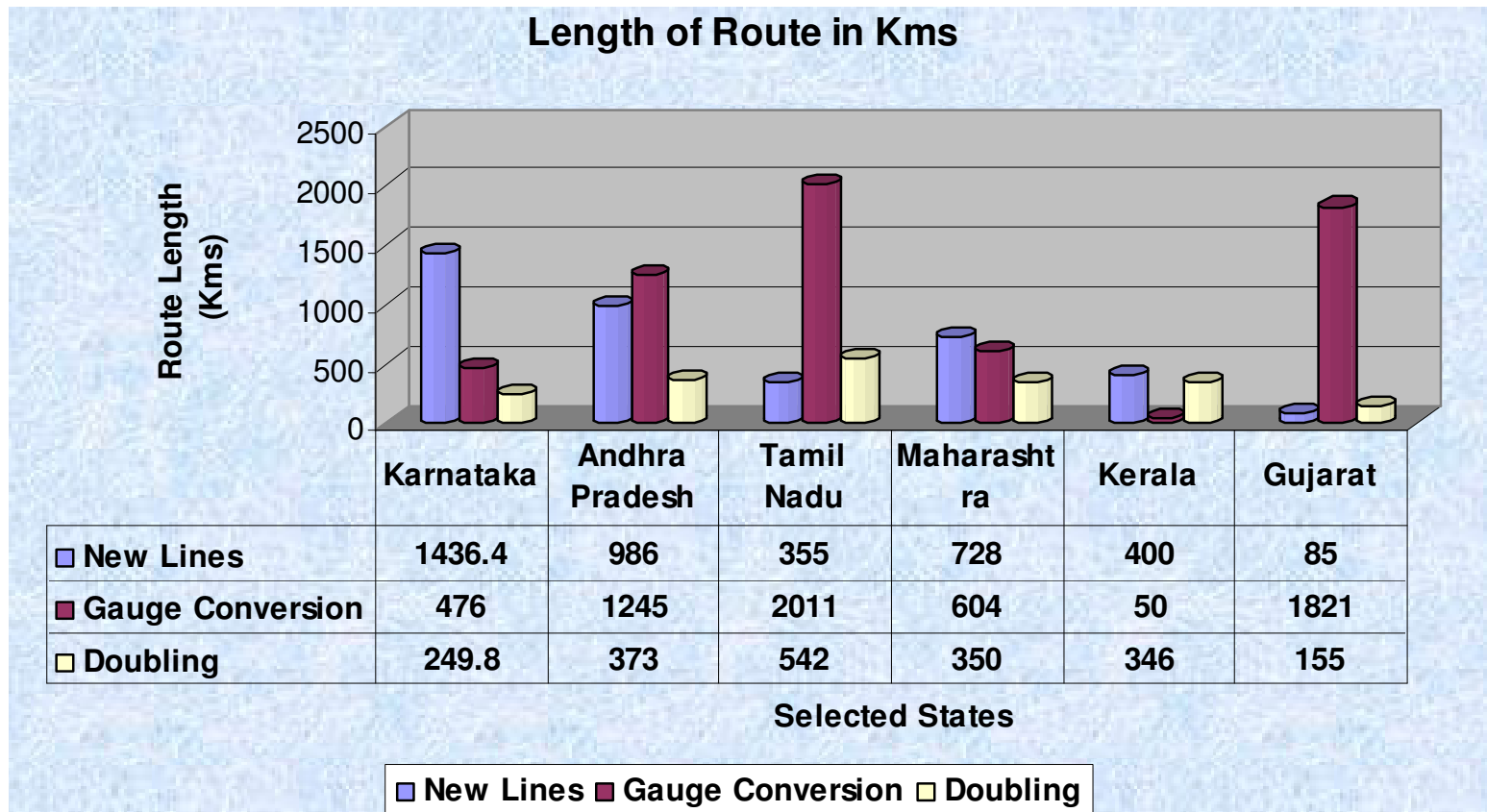
- ▶ Karnataka and Gujarat are comparable in term of area
- ▶ Karnataka has just 56% of route length present in Gujarat.

Route Lengths

States	Population (in crores)	Route length per 1000 sqkm area (in Kilometres)		Route length per 100,000 population (in Kilometres)	
		BG	All Type	BG	All Type
Andhra Pradesh	7.62	17.8	18.8	6.4	6.8
Gujarat	5.06	15.9	27.2	6.2	10.5
Karnataka	5.27	16.0	16.9	5.8	6.2
Kerala	3.18	24.0	27.0	2.9	3.3
Maharashtra	9.67	14.6	18.0	4.6	5.7
Tamil Nadu	6.22	19.3	31.8	4.0	6.6

- ▶ Karnataka is comparable to Gujarat in terms of population.
- ▶ Though the numbers for Broad Gauge are comparable, the total route length per 1000 sqkm is almost half of the existing figures for Gujarat.

Status compared to other States



- ▶ gap exists between the existing facilities and requirement

RAILWAY PROJECTS				
Particulars	Details			Remarks
	No	Kms	Cost (Rs. cr.)	
. Under Implementation				
New lines	10	1436.4	7721.8	3 projects are cost sharing by GoK of 361 km of anticipated Rs. 7721.8 cr. is GoK Share. Till date 234.57 cr. Released
Gauge Conversion	2	476.0	847.0	2 projects are cost sharing by GoK of 381 km of Rs.112.5 cr. is GoK Share. Till date 207.36 cr. Released. This also includes the funds released for Gadag- Sholapur line.
Doubling	8	249.8	1219.8	1 project is cost sharing by GoK of km 99 of Rs. 202.90 cr. is GoK Share. Till date 112.8 cr. Released for Bangalore-Mysore project.
jb Total	20	2162.2	9788.6	
. Electrification	3	347.0	246.6	1 project is cost sharing by GoK of km 99 of Rs. 202.90 cr. is GoK Share. Till date 112.8 cr. Released for Bangalore-Mysore project including electrification.
. Surveys				
Completed	11	1335.0	6675.0	With Rly. Board for consideration
Under Progress	15	1386.0	6930.0	Survey under different stages
jb Total	26	2721.0	13605.0	

Summary of key works completed(2002-09)

No	Particulars	Length (Km)	Expenditure(Rs In Cr)
1	New Lines	60	466.9
2	Gauge Conversions	258	709.6
3	Doubling	180	543.2
4	Other Facilities		340.8
	Total	498	2060.5 (530)

Railway projects in progress



NL: 10 CS:
 3
GC: 3 CS:
 2
DL: 8 CS:
 1

Priority Projects

N o.	Name of the Project	Cost (Rs.crores)	Total Kms	Remarks	Purpose	Recommendations
1	Hubli-Ankola	1000	167	Held up on account of CEC on environmental issues.	Port Connectivity.	K-RIDE
2	Bijapur - Shahbad	840	140	The proposal has been sent to MoR from GoK. Response is awaited.	Development of Cement Industrial Zone	K-RIDE
3	Shimoga- Harihara	504	84	Proposal has been sent to MoR through letter No:CM/460/Gol/2009 dated 26/8/2009	Port connectivity and Industrial Development	K-RIDE
4	Gadag - Haveri	350	84	Survey is under progress.	Port connectivity and Industrial Development	K-RIDE
5	Whitefield- Kolar- Mulbagal	350	52	Survey Completed	Industrial Zones (for movement of Labor force)	K-RIDE
6	Kuduchi - Bagalkot	816	142	Surveys completed and report submitted to Railway Board. It is with planning Commission for approval.	Development of Cement Industrial Zone and port connectivity	RAILWAYS
7	Tumkur - Davanagere	913	210	Surveys completed and report submitted to Railway Board.	To reduce traveling time between North and South Karnataka.	RAILWAYS

Priority Projects

No.	Name of the Project	Cost (Rs.crores)	Total Kms	Remarks	Purpose	Recommendations
8	Alamatti - Koppal	600	150	Tender for Survey called on 14-10-09.	Connectivity of Cement and Iron ore Industries to port towards the eastern coast.	RAILWAYS
9	Londa – Goa (Doubling)	436.4	109	24.4 Km lies in Karnataka. Rs.120 cr is for this stretch. Forest clearance is required. RVNL proposes to do the doubling work between Hospet to Goa (Vasco). This proposal is submitted to the Planning Commission for clearance.	Connectivity for port, cement zone and power projects	RAILWAYS / K-RIDE
TOTAL		5809	1138			

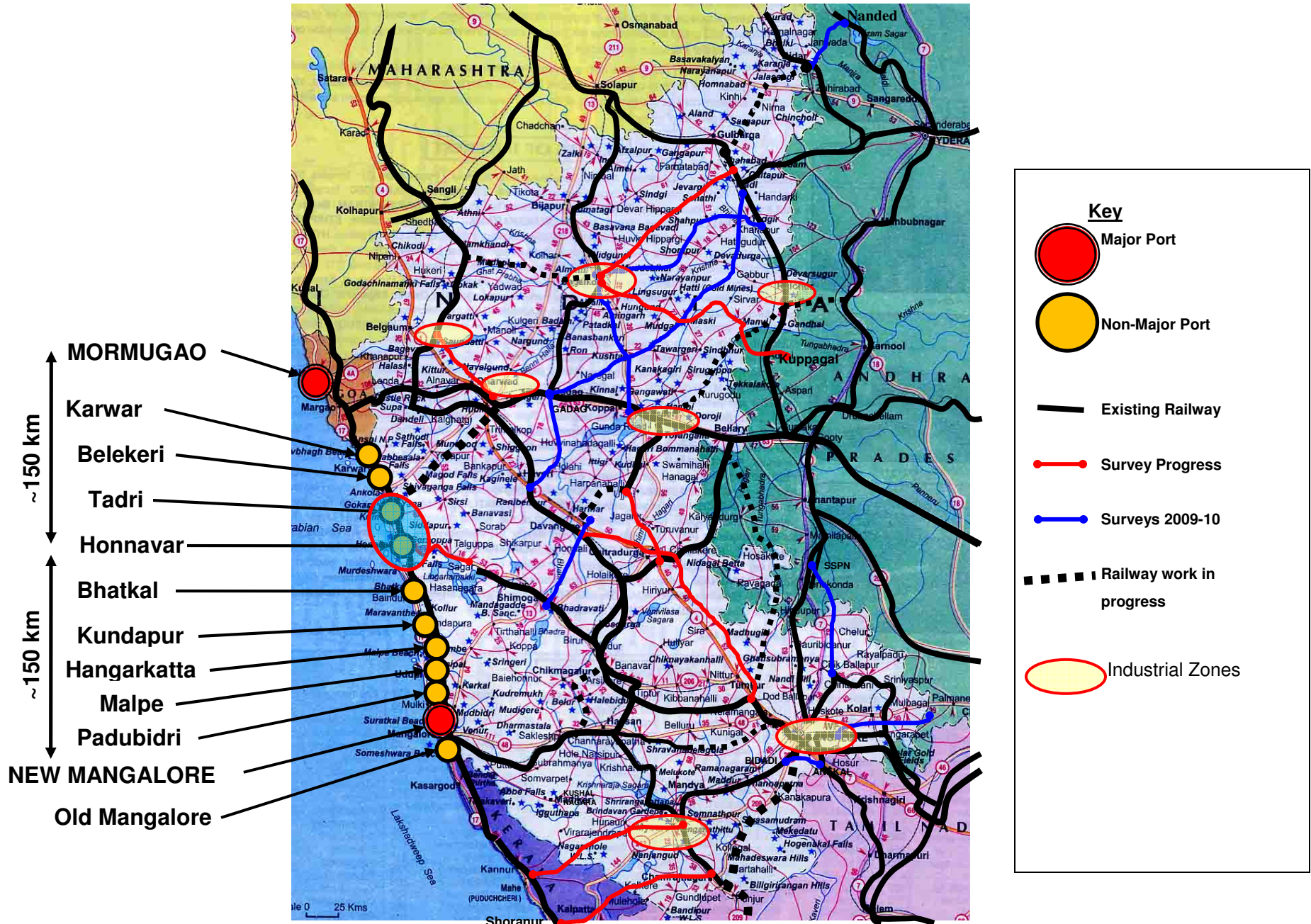
Surveys Completed

Sl. No.	Name	Length in km	Status of Survey	Remarks
1	Alamatti-kuppagal	124	Completed	With Railway Board
2	Bagalko-Kudichi	141.08	Completed	With Railway Board
3	Gunji-Kulem	80	Completed	With Railway Board
4	Yelahanka – Penkonda	88	Completed	With Railway Board
5	Talaguppa – Honnavara	83	Completed	With Railway Board
6	Dharwad – Belgaum	97	Completed	With Railway Board
7	Tumkur – Davanagere	210	Completed	With Railway Board
8	K.R.Nagar – Kushalanagara	100	Completed	With Railway Board
9	Torangallu – Ranjitpura	22	Completed	With Railway Board
10	Bangalore – Nangli	50	Completed	With Railway Board
11	Hospet – Londa – Vasco	340		2127 Cr by RVNL project approved by planning commission Cabinet committee on economic affairs should clear the project
	Total	1335		

Surveys under Progress

Sl. No.	Name	Length in km	Status of Survey	Remarks
1	Bangalore – Salem	218	Under progress	South Western Railway
2	Kottur – Chitradurga	80	Under progress	South Western Railway
3	Bijapur – Shahabad	140	Under progress	South Western Railway
4	Chikkaballapur – Puttaparthi	90	Under progress	South Western Railway
5	Almatti – Koppal	124	Under progress	South Western Railway
6	Yadgir – Shahapur – Sholapur – Meddebihal – Almatti	150	Under progress	South Western Railway
7	Gadag – Haveri	80	Under progress	South Western Railway
8	Bidadi – Anekal	30	Under progress	South Western Railway
9	Gadag – Wadi	240	Under progress	South Central Railway
10	Bidar – Nanded	25	Under progress	South Central Railway
11	Dharmavaram – yelahanka – Devanahalli (By-pass)	5	Under progress	South Western Railway
12	Mysore – Hejjala – Gollahalli – Tumkur	35	Under progress	South Western Railway
13	Shimoga – Harihara	71	Under progress	South Western Railway

Port / Railways/ Industrial Zones



PPP in Indian Railways



ISSUES ?

- **CONSTRUCTION**
 - » **AGENCY**
 - » **STANDARDS**
 - » **TYPES-**
 - » **AT GRADE**
 - » **TUNNELS**
 - » **ELEVATED**
- **ROLLING STOCK**
- **SIGNALLING & TELECOMMUNICATIONS**
- **SAFETY**
- **REVENUE MODELS-**
- **SHARING**
- **OPERATION & MAINTENANCE**
- **UPGRADATION**

Alternative Financing -SPV Route



- **Konkan Railway Corporation Limited**
 - 50:50 JV Between Indian Railway and State Govts
- **Pipavav Rail Corporation**
 - 50:50 JV Between Indian Railway and Pipavav Port (Private Sector) with 200 Crore equity and 173 Crore Debt.
 - SPV mandated to do O&M for 33 Years
- **Kutch Railway Company Ltd**
 - JV Between Indian Railway(50%), Kandla Port (26%), Guj Adani(20%) and Govt of Guj.(4%) for 314 km broad guage line connecting Palanpur and Kandla

Alternative Financing -SPV Route

- **Hassan Managalore Rail Development Company-
Project Specific**
 - MOU Between Indian Railway and K-RIDE
 - SPV with equity of IR- 40.95%, GoK-40.95%, K-RIDE-16.36% and Strategic Investors including private sector-1.82%.
- **Rail Vikas Nigam Limited- Umbrella SPV**
 - RVNL set up in 2002 with paid up capital of 950 Crore with port connectivity objective
 - Financial resources to be raised from the market
 - Projects on BOT basis
 - Of the 55 Projects- 16 completed up to Mar 2008, 31 Under implementation and 8 under sanction
 - Umbrella SPV has been able to speed up the project execution

PPP Route

- **Delhi Mumbai Dedicated Freight Corridor**
 - 2700 KM to be set up at a cost of 28000 Crore (US\$ 6 Bn) with a mix of EPC and PPP methods
 - Design and construction of 54 major bridges for western corridor awarded to Soma Entreprises
 - Design and construction for 200 Km between Vaitarna and Uran commenced
- **Development of Railway Stations**
 - 26 Stations identified including Bayapanahalli (Bangalore) for (re)development including commercial space development in Phase I with another 24 to be taken up in Phase II
 - MOU signed with China Railway for Bayapanahalli and Bhubaneswar
- **Commercial Utilisation of Land**
 - 127 sites spanning 1480 Hectares entrusted to Railway Land development Authority
 - By Feb 2009 3 sites awarded for commercial development to receive Rs 1066 Crore as premium

Railway Segments open to PSP

- **Liberalised Wagon Investment Scheme**
 - High Capacity Wagons (HCW) and Special Purpose Wagons (SPW) can be leased by Wagon leasing Company for captive or third party use
- **Wagon Leasing Scheme**
 - Third party leasing of wagons to bring in better designed wagons
 - Wagon leasing contract to be bipartite between WLC and the lessee, maintenance of leased wagons by IR can be contract with WLC
 - Global consultant being selected
- **Terminal Development Scheme**
 - Objective to encourage private sector investment for development of new railway terminals
 - End users, PSUs or their agencies are permitted
 - To be set up on private land with option to use Railway land for 30+10 years
 - Private ownership of terminals at both ends with specified commodities transported in privately owned SPWs
- **IRCTC**
 - SPV for privatisation and outsourcing for catering and tourism activity
 - IRCTC entered into PPP for food plazas, packaged drinking water, internet booking, rail sampark, budget hotels, yatri nivas and

Enablers

- **Development of MCA**

- For development of Railway Stations
- For procurement and maintenance of Locomotives
- For urban Rail projects



PPP experience

- **Core activities**
 - For tracks, bridges, signalling have met with limited success
- **Non-core activities**
 - For Logistics parks, terminals, production units, workshops, wagon investment scheme, cleanliness
- **Investments So Far as per PPIAF (World Bank) database**
 - Investments in Roads (between 1990 and 2007) Rs 435 Bn but rail only Rs 9.6Bn
 - India has invested USD 218 Mn in 3 rail projects between 1990-2007 where as developing nations USD 39000 Mn in 39 rail projects.
- **PPP projects in 11th plan behind schedule**
- **Issues and challenges**
 - Most PPP in Railway lacks proper structuring
 - Structural reforms/ regulatory framework for PPP are needed to be in place
 - Institutional arrangement- Independent Regulator
 - Structured Project development process for identification, approval, tech studies, project structuring, management of bidding process, financial closure
 - Standard Contractual framework with responsibility sharing, proper risk allocation and returns etc.

Incentives & Concessions

- A. Facilitation:
 - Land to be acquired if required
 - Clearances
 - Provision of water & power
- B Asset based Support
 - Provision of Govt land at Concessional rate if available
 - Allowing Commercial development
 - Develop critical linkage Infra

Incentives & Concessions

- C. Tax Concessions:
 - Entry & Spl Entry Tax on Machinery, Equipments & Construction materials- Limited to 25 Lakhs & 3 years
 - Stamp duty on land transfer in Zone I(100%, II(50%))
 - Conversion fine- same pattern as above
- D. Take or pay Guarantee
- E. VGF

Deliverables by Government

- Clearances
- Land Acquisition
 - Compensation payment
 - Market value of land
 - Replacement value of building
- Resettlement & Rehabilitation
 - Dislocation allowance
 - Allocation of proportional as
 - *Share in the new project ?*



SWISS CHALLENGE

- Clause 29 of the Infra '07 policy
 - Innovative/ *suo moto* Proposals
- Procedure
 - Proponent Submits proposal for Prelim examination
 - Provide 'approval to proceed' with studies
 - Submits a DPR with output based specification
 - Project Bid out
 - Original proponent has first right of refusal

Central Assistance- VGF

- **PPP project should be from-**
 - Roads, Sea ports, airports, inland waterways, Power, Urban transport, water supply & sewerage, solid waste and other physical infrastructure
 - Infrastructure in SEZ
- **Government Support**
 - VGF not to exceed 20% of the total project cost- Land cost
 - Government or statutory entity can top up with another 20%
- **Approval process laid down**
- **Viability Gap Funding (VGF)**
 - For 3 projects, VGF funding of Rs 120 Crore
 - VGF of Rs 1040 Crore for High speed Rail Link

Initiatives

- **Standardised Contractual Documents**
 - **Bidding Documents**
 - RFQ
 - RFP
 - **Model Concession Agreements**
 - Ports
 - Airports
 - Roads
 - Water Supply and Sanitation – PBMC & PBDPS contract developed (under ADB Assistance)
- **Approval Mechanism**
 - SWA established
 - SLHCC

Important PPP projects



- **Airport Projects-**
 - Hassan, Bellary, Bijapur, Shimoga, Gulbarga; 12 Air strips(IDD)
- **High Speed Rail Link to Airport at Bangalore(BARL)(6000cr)**
- **10000 km of Road Projects in phases- (KRDCL)(45000cr)**
- **Devanahally Business Park(KSIIDC)(9500cr)**
- **Sea Port at Tadri, Haldipur (IDD)(4000cr)**
- **Devanahally Convention Centre(Tourism)**
- **Logistics park (KSIIDC)**
- **Two Mono Rail Projects in Bangalore(BARL)(6000cr)**
- **Food Parks (Food Karnataka Limited/ KSIIDC)**
- **Tourism Projects(Tourism dept/ KIPDC/KSIIDC)**
- **Industrial Infrastructure –VADA at Bellary**

Important PPP

- **Logistics Architecture in Karnataka**
- **Hub at Bajpe**
- **Mega Power Projects - Belgaum, Davanagere, Tumkur, Gadag**
- **City Gas Distribution**
- **Railway Projects**

PORTS



Slide 38



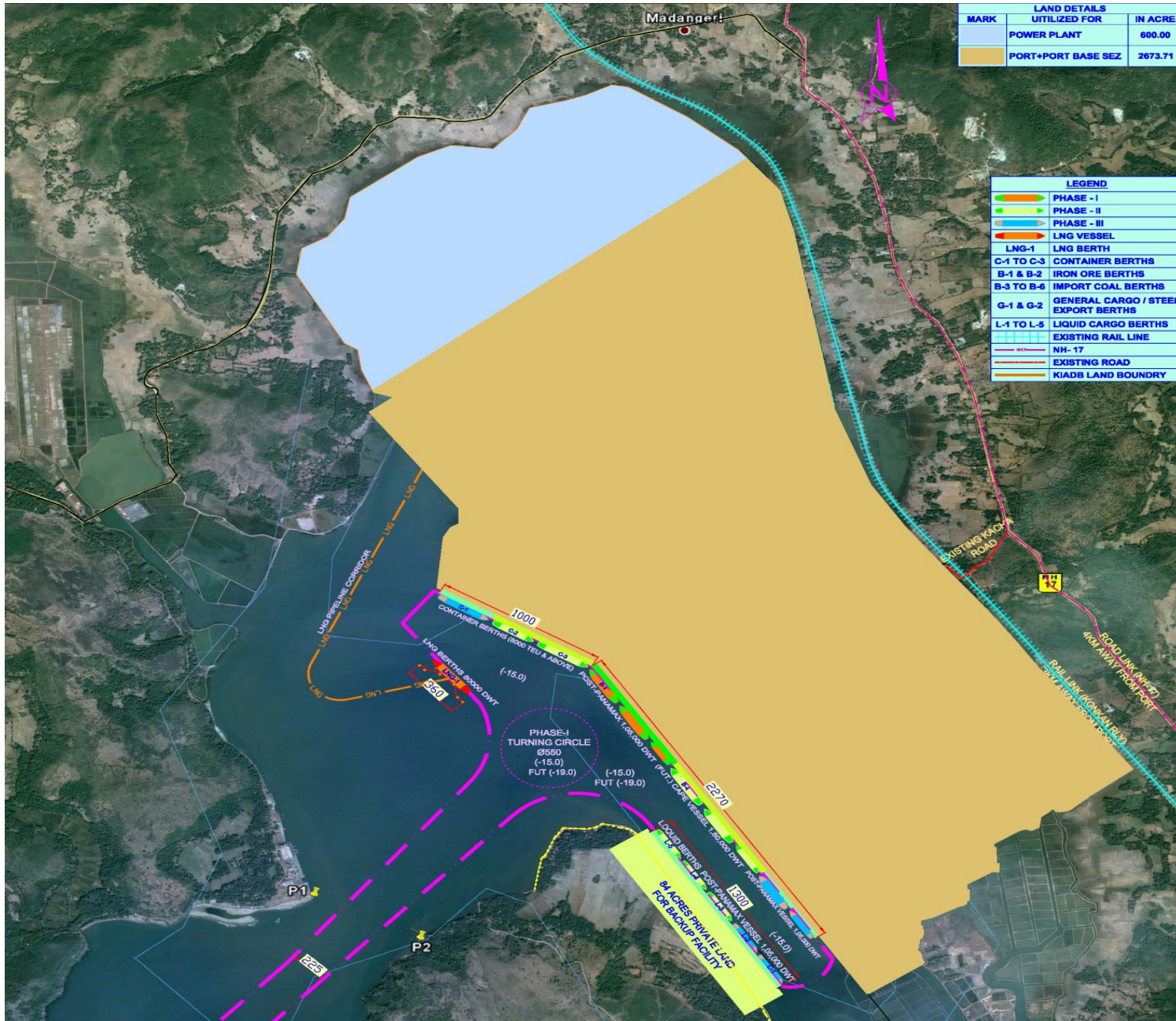
Cargo in Major Ports in 2007-08

Cargo Traffic at Major Ports in 2007-08 (million tonnes)

Major Port	Ministry target for 2007-08	Cargo Traffic in 2007-08
Chennai	55.86	57.15
Cochin	16.94	15.81
Ennore	11.7	11.56
JNPT	49.38	55.84
Kandla	60	64.89
Kolkata	58.88	57.28
Mormugao	38.94	35.13
Mumbai	58.76	57.04
New Mangalore	34.34	36.02
Paradip	45.89	42.44
Tuticorn	20.39	21.48
Visakhapatnam	64.24	64.59
Total	515.32	519.23

Source: India Infrastructure
Research

TADRI- PROPOSED PORT LAY-OUT



Project Development

Development Plan	- Proposed in three Phases
Total cargo capacity	> 114 MTPA
Total No Of Berth	> 16
Total Berthing length	> 4570 Meters
Total Project Cost	- 5677 Cr (approx.)

Phase - 1

Berths:-	3 nos. for bulk Cargo (825 m long)
Draft:-	– 15 m (Dredging envisaged for Panamax vessel only, assuming no rock strata to be encountered).
Capacity:-	34MTPA
Vessel Size:-	Upto Post-Panamax of 105,000 DWT class
Completion Schedule:-	2010 - 2013

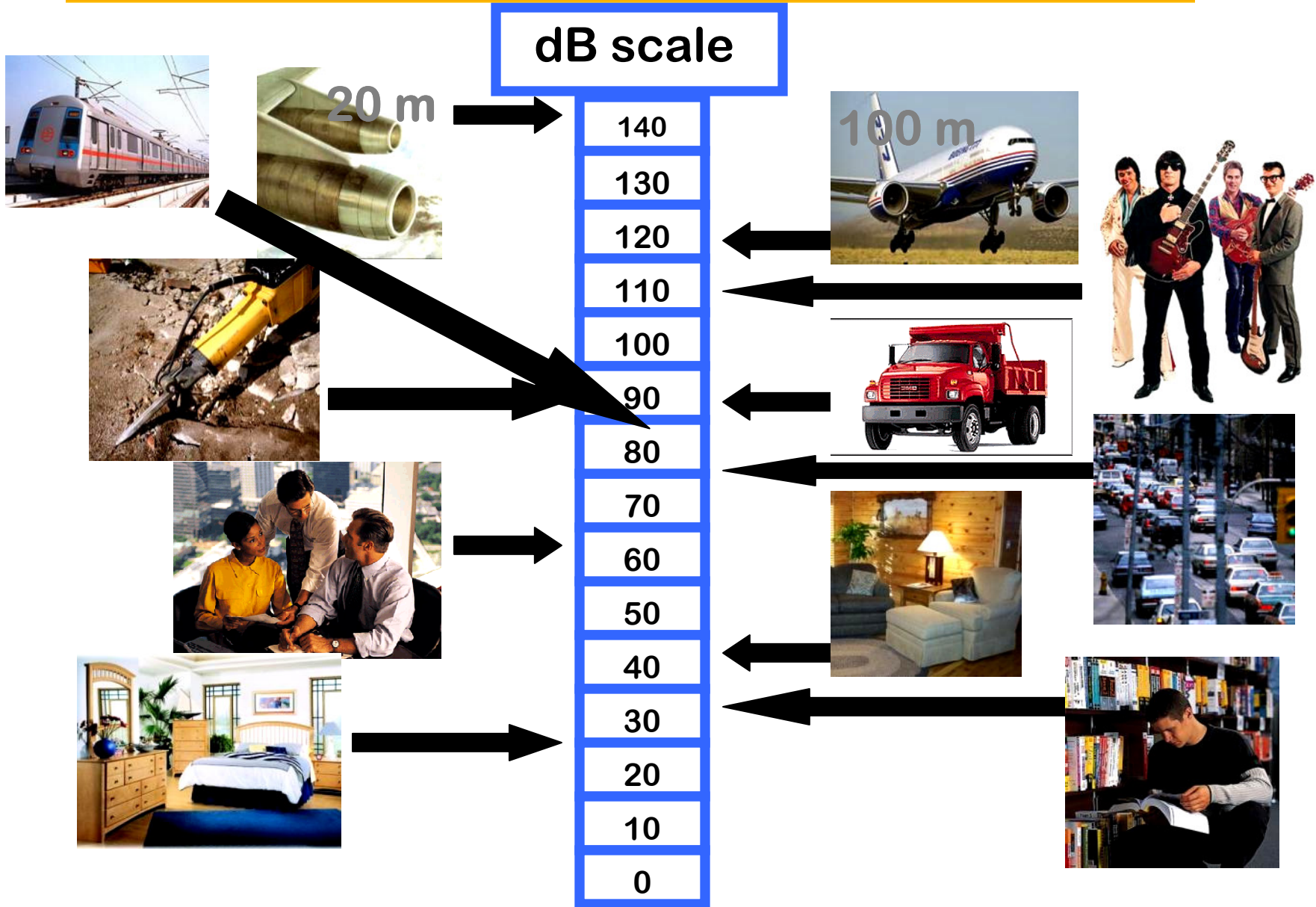
Infrastructure- *Requirements*

- **Enabling Policy and Regulatory Framework**
- **Long-term equity and debt**
- **Capacity to manage the PPP Process**
- **Shelf of credible, bankable Projects**
- **Private Sector capacity to invest in projects**
- **Acceptance among the stakeholders**

Issues in PPP

- **Size of Infrastructure investment- 20.5 Lakh Cr in 11th plan**
- **(GOI-40:SG-30:Private-30)**
- **Perceptions & Attitudes of Governance- the three arms**
- **Regulatory Framework**
- **Risk Sharing- Political & Commercial risks**
- **Monopoly in PPP- Art 12/ RTI/ CAG**
- **Fourth Estate**
- **Gap in funding- IRR for private sector**
- **Micro- management Vs Macro- management**
- **Dynamic Concession period**
- **Sustainable Infrastructure**

Levels of Common Sounds



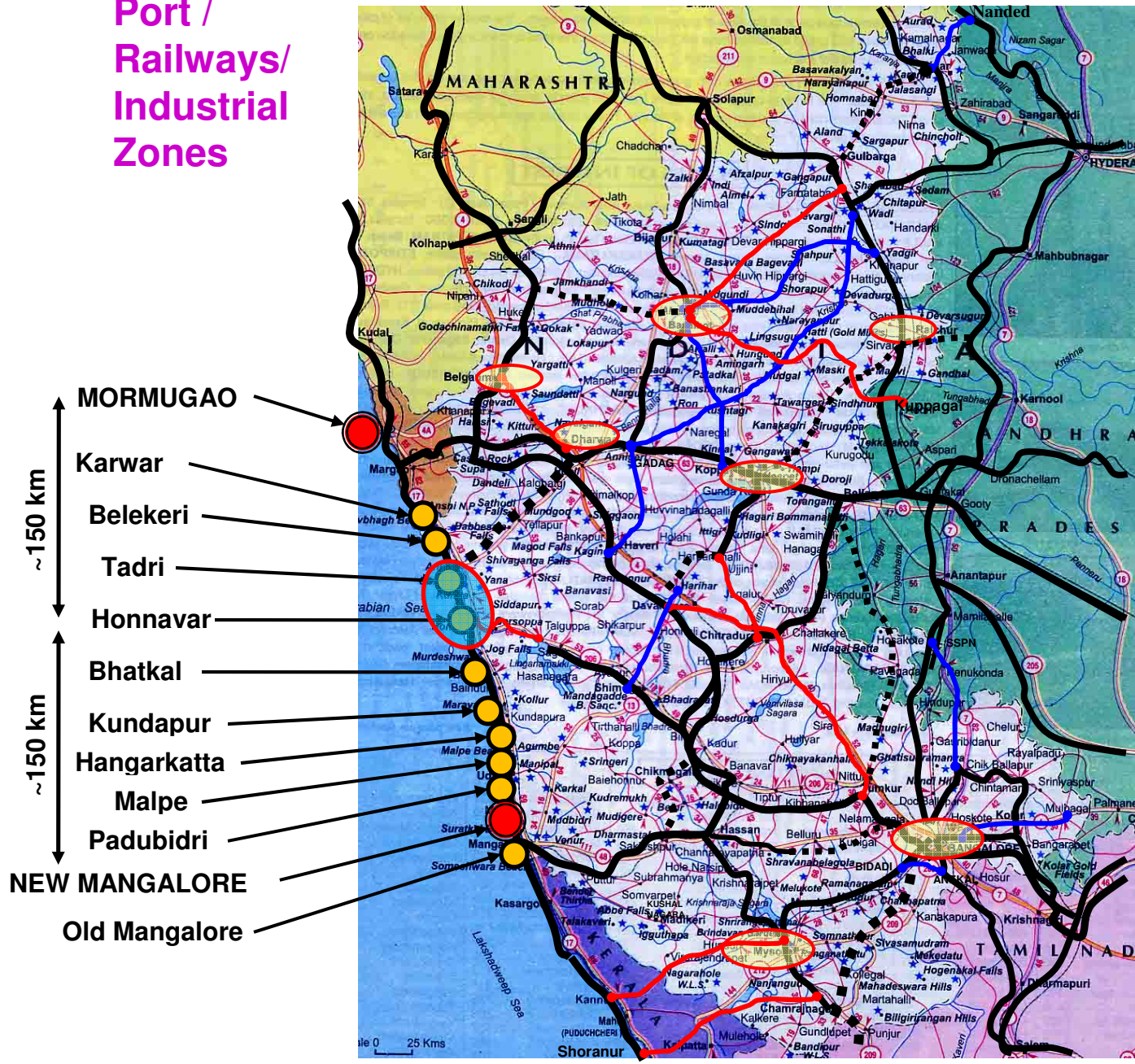
Proposed Integrated Mass Transport System

<u>System</u>		<u>Length</u>
• Metro System	-	137 km
• Mono Rail / LRT	-	60 km
• Bus Rapid Transit System	-	291.5 km
• Commuter Rail Services	-	204 km
Total		- 692.5 km








Integrated Mass Transit System (IMTS)

- Master Plan for Bangalore – Proposes IMTS
- CTPP – proposes IMTS
 - Metro
 - Mono rail / LRT
 - BRTS
 - Commuter Rail System
 - Bus System
 - IPT
- Integrated Mass Transit System – Issues
 - Integration of systems
 - Physical integration
 - Fare integration

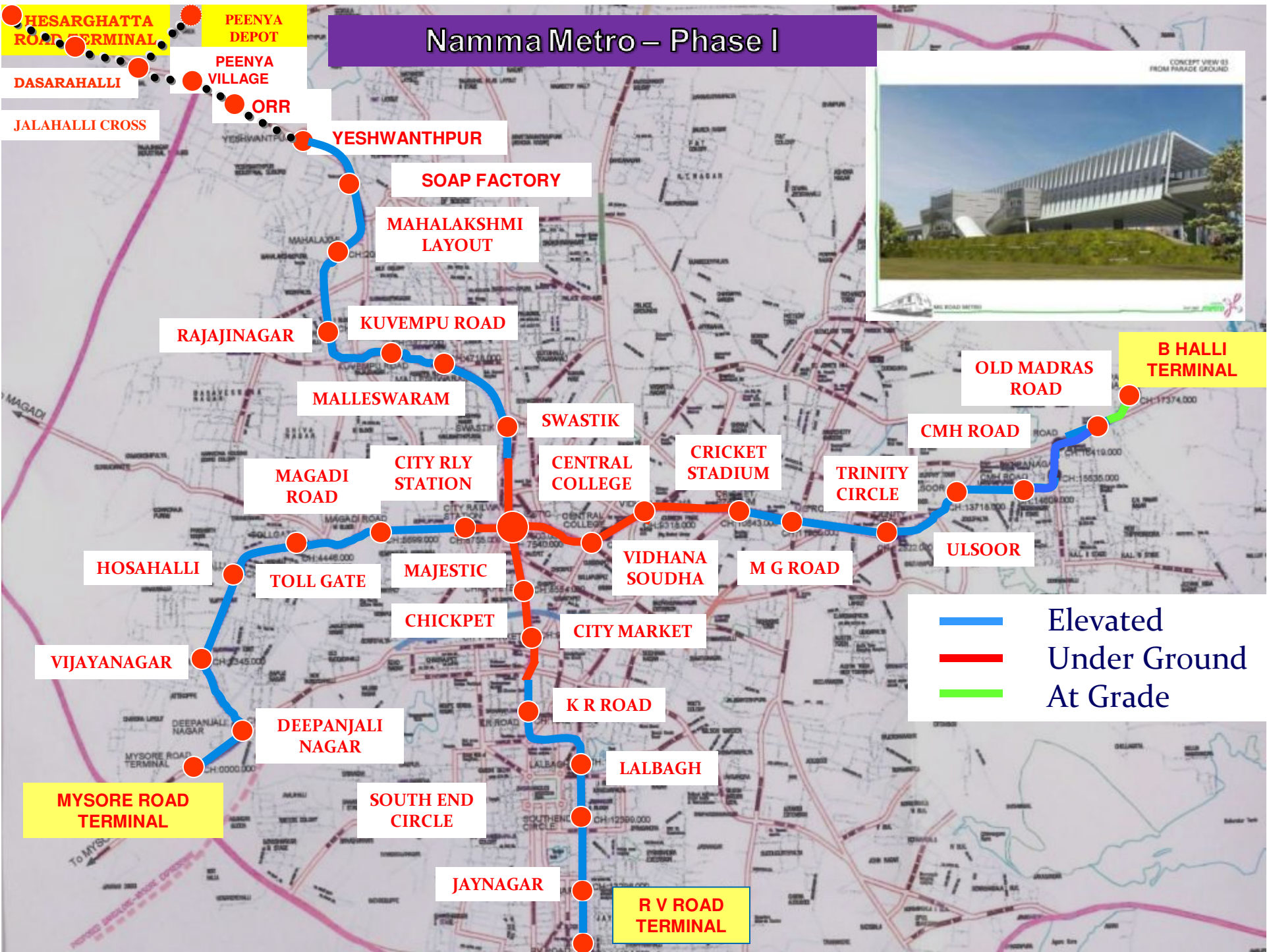
Port / Railways/ Industrial Zones



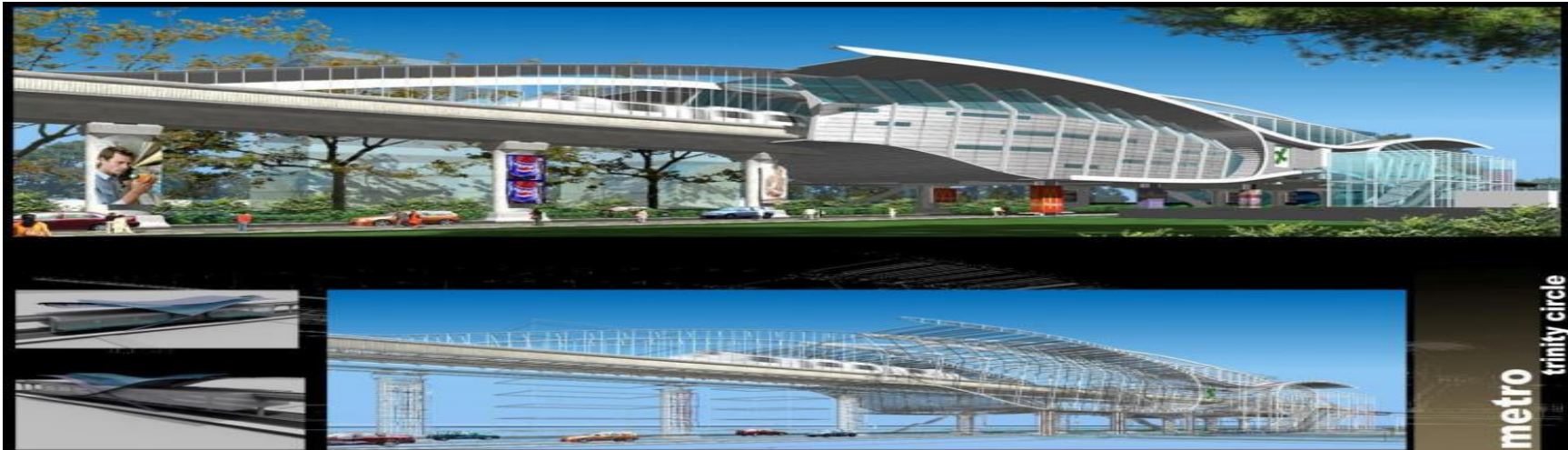
Key

-  Major Port
-  Non-Major Port
-  Existing Railway
-  Survey Progress
-  Surveys 2009-10
-  Railway work in progress
-  Industrial Zones

Namma Metro – Phase I

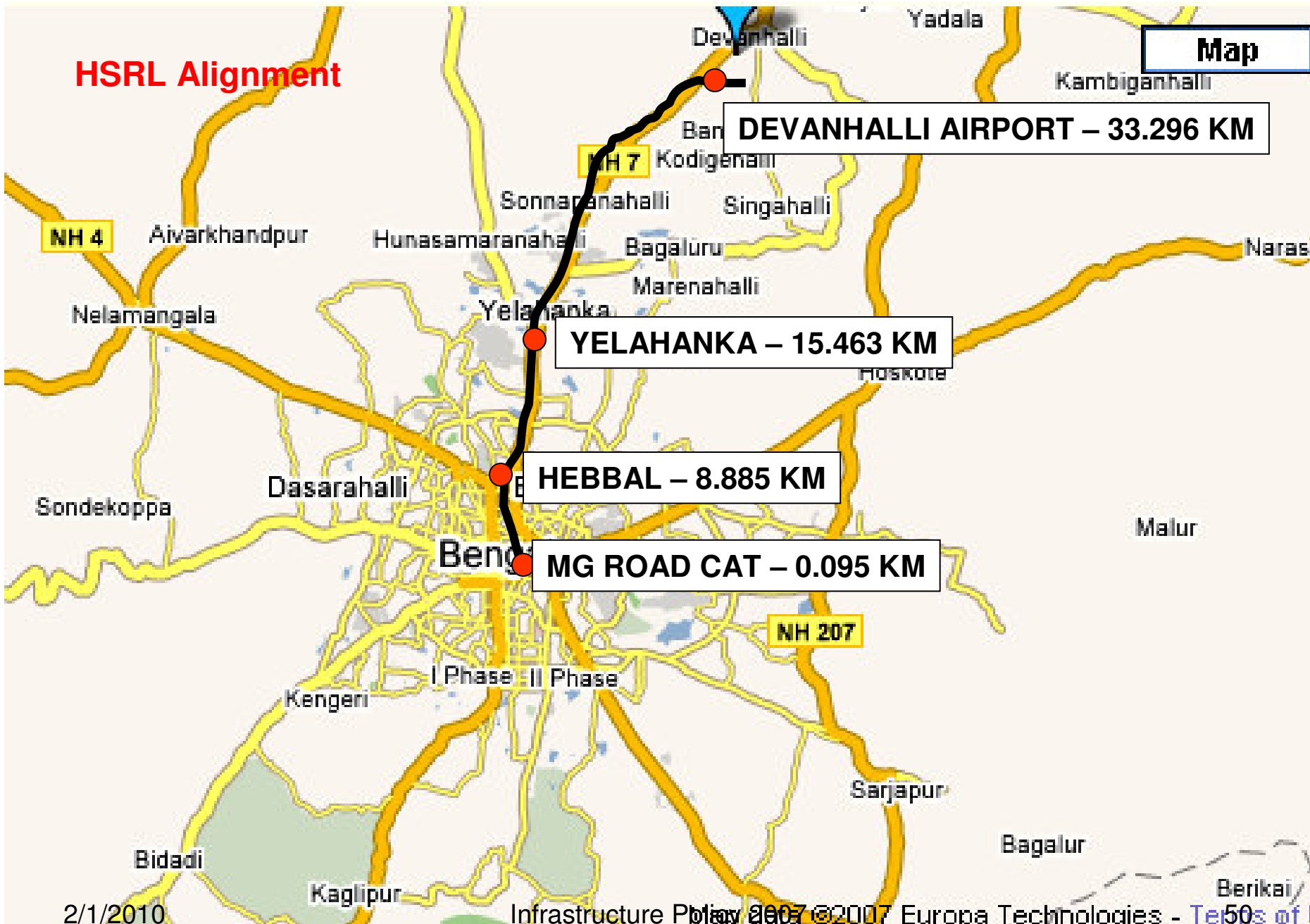


Namma Metro



EAST – WEST CORRIDOR	18.10 KMS
NORTH-SOUTH CORRIDOR	14.90 KMS
TOTAL	33.00 KMS
ELEVATED	25.65 KMS
AT GRADE (At Ground Level)	00.65 KMS
UNDERGROUND	6.70 KMS
GAUGE	Standard Gauge
TRACTION	750V dc Third Rail
SPEED	Max 80Kmph ; Avg. 32Kmph
NO. OF STATIONS	32 (24 elevated, 8 UG)
TRAVEL TIME	33 / 28 Mins. (end to end)
HEAD WAY	4 Mins at start ;later 3 Mins

HSRL Alignment



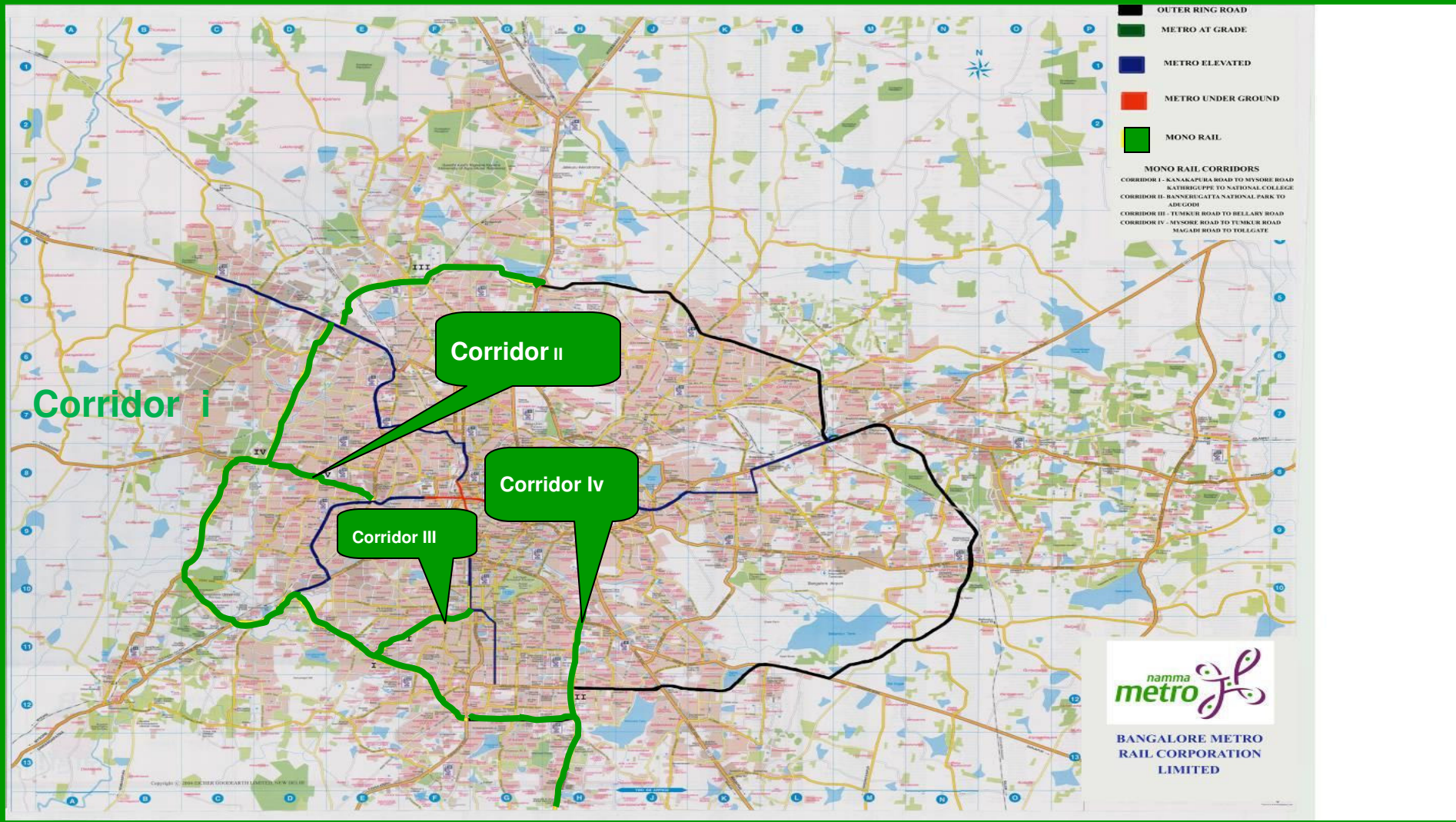
HIGH SPEED RAIL LINK (HSRL) TO BANGALORE INTERNATIONAL AIRPORT



2/1/2010

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Monorail Corridors (CTTP)



Monorails in the World

Palm Jumeirah Monorail



Las Vegas Monorail



Kuala Lumpur Monorail



Tokyo-Haneda Monorail

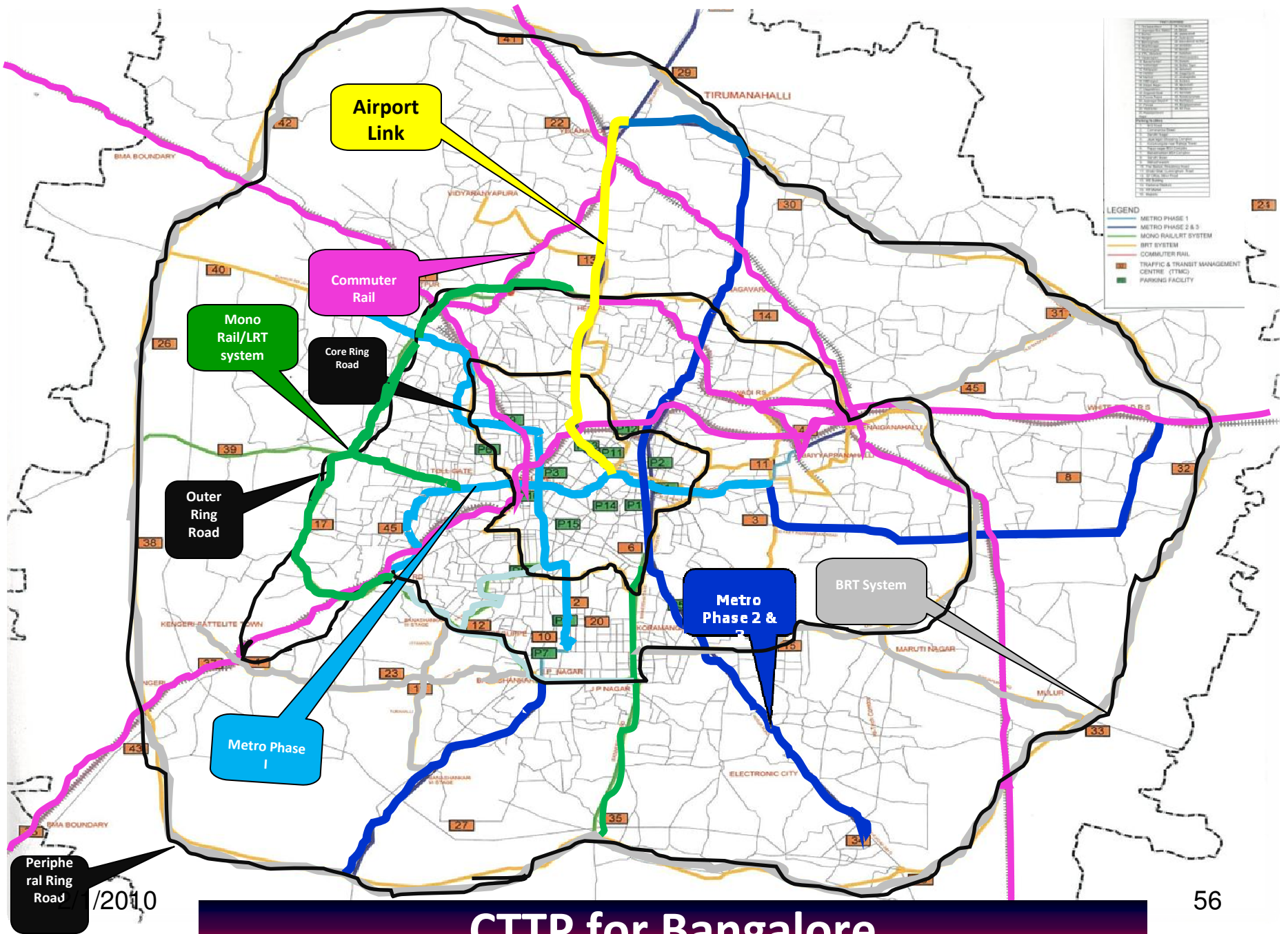


TRANSPORT DEMAND ANALYSIS

Modes	Daily Trips in Lakhs (Modal Split)			
	2006	2025		
		Scenario 1	Scenario 2	Scenario 3
Car	4.2 (7.5%)	15.5 (12.2%)	9.7 (7.6%)	7.0 (5.5%)
2W	18.4 (32.8%)	60.4 (47.5%)	45.6(35.9%)	20.6 (16.2%)
IPT	7.3 (12.9%)	14.9 (11.7%)	8.9 (7.0%)	6.7 (5.3%)
Public Transport	26.3 (46.8%)	36.3 (28.6%)	50.0(49.5%)	92.9 (73%)
Total	56.2(100%)	127.2 (100%)	127.2 (100%)	127.2 (100%)

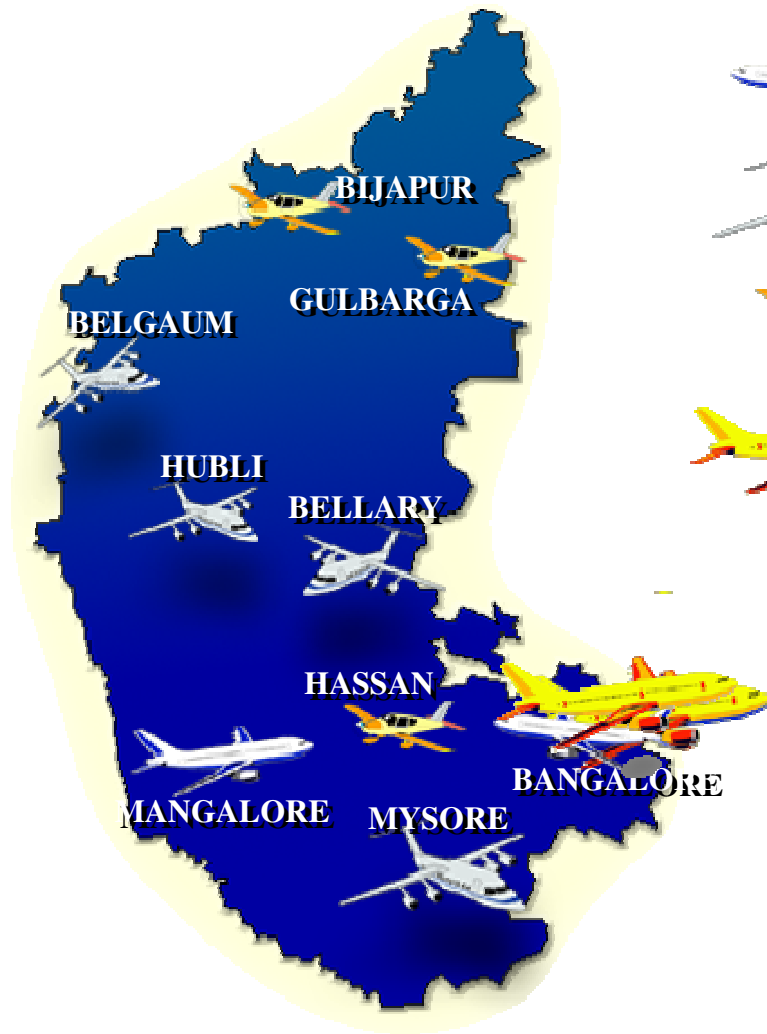
Traffic Demand- by 2025 (PHPDT)

Corridor / Route	Expected Maximum Traffic (PHPDT)	Available ROW (m)
Hebbal to Bannerghatta Road along Western portion of ORR	20,000	20
PRR to Toll Gate along Magadi Road	12,000	22
Kathriguppa Road / Ring Road Junction to National College	14,000	18
Hosur Road to PRR along Bannerghatta Road	18,000	22



CTTP for Bangalore

Airports



Existing



Existing



Proposed



New International Airport



Existing old HALnternational Airport

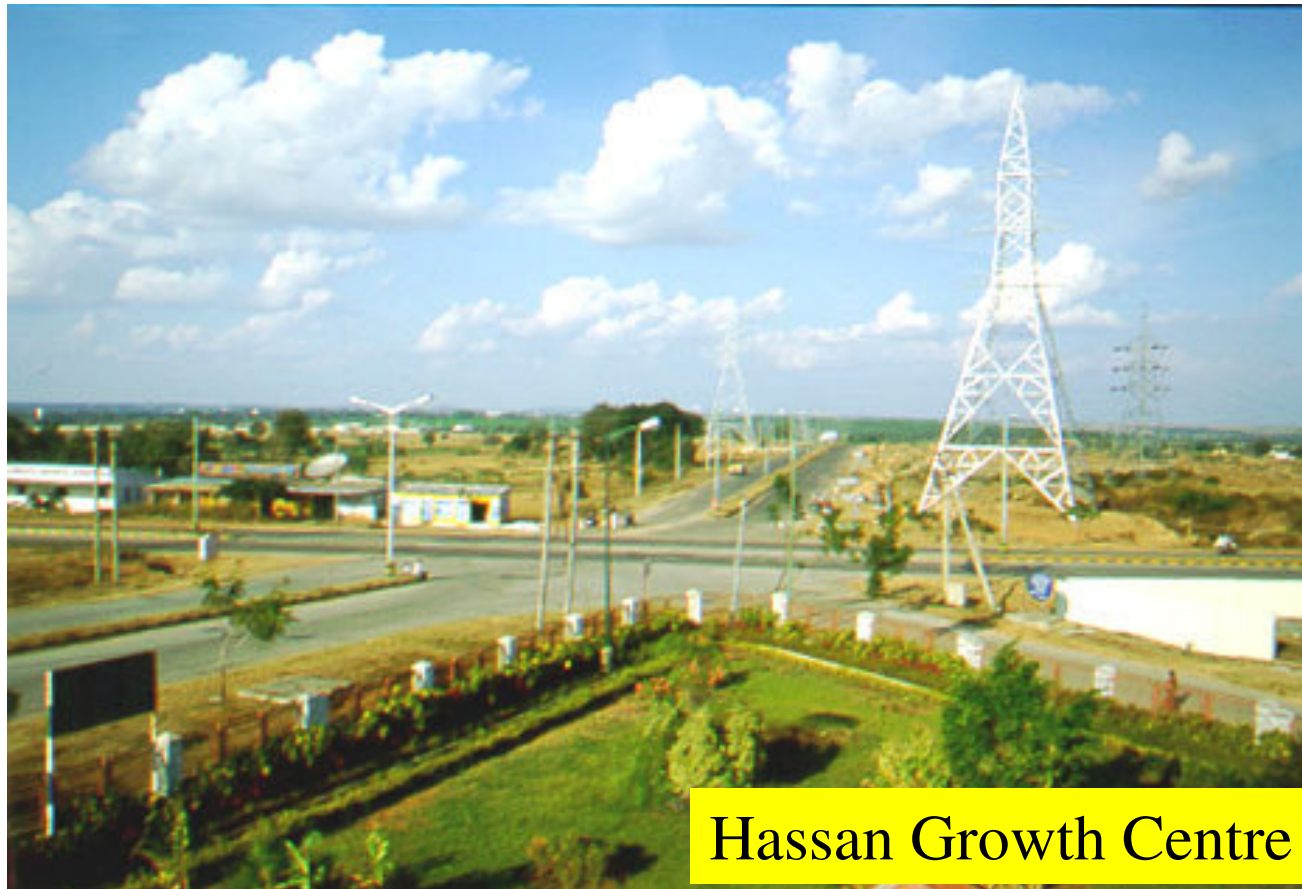
Freight Traffic at Airports

Year	Freight Traffic ('000 tons)	%age Change
2001-02	854.28	0.96
2002-03	979.36	14.64
2003-04	1,068.66	9.12
2004-05	1,280.27	19.80
2005-06	1,403.94	9.66
2006-07	1,553.46	10.65

Source: India Infrastructure
Research

Industrial Areas

96 Industrial Areas with well developed 28,852 acres of land, spread throughout the State.



10000 KM Core Roads

- **A corpus fund of Rs.500 Cr. provided to KRDCL**
- **51 Packages tendered**
- **KRDCL – Nodal agency.**
- **KPWD, KRDCL, IDD will provide all necessary support for implementation of project.**
- **Status**
 - **Bid Submission for 7 packages by 30 Sep '09**



Devanahalli Business Park (DBP): 413.65 Acres

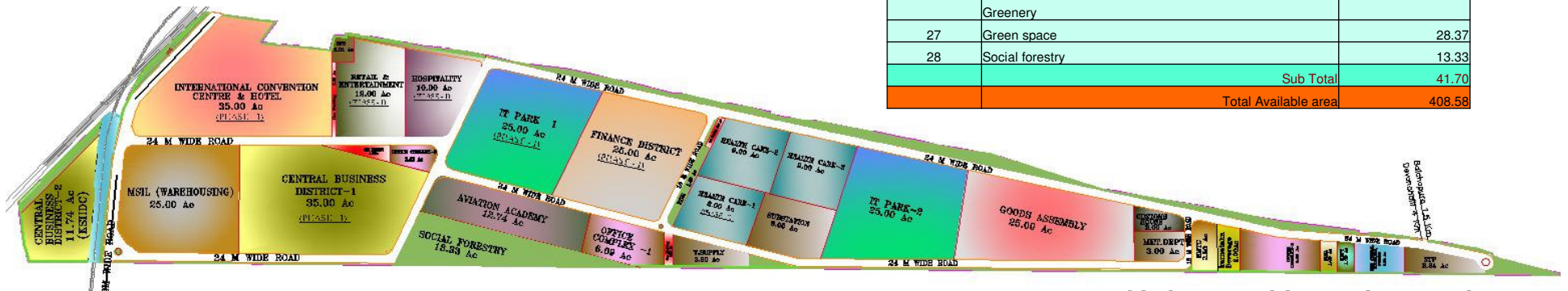
- Market Study & Business plan by Jones Lang LaSalle Meghraj (JLLM), Utility Master Plan by Mahindra Consulting Engineers (MACE)
- Suggested Land Use Plan approved by GoK on 14.05.2008
- Retained for Govt. Agencies: 83.24 Acres
- Power Sub-Station & Social Forest: 21.34 Acres
- For Development on PPP basis: 309.07 Acres
(Commercial Devpt: 217 Acres, Roads & Utilities: 92.07 Acres)
- Total **413.65 Acres**
- KSIIDC shall lease 309 acres to private sector developer for 30 yrs with automatic renewal for another 30 yrs.
- Developer can sub-lease certain portion of 309 acres to other developers and shall develop roads & utilities for DBP as a whole

DBP: Suggested Land Use Plan

Based on JLLM's Market Study, Mahindra Consulting Engineers Ltd. prepared Suggested Land Use Plan for DBP in consultation with JLLM

S.No	Description	Area in Acres
1	International Convention centre & Hotel	35.00
2	Central Business District 1	35.00
3	IT PARK 1	25.00
4	IT PARK 2	25.00
5	Finance District	25.00
6	Health Care - 1, 2 & 3	26.00
7	Goods Assembly	25.00
8	Retail & Entertainment	12.00
9	Hospitality	10.00
10	Aviation academy	12.74
11	Central Business District 2	11.74
12	Office complex - 1, 2 & 3	13.64
13	Car parking	2.73
Sub Total		258.85

S.No	Description	Area in Acres
Government Agencies		
14	MSIL	25.00
15	Metrological department	3.00
16	BMTC	2.50
17	Customs House	2.00
18	Karnataka Beverages	2.00
19	NMBT	1.00
20	DGCA	1.00
Sub Total		36.50
Services & Utilities		
21	Roads	52.85
22	Sub Station	8.00
23	Fire station, Police, P&T and Others	2.63
24	Water Supply	3.20
25	Sewage Treatment Plant	2.84
26	Sewage Pumping Station	2.01
Sub Total		71.53
Greenery		
27	Green space	28.37
28	Social forestry	13.33
Sub Total		41.70
Total Available area		408.58



2/1/2010

Source: Mahindra Consulting Engineers Ltd.

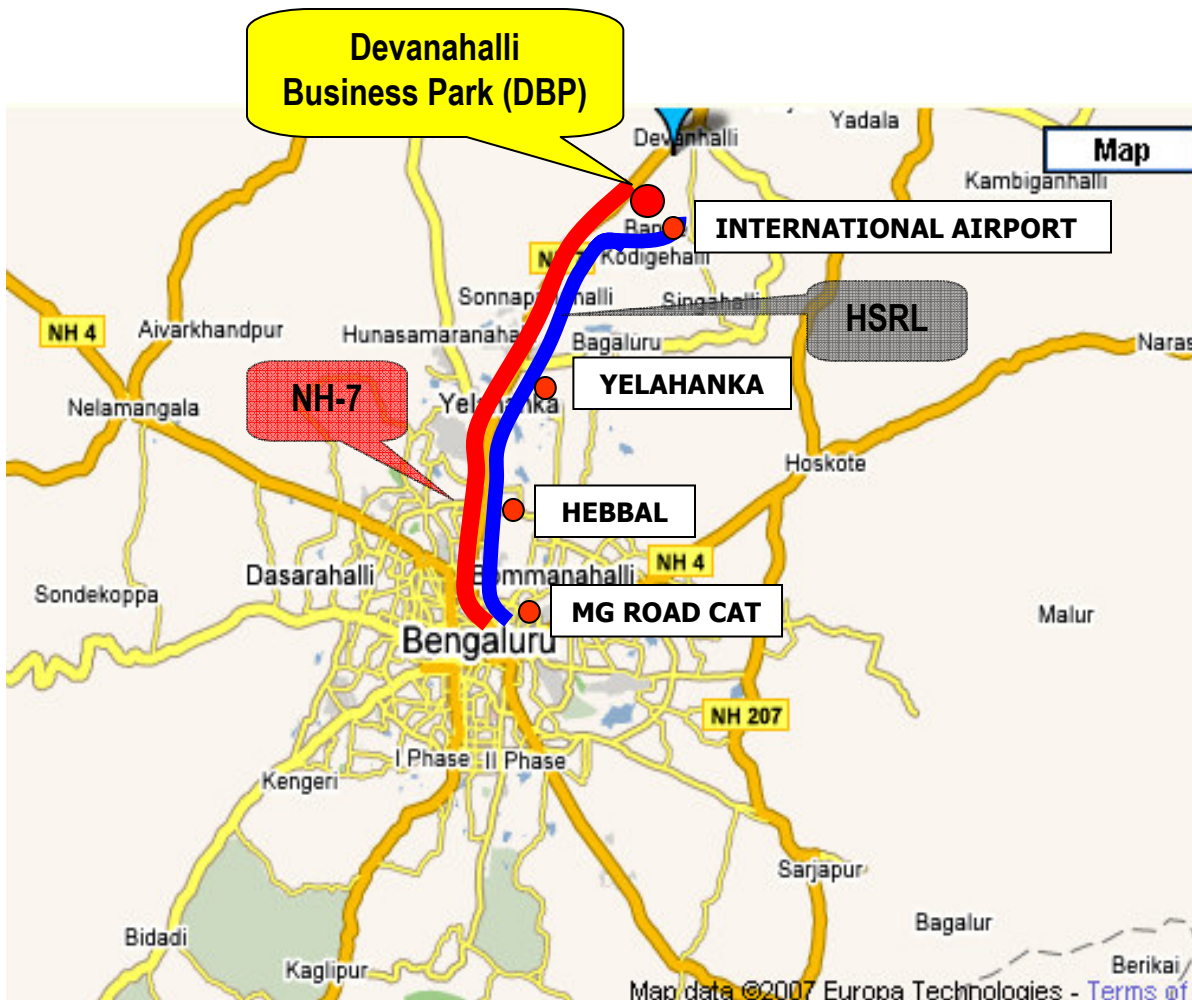
Devanahalli Business Park (DBP): 408.58 Acres



- Bengaluru International Airport (BIA) has been operational since May 24, 2008, total lease period of 60 years (30+30) (ending 2068)
- GoK and KSIIDC propose to establish Devanahalli Business Park (DBP) on 408.58 acres site adjoining the northern boundary of BIA
- 104.57 acres to be retained by Government Agencies for its own use
- GoK and KSIIDC propose to lease balance portion of around 304 acres' in DBP on Build-Operate-Transfer (BOT) model for 30 years with automatic renewal of another 30 years, thus totally for a 60 years period

Expressions of Interest (EoIs) invited on 15.9.2008. 8 EoIs received.

DBP: Location & Access



- **NH-7**
 - 6-laned road (8-laning proposed)
 - Proposed elevated road between Hebbal & Yelahanka
 - **Dedicated access road options from NH-7 to DBP worked out by STUP Consultants**
 - **Proposal for direct access road from Airport**
- **Hi-Speed Rail Link (HSRL) to International Airport:**
 - City Air Terminal (CAT) at MG Road to Airport
 - Appox. 34 kms will be covered in about 25 min
 - KSIIDC is Nodal Agency & DMRC is consultant
 - Development on BOT model-EoI invited
- **RFP in a month**

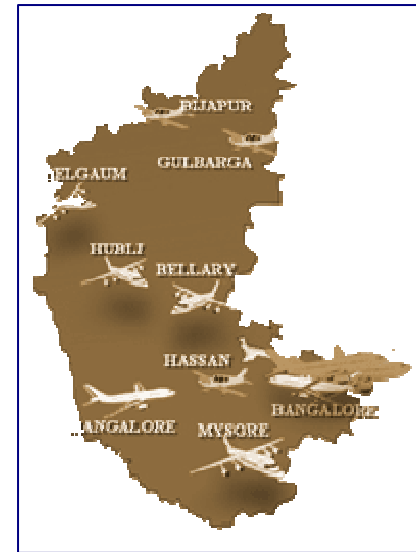
Food Parks

- Food Parks under implementation
 - Malur, Hiriyr, Bagalkot, Jewargi and Chickmagalur
- New Food Parks
 - Shimoga,
 - Bangalore Rural,
 - Tumkur,
 - Davanagere,
 - Belgaum,
 - Bijapur Districts.



Selected Sectors- Aero

- PPP Projects - Airports
 - 1 Major Airport operational (BIAL),
 - 4 Minor airports under PPP mode
 - 3 Awarded (Shimoga, Gulbarga, Hassan)
 - Bijapur: Concession to be signed
 - Bellary: Bidding commenced
 - Total Project Cost of 3300 Cr
- Non PPP
 - Up-gradation of Airport- Hubli, Mangalore, Belgaum and Mysore.
 - Bidar Airforce airport for civilian use
 - Mysore to be commissioned in Sept 09
 - 12 Airstrips proposed in the state



PPP Projects in Tourism

- **PPP Projects - Tourism**

- No of Projects – 16 Nos
- Value Rs 1621 Crs

Theme park,
Cultural centre,
Entertainment
Golf Course
Aquamarine Park
Tourist Train Facilities

- **PPP Projects - Heritage Projects**

- No of Projects – 39 Nos Identified
- Identification stage



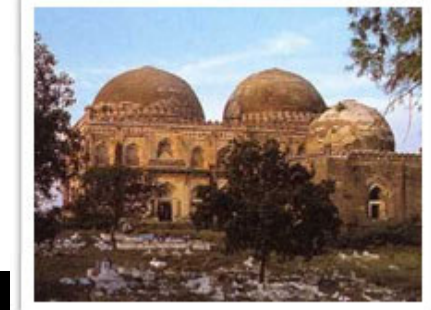
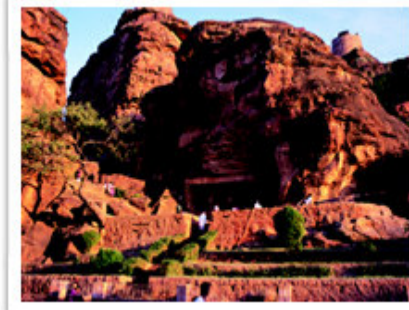
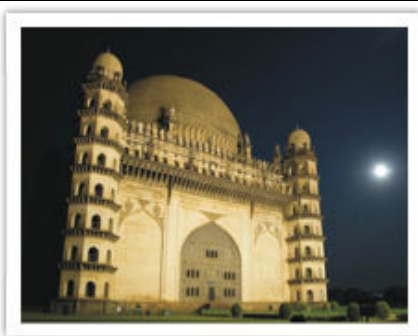
Location details : 18 – hole Golf Course at Mangalore



Tourism Circuit Development - Project Packages

Package	location
Package I	Jog Falls
	Agumbe
	Banavasi
Package II	Badami
	Pattadakal
	Aihole
Package III	Belur
Package IV	Bijapur
Package V	Gokarna

Tourism Projects in Karnataka on PPP Format



KARNATAKA
One state. Many worlds.

Distribution- Sector Wise

(Amount
in Rs in Cr)

	No	Amount
Transport	60	46411.05
Urban and Municipal Infrastructure	24	2817.65
Tourism	12	1348.19
Energy	4	50000
Industrial Infrastructure	2	9522
Agri-Infrastructure	5	900.1
Healthcare	4	11.66
Education	1	11.4
Total ^{2/1/2010}	112	1711022

Project Prefeasibility

SL. No.	Name of the Projects	Consultant
8	River Front Development in Karnataka	iDeCK
9	Development of Intermodal Transit Hubs at Belgaum, Hubli-Dharwad, Mysore, Bangalore (Dabaspet), Bellary and other places	KIPDC
10	Development of Tadri port	iDeck
11	Tumkur Solid Waste Management	iDeCK
12	Feasibility Study for Car Parking (including busses and passenger amenities) at Brundavan gardens in Mysore	iDeCK
13	Development of Modern Foot Over Bridges on PPP format for each City in Karnataka	KIPDC
14	Development of Multi-level Car Parking Plazas in major Cities of Karnataka, viz: Bangalore, Belgaum, Hubli-Dharwad & Mangalore	KIPDC

2/1/2010

Project Prefeasibility

SL. No.	Name of the Projects	Consultant
15	Water Supply, Sanitation & Solid waste Management as a single package for each city for Top 10 CMCs in Karnataka	KIPDC
16	Development of Agri-market and Logistics Hubs across the state	iDeCK
17	Development of urban entertainment centers in Major Cities of Karnataka	iDeCK
18	Development of Lake Conservation Projects	iDeCK
19	Improvement of Industrial Training Institutes through PPP	KESOL
20	Development of Education Infrastructure across the state	iDeCK
21	Development of Health Infrastructure across the state	iDeCK
22	Rejuvenation of Urban Zones (Peta Area)	iDeCK
23	Eco-tourism feasibility at different places in Karnataka	iDeCK
24	River Development: Mangala Corniche	KIPDC
25	Belgaum Ring Road Project	KESOL
26	Marine Sea Food Logistics	KESOL
27	Warehousing Logistics Across Karnataka	KESOL

2/1/2010

Project Feasibility

SL. No.	Name of the Projects	Consultant
1	HSRL	iDMRC
2	DBP	KIPDC
3	Development of Tadri port	iDeck
4	Airports	iDeCK
5	Logistics Park at Bangalore	KIPDC
6	Food Parks	iDeck
7	Roads	KRDCL, iDeck

2/1/2010

NAMASKARAGALU





THANK YOU

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Sustainable Infrastructure

Sustainability in infrastructure services –

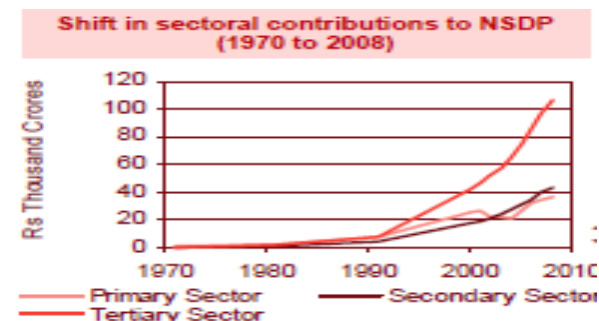
going beyond the “do-no-harm” objectives

Through Triple Bottom line:

- traditional economic and financial,
- environmental sustainability and
- social inclusion

Economic & Social Background

- Sectoral shift - tertiary sector overtaking the primary sector of economy around Yr 1990
- primary focus for development - balanced growth ensuring better sectoral output employment ratio



Source: Directorate of Economics and Statistics, Govt.

- Vision 2020 - Movement of two indicators under different plan periods with the interventions planned for balanced growth

Indicator	GSDP growth rate	Ratio of Output per Worker (Service to Agriculture)
<u>Business As Usual</u>		
2007-12 (11 th Plan)	8.1%	8.8
2012-17 (12 th Plan)	8.5%	12.0
2017-22 (13 th Plan)	8.9%	16.2
<u>Employment Alignment- I</u>		
2007-12 (11 th Plan)	8.1%	7.9
2012-17 (12 th Plan)	8.9%	8.4
2017-22 (13 th Plan)	9.1%	8.2
<u>Employment Alignment- II</u>		
2007-12 (11 th Plan)	8.1%	7.1
2012-17 (12 th Plan)	8.9%	5.7
2017-22 (13 th Plan)	9.1%	4.9

[1] Business as usual: trends of the past 12 years of sectoral growth rates and sectoral shares of GSDP and employment to continue.

[2] Employment alignment – I: disparities do not rise; ratio of output per worker in services and agriculture remains stable; net annual movement of workers out of agriculture – 2,00,000; net annual movement of workers into industry and services – 1,40,000 and 4,60,000 respectively

[3] Employment alignment – II: disparities decline, ratio of output per worker in services and agriculture decline; net annual movement of workers out of agriculture – 3,20,000; net annual movement of workers into industry and services – 2,20,000 and 5,00,000 respectively

Karnataka at a Glance

- **General**

- **Area: 1,92,000 Sq Km**
- **Population: 52.85 Million**
- **Literacy: 66.60%**
- **Climate: Semi-tropical**

- **Economy**

- **Among the Top 5 Industrial States**
- **Highly Skilled technical Manpower**
- **One of the fastest Growing Markets**
- **Steady GDP growth rate**

Karnataka at a Glance

**Gross State Domestic Product
(GSDP)**

7 %

– Growth Rate (2007 – 08)

GSDP Contribution

– Agricultural Sector

19.13 %

**– Manufacturing, Construction &
Electricity Sector**

25.16 %

55.72%

– Tertiary Sector

**Index of Industrial Production for
Karnataka**

6.39 %

Mining

7.31 %

Manufacturing

3.89 %

GDP

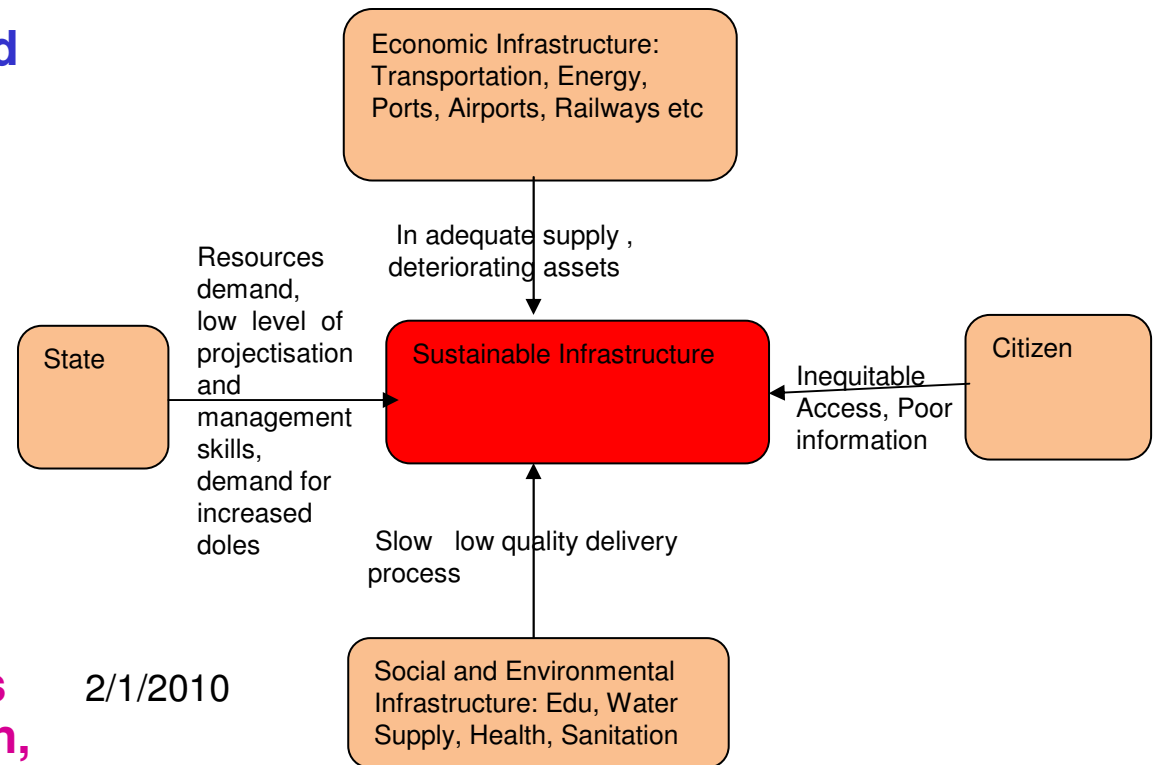
Rs. 2,15,282 cr

Per Capita GSDP

Rs. 40,576

Economic & Social Background

- The road to sustainable infrastructure is challenged



- **Need for Paradigm Shift**
 - to overcome the issues identified on population, economy and Income

Phase - II

Berths:-	Total - 8 nos. (2330 m long) 3 nos. (900m) for bulk cargo 2 nos. (650m) for containers 3 nos. (780m) for liquid
Draft:-	- 15 m
Capacity:-	45 MTPA
Completion Schedule:-	2015 - 2019

Phase - III

Phase – III:

Berths:-	5 berths (1415 m long) 2 nos. (545m) for General cargo 1 nos. (350m) for container 2 nos. (520m) for Liquid
Draft:-	– 15 m
Capacity:-	39 MTPA
Completion Schedule:-	2021 - 2025

Berth No:17 (LNG Terminal) : LNG berth of 5 MMTPA will cost apprx. 4000 Cr.
Additional if gas based power plant coming up

Traffic Projections & Cost

(Cargo in Mil MT – Cost in Rs. Crore)

Phase / Year Commodity	Phase 1 (2013-17)	Phase 2 (2018-22)	Phase 3 (2023-27)	Total (2013-27)
No. of Berths	3	8	5	16
Coal	12	12	16	40
Iron ore	15	15	-	30
General cargo	3	3	3	9
Container	-	12	18	30
Liquid Cargo	-	3	2	5
Total	30	45	39	114
Total Project Cost (Rs. Cr)	1550	2606	1521	5677

CTTP : SUMMARY OF INVESTMENTS & PHASING (Rs.Cr)

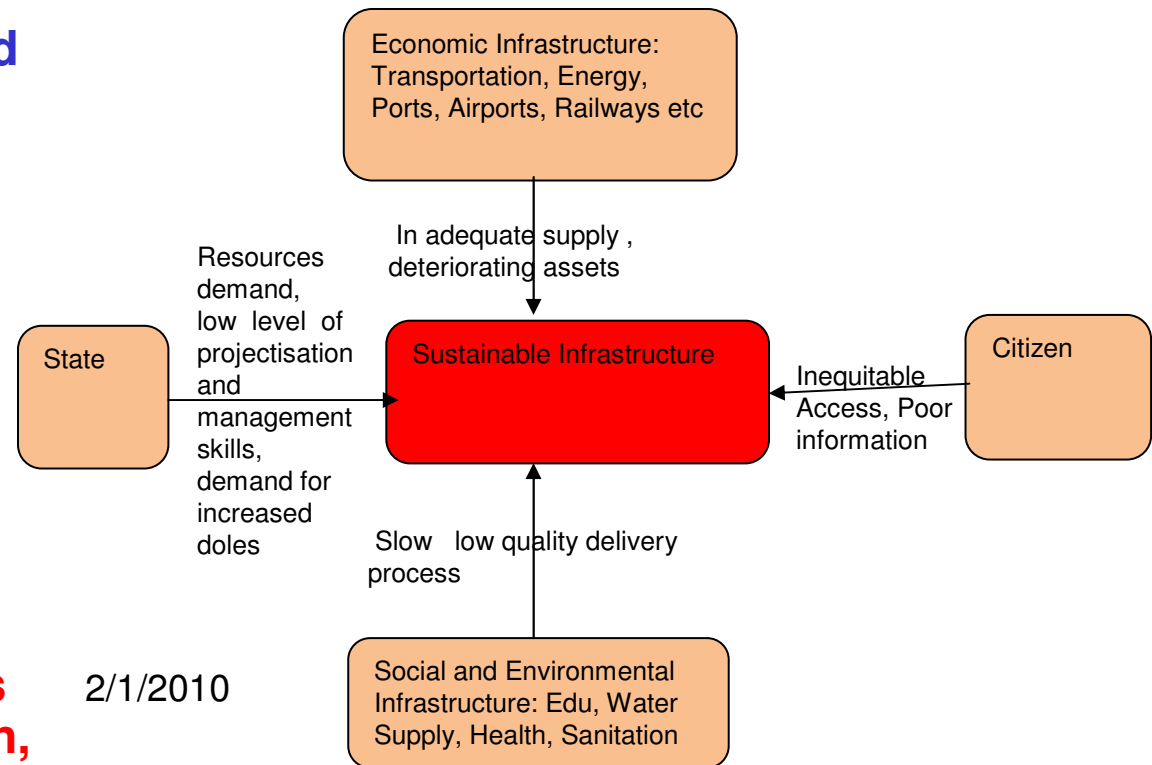
ITEM	Length kms/Nos	Total Cost (Rs. Cr.)	Phase-I 2007-12	Phase-II 2013- 18	Phase-III 2019- 24
Mass Transport Corridors					
Metro System	137	19921	11086	8835	
Mono Rail / LRT System	60	5100	3825	1275	
Commuter Rail System	204	3080	690	1620	750
BRT System	291.5	3498	1866	1832	
Improvement in City Bus System					
Improvement in City Bus System		5721	4401	660	660
Road Infrastructure					
New Roads	208.2	5192	5192		
Outer Ring Road Realignment	17	311	311		
Road Improvements (Inside ORR)	142	142	142		
Road Improvements (Outside ORR)	503	433	433		
Grade Separators	28	713	713		
Road Over Bridges / RUBs	18	432	432		

SUMMARY OF INVESTMENTS & PHASING (Contd.)

ITEM	Length kms/Nos	Total Cost (Rs. Cr.)	Phase-I 2007-12	Phase-II 2013- 18	Phase-III 2019- 24
Pedestrian Facilities					
Improvement & Augmentation of Foot Paths	350	70	70		
Sky Walks / SUB-WAYS	68	211	211		
Parking Facilities					
Parking Facilities	10000	380	380		
Integrated Freight Complexes (IFC)	6	270	135	135	
Transport System Management Measures (B-TRAC)					
TSM measures (B-TRAC)		500	500		
Grand Total (Rs. Crores)		46944	31377	14157	1410

Economic & Social Background

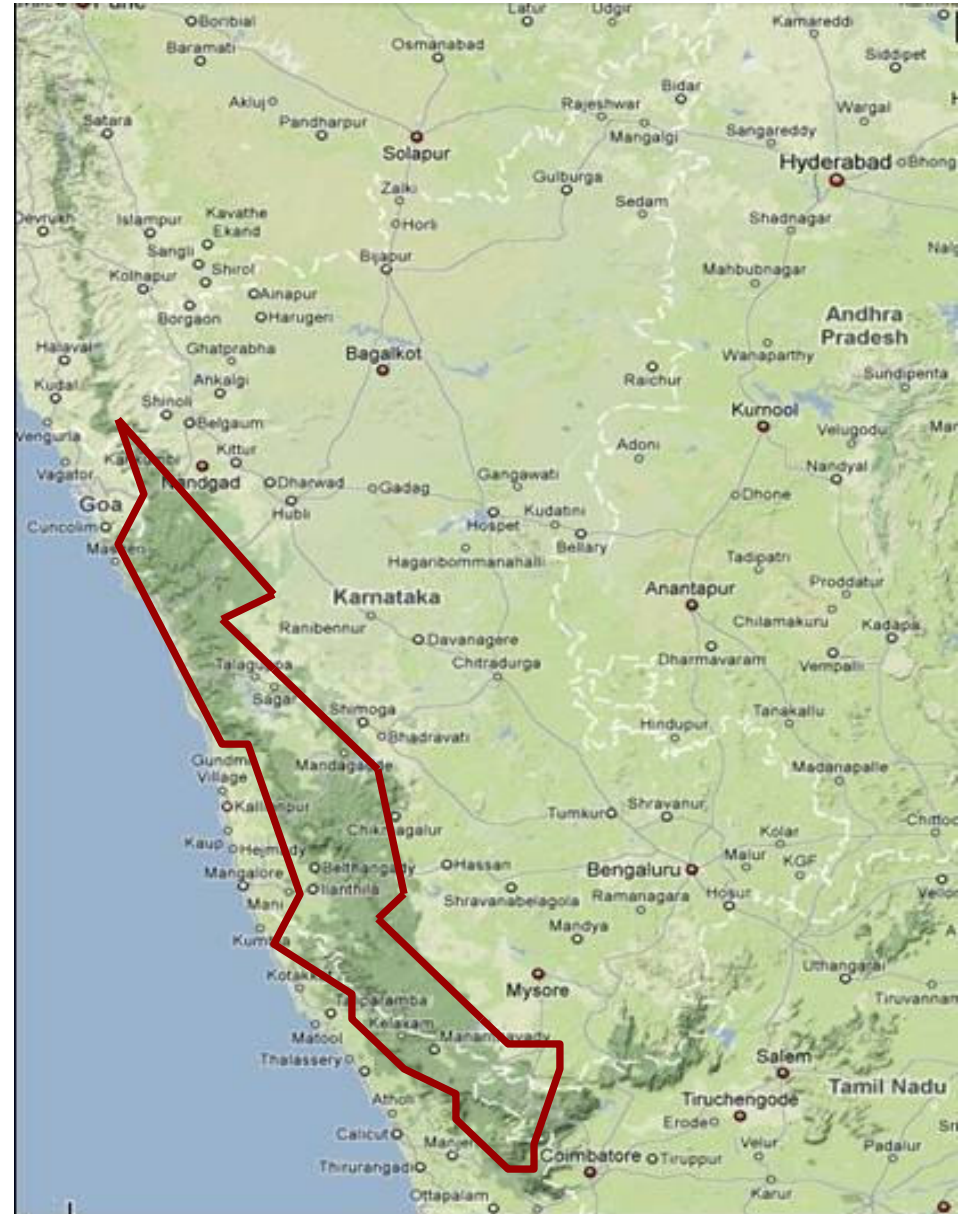
- The road to sustainable infrastructure is challenged



- **Need for Paradigm Shift**
 - to overcome the issues identified on population, economy and Income

Key Issues

- Land Acquisition
- Environmental Clearance-
Biological Hot Spot-
Economic well being of poor not an essential component of ecological balance!
- Limited Allocation
- Projects on *scheme- mode* than on *project – mode!*
- Potential of rare natural bounty- coast line –port connectivity to hinterland not prioritised



Summary of Ongoing Projects

Particulars	Details			Remarks
	No	Kms	Cost (Rs. cr.)	
A. Under Implementation				
New lines	10	1436.4	7721.8	3 projects are cost sharing by GoK of 361 km of anticipated Rs. 7721.8 cr. is GoK Share. Till date 234.57 cr. Released
Gauge Conversion	2	476.0	847.0	2 projects are cost sharing by GoK of 381 km of Rs.112.5 cr. is GoK Share. Till date 207.36 cr. Released. This also includes the funds released for Gadag- Sholapur line.
Doubling	8	249.8	1219.8	1 project is cost sharing by GoK of km 99 of Rs. 202.90 cr. is GoK Share. Till date 112.8 cr. Released for Bangalore-Mysore project.
Sub Total	20	2162.2	9788.6	
B. Electrification	3	347.0	246.6	1 project is cost sharing by GoK of km 99 of Rs. 202.90 cr. is GoK Share. Till date 112.8 cr. Released for Bangalore-Mysore project including electrification.
C. Surveys				
Completed	11	1335.0	6675.0	With Rly. Board for consideration
Under Progress	15	1386.0	6930.0	Survey under different stages
Sub Total	26	2721.0	13605.0	
Total (A+B+C)	49	5230.2	23640.2	

Ongoing Projects in Karnataka – Cost Sharing

Sl.No.	Projects	Kms.	Sanctioned		Revised Cost	Sharing		Expenditure	Target Date of Commissioning	Land	Remarks
			Year	Cost Rs. In crore		GoK	GoI				
New Line											
1	Munirabad – Raichur-Mehaboobnagar	246	2007-08	497.47	497.47	½	½	30	NA	LAQ under process	GoK released till date Rs.10.00 Cr to SWR, Rs.5 Cr to SCR.
2	Bidar-Gulbarga	106	2002/03	369.7	360.7	½	½	130	NA	LAQ under process	GoK released till date Rs.65.00 Cr.
3	Kottur-Harihar	65	1995-06	124.13	281.2	1/3	2/3	130.28	Dec.2009	LAQ under process	GoK released till date Rs.154.57 Cr. and Rs.15.00 Cr under process of release.
Gauge Conversion											
1	Solapur – Gadag	284	1995	417.07	495	½	½	317.9	Commissioned	completed	GoK released till date Rs.157.36 Cr and Rs.6.50 Cr under process of release.
2	Shimoga–Talaguppa	97	1992	158.95	225	½	½	82.98	30/6/2008	No issue	GoK released till date Rs.76.50 Cr and Rs.10.00 Cr under process of release.
Doubling											
1	Bangalore Ramanagar –Mysore – Kengeri	135	2001 2007	429.93	553	2/3	1/3	173.42	2012	LAQ under process	GoK released till date Rs.115.61 Cr. TDC for Ramanagara shettihalli 28/2/09
Total		933		1997.25	2412.27			864.58			

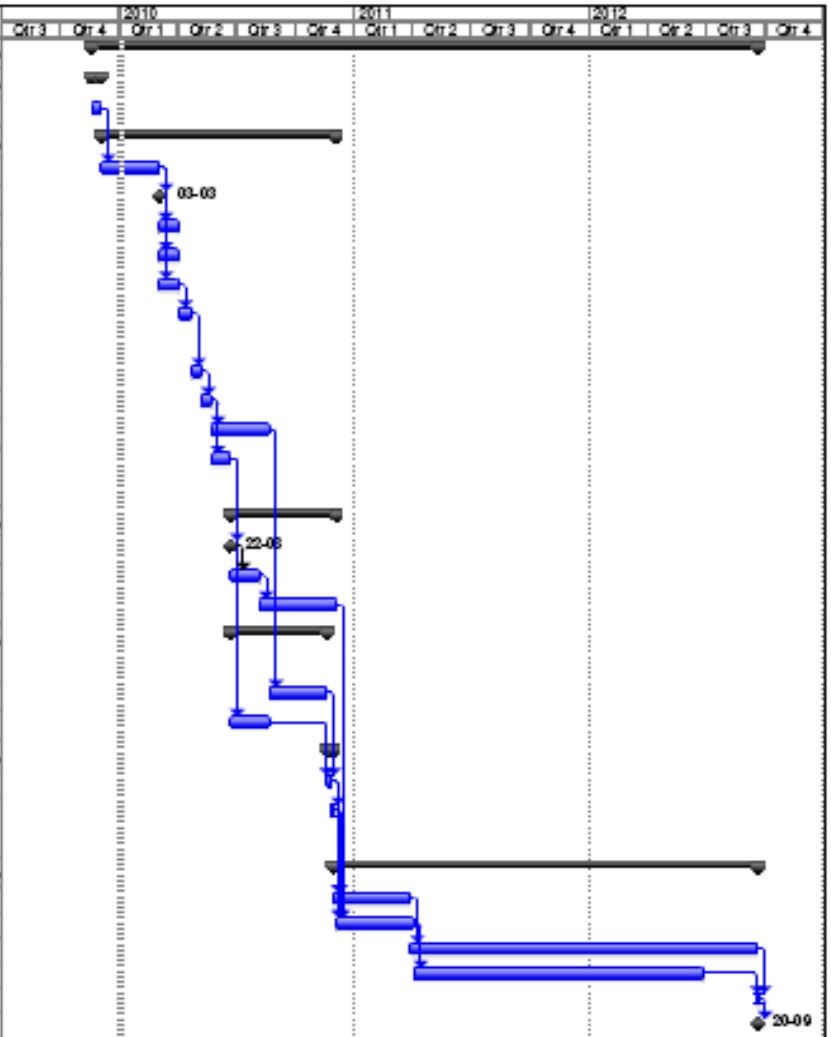
Ongoing Projects in Karnataka – Non Cost Sharing

Sl.No. 1	Projects 2	Kms 3	Sanctioned		Revised Cost 5	Expenditure 6	Date of Commissioning 7	Land 8	Remarks 9
			Year 4a	Cost 4b					
New Line									
1.	Kadur-Chikkamagalur-Sakaleshpur	93	1996-97	69.15	450	68.59	NA	LAQ under process	Kadur to chikkamagalur work is in the final stage of completion.
2.	Bangalore - sathyamangala	260	1996-97	1300.00	1300.00	0.29	NA	Forest Clearance is pending	Hon'ble supreme court stayed survey work in pre text of elephant corridor
3.	Hubli- Ankola	167	1997-98	887.31	NA	94.45	NA	Forest Clearance is pending	Before central empowered committee
4.	Cudappa Bangalore	255.4	2007-08	1000	1000	NA	NA	LAQ required	Survey work in progress by SCR/ cost sharing by AP.govt
5.	Rayadurga Tumkur	213	2007-08	1000	NA	NIL	NIL	LAQ required	Budget sanctioned Rs. 15 Crs.
6.	Gadwal Raichur	22	2006-07	65	65	NA	NA	no issue with land	Final stage of completion by SCR.
7.	Hassn Bangalore	166	1997	412.91	412.91	288.21	NA	LAQ under process	LAQ pending with DCs of Hassan, Ramanagaram, Mandya, Tumkur

Sl.No .1	Projects 2	Kms 3	Sanctioned		Revised Cost 5	Expendit ure 7	Date of Commissing 8	Land 9	Remarks 10
			Year 4a	Cost 4b					
1.	Kolar Chikkabalapur	89.5	2006-07		98.83	52.38	2012	LAQ under process	DC/Chikkaballapur has to clear encroachment.
Doubling									
1.	Hubli- Hebsur	18.74	2006-07	56.99	56.99	21.23	28/2/09	No issue	Final stage of commissioning
2.	Arasikere- Birur	44.28	2007-08	98.21	98.21	2.82	28/2/09	LAQ under process	LAQ required.
3.	Dharwad- Kambargavi	26.15	2006-07	87.48	87.48	36.62	28/2/09	No issue	Final stage of commissioning. No LAQ issue.
4.	Kankanadi Panamburu	19.00	2004-05	147.8	147.8	NA	NA	No issue	Work done by southern Rly.No LAQ issue.
5.	Yelahanka Channasandra	12.90	2009-10	65.00	65.00	NA	NA	Railway has not requested	Work not yet started No LAQ issue
6.	Yeshwanthpur Yelahanka	12.00	2009-10	60.00	60.00	NA	NA	Railway has not requested	Work not yet started. No LAQ issue.
Total		1398.97		5348.68	3743.39	564.59			

RoB Schedule

ID	Task Name	Duration	Start	Finish	Progress % Complete
1	ROB No:	1037 days?	Thu 19-11-09	Thu 20-09-12	0%
2	Sanction	15 days	Thu 19-11-09	Thu 03-12-09	0%
3	Decision of agency	15 days	Thu 19-11-09	Thu 03-12-09	0%
4	GAD	366 days	Fri 04-12-09	Sat 04-12-10	0%
5	Agency	90 days	Fri 04-12-09	Wed 03-03-10	0%
6	Entrustment	0 days	Wed 03-03-10	Wed 03-03-10	0%
7	Topography	30 days	Thu 04-03-10	Fri 02-04-10	0%
8	Geotech	30 days	Thu 04-03-10	Fri 02-04-10	0%
9	Ply GAD	30 days	Thu 04-03-10	Fri 02-04-10	0%
10	Joint inspection by all	21 days	Sat 03-04-10	Fri 23-04-10	0%
11	Ply Approvals	15 days	Sat 24-04-10	Sat 08-05-10	0%
12	Final GAD	15 days	Sun 09-05-10	Sun 23-05-10	0%
13	Approvals Rlys	90 days	Mon 24-05-10	Sat 21-08-10	0%
14	Approval by Agencies	30 days	Mon 24-05-10	Tue 22-06-10	0%
15	LAQ	165 days	Tue 22-06-10	Sat 04-12-10	0%
16	Application	0 days	Tue 22-06-10	Tue 22-06-10	0%
17	Ply Notification	45 days	Wed 23-06-10	Fri 06-08-10	0%
18	Final	120 days	Sat 07-08-10	Sat 04-12-10	0%
19	Estimations/ Internal approvals	150 days	Wed 23-06-10	Fri 19-11-10	0%
20	Rlys	90 days	Sun 22-08-10	Fri 19-11-10	0%
21	Agencies	60 days	Wed 23-06-10	Sat 21-08-10	0%
22	Acceptance in IDD	10 days	Sat 20-11-10	Mon 29-11-10	0%
23	Sanction	7 days	Sat 20-11-10	Fri 26-11-10	0%
24	Money release to KRIDE	3 days	Sat 27-11-10	Mon 29-11-10	0%
25	Execution	661 days?	Tue 30-11-10	Thu 20-09-12	0%
26	Procurement- Rlys	120 days	Tue 30-11-10	Tue 29-03-11	0%
27	Procurement- Agencies	120 days	Sun 05-12-10	Sun 03-04-11	0%
28	Execution Rlys	540 days	Wed 30-03-11	Wed 19-09-12	0%
29	Agencies	450 days	Mon 04-04-11	Tue 26-06-12	0%
30	Commissioning	1 day?	Thu 20-09-12	Thu 20-09-12	0%
31	EOP	0 days	Thu 20-09-12	Thu 20-09-12	0%



Project: ROB
Date: Sat 02-01-10

Task Progress Summary External Task Deadline
Split Milestone Project Summary External Milestone

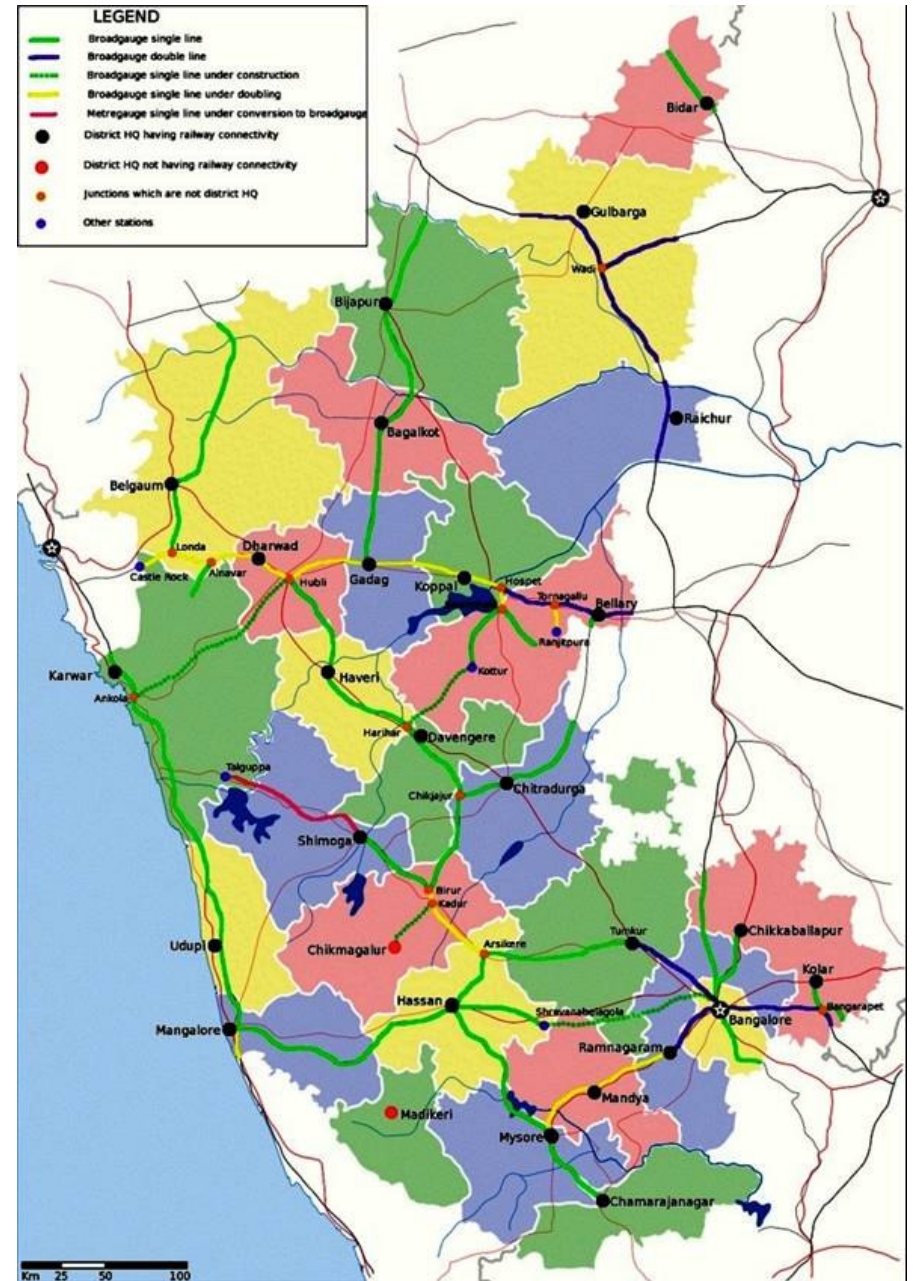
Railway projects in progress



NL: 10 cs: 3
GC: 3 cs: 2
DL: 8 cs: 1

The Need

- To provide impetus for development of:
 - Connectivity with ports & industrial zones
 - Connectivity to power plants
 - General development: commerce, industry, tourism
 - Movement of Labour Force



RAILWAY PROJECTS				
Particulars	Details			Remarks
	No	Kms	Cost (Rs. cr.)	
A. Under Implementation				
New lines	10	1436.4	7721.8	3 projects are cost sharing by GoK of 361 km of anticipated Rs. 7721.8 cr. is GoK Share. Till date 234.57 cr. Released
Gauge Conversion	2	476.0	847.0	2 projects are cost sharing by GoK of 381 km of Rs.112.5 cr. is GoK Share. Till date 207.36 cr. Released. This also includes the funds released for Gadag- Sholapur line.
Doubling	8	249.8	1219.8	1 project is cost sharing by GoK of km 99 of Rs. 202.90 cr. is GoK Share. Till date 112.8 cr. Released for Bangalore-Mysore project.
Sub Total	20	2162.2	9788.6	
B. Electrification	3	347.0	246.6	1 project is cost sharing by GoK of km 99 of Rs. 202.90 cr. is GoK Share. Till date 112.8 cr. Released for Bangalore-Mysore project including electrification.
C. Surveys				
Completed	11	1335.0	6675.0	With Rly. Board for consideration
Under Progress	15	1386.0	6930.0	Survey under different stages
Sub Total	26	2721.0	13605.0	
Total (A+B+C)	49	5230.2	23640.2	

Construction of New Lines



Kurchi-Bagalkot (111 Km)

Bidar – Gulbarga (106 Km)

Hubli-Ankola (167 km) – Temporarily stopped for want of forest clearance.

Kottur-Harihar (67 km) - In progress

Kadur - Chikmagalur – Sakleshpur (93 km) – In progress

Rayadurga - Tumkur (212 kms) - In progress

Hassan-Bangalore(via Shraavanabelagula (166 km)-Hassan-Shraavanabelagula commissioned & Chikbanawar-Nilamangala ready

Bangalore- Sathyamagalam Via Kanakapura (260km) – In progress

Munirabad to Raichur (190km) – In progress

Projects taken up for Gauge Conversion



Shimoga-Talaguppa(97 km) - In progress.

Kolar – Chikballapur (87 km) - In progress

Projects on Doubling of Existing Lines



Dharwad - Kambarganvi (26.68 km) - In progress

Hubli - Hebsur (17.17 km) - In progress

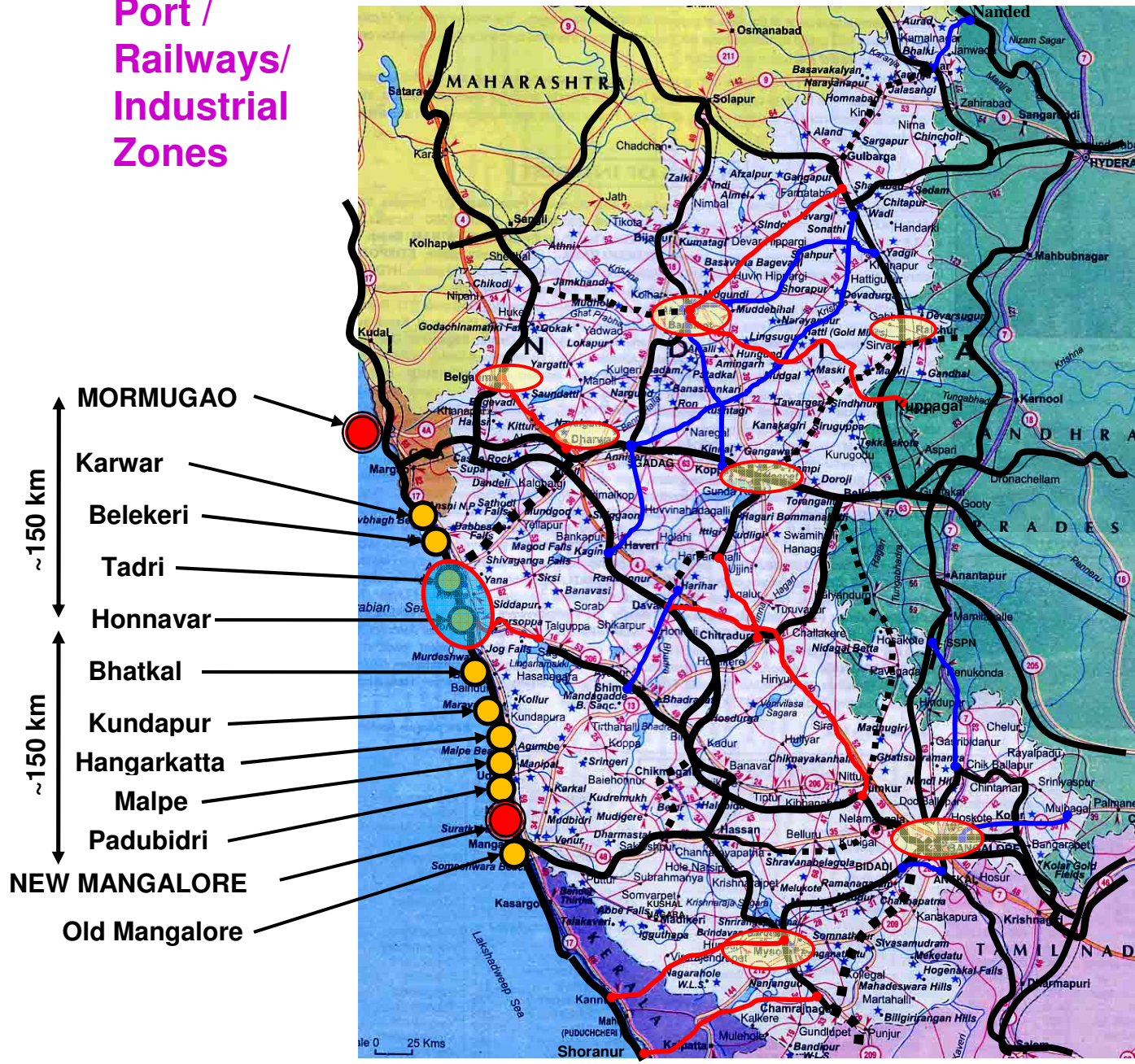
Hospet-Toranagallu (32 km) - Completed & commissioned.

Arsikere - Birur (44.28 km) - In progress.








Yeswantpur-Tumkur (62.92 km) - Yeswantpur-Gollahalli(20 km), Gollahalli-Nidvanda (20 km) completed. Nidavanda - Tumkur (22 km) in progress.

Bangalore - Mysore (135.00 km) - Bangalore-Kengeri(13 km), Kengeri-Bidadi(17.6km) - completed. Bidadi - Ramanagaram(14km) - completed. Ramanagaram-Shettihalli-in progress.

Port / Railways/ Industrial Zones



Key

-  Major Port
-  Non-Major Port
-  Existing Railway
-  Survey Progress
-  Surveys 2009-10
-  Railway work in progress
-  Industrial Zones

Existing Railway Network



Summary of key works completed(2002-09)

No.	Particulars	Length (Km)	Year
New Lines (A)			
1	Hassan-Shravanabelagola	46	2005-06
2.	Chikbanavar – Nelamangala (Bangalore)	14	2007-08
	Total (A)	60	
Gauge Conversions (B)			
1.	Baiyappanahalli – Yesvantpur	20	2002-03
2.	Kankanadi-Kabakaputtur	44	2003-04
3.	Kabakaputtur-Subramanya Road	42	2005-06
4.	Sakaleshpur-Subramanya Road	55	2006-07
5.	Bijapur- Bagalkot	97	2006-07
	Total (B)	258	

Priority Projects

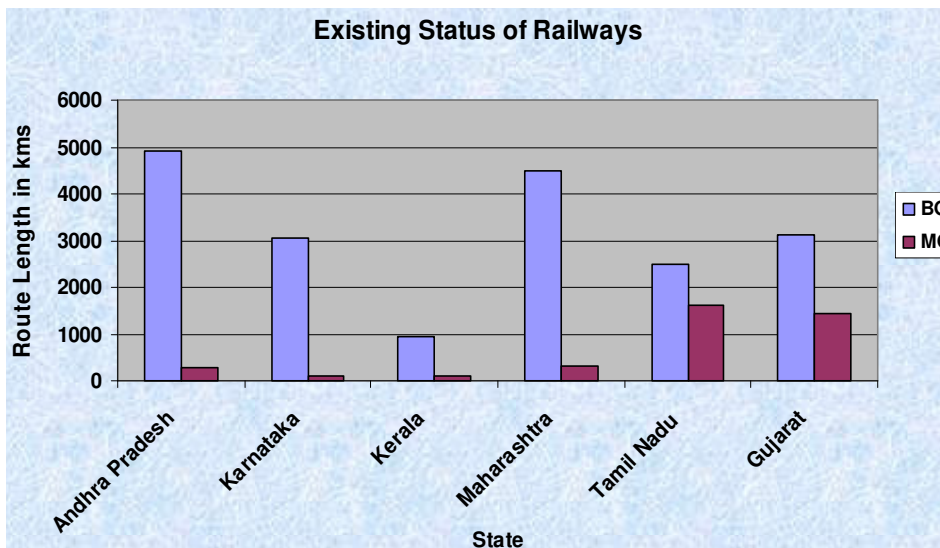
N o.	Name of the Project	Cost (Rs.crores)	Total Kms	Remarks	Purpose	Recommendations
1	Hubli-Ankola	1000	167	Held up on account of CEC on environmental issues.	Port Connectivity.	K-RIDE
2	Bijapur - Shahbad	840	140	The proposal has been sent to MoR from GoK. Response is awaited.	Development of Cement Industrial Zone	K-RIDE
3	Shimoga- Harihara	504	84	Proposal has been sent to MoR through letter No:CM/460/Gol/2009 dated 26/8/2009	Port connectivity and Industrial Development	K-RIDE
4	Gadag - Haveri	350	84	Survey is under progress.	Port connectivity and Industrial Development	K-RIDE
5	Whitefield- Kolar- Mulbagal	350	52	Survey Completed	Industrial Zones (for movement of Labor force)	K-RIDE
6	Kuduchi - Bagalkot	816	142	Surveys completed and report submitted to Railway Board. It is with planning Commission for approval.	Development of Cement Industrial Zone and port connectivity	RAILWAYS
7	Tumkur - Davanagere	913	210	Surveys completed and report submitted to Railway Board.	To reduce traveling time between North and South Karnataka.	RAILWAYS

Priority Projects

No.	Name of the Project	Cost (Rs.crores)	Total Kms	Remarks	Purpose	Recommendations
8	Alamatti - Koppal	600	150	Tender for Survey called on 14-10-09.	Connectivity of Cement and Iron ore Industries to port towards the eastern coast.	RAILWAYS
9	Londa – Goa (Doubling)	436.4	109	24.4 Km lies in Karnataka. Rs.120 cr is for this stretch. Forest clearance is required. RVNL proposes to do the doubling work between Hospet to Goa (Vasco). This proposal is submitted to the Planning Commission for clearance.	Connectivity for port, cement zone and power projects	RAILWAYS / K-RIDE
TOTAL		5809	1138			

Comparison with other States

State/Gauge-wise Total Length of Railways Lines in Indian Railways					
States	Area (Sq km)	Route length in Kilometers			
		BG	MG	NG	Total
Andhra Pradesh	2,75,045	4904	268	0	5172
Gujarat	1,96,024	3119	1422	787	5328
Karnataka	1,91,791	3069	97	84	3250
Kerala	38,863	933	117	0	1050
Maharashtra	3,07713	4489	313	733	5535
Tamil Nadu	1,30,058	2507	1624	0	4131



- ▶ Karnataka and Gujarat are comparable in term of area
- ▶ Karnataka has just 56% of route length present in Gujarat.