



**WELCOME**

## **Sustainable Infrastructure**

**Infrastructure Development Department  
Govt. of Karnataka**

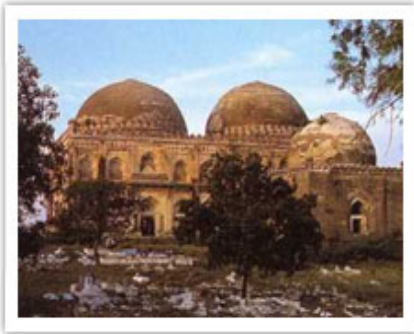
# Infrastructure investment- Now & Future

- Presently 4.5% of GSDP
- Target 8-9 % of GSDP
- India Competitive Index- 25
  
- Huge deficit in Tax- GDP ratio 22 %(35 %)
  
- Investment requirements: Rs 92462 cr  
( 11<sup>th</sup> plan)
- Present Investment : Rs 11000 cr
  
- Required Annual Investment : Rs20,- 25,000 cr

5/17/2010

Infrastructure Polic



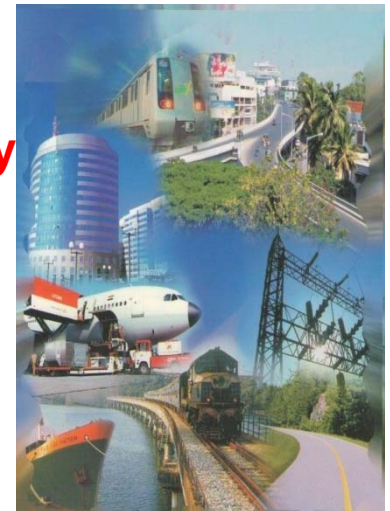


## a few Infrastructure Indices

| No | Sector  | Index           | Target Index                                     | Invest ( Rs Cr)     |
|----|---|-----------------|--|---------------------|
| 1  | Railways<br>( railkm/ 1000sq km)                | 16              | 41   | 23300<br>(by 2020)  |
| 2  | Roads<br>(km/ Sqkm)                             | 1.07            | 1.50   | 125000<br>(by 2020) |
| 3  | Energy<br>(units per capita-annum)              | 700<br>(7800MW) | 1400<br>(18500MW)                                | 85000<br>(by 2020)  |
| 4  | Airports<br>Districts(No)                       | 11              | 30   | 1500<br>(by 2012)   |
| 5  | Rapid Mass<br>Transportation<br>(km)- Bangalore | 0               | 693km<br>(Metro-<br>103+HSRL-<br>34+Mono-<br>60) | 27000<br>( by 2017) |

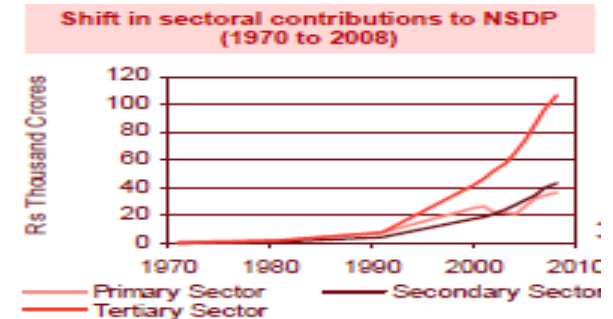
# Objective

- Vision 2020
- infrastructure development to be sustainable
- **Infrastructure Policy**
  - **PPP route - the preferred route for infrastructure Delivery**
- **Triple –bottom Concept**
  - **Viability**
  - **emphasis also on environment**
  - **and social inclusiveness**



# Economic & Social Background

- Sectoral shift - tertiary sector overtaking the primary sector of economy around Yr 1990



Source: Directorate of Economics and Statistics, Govt

- Vision 2020 -

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

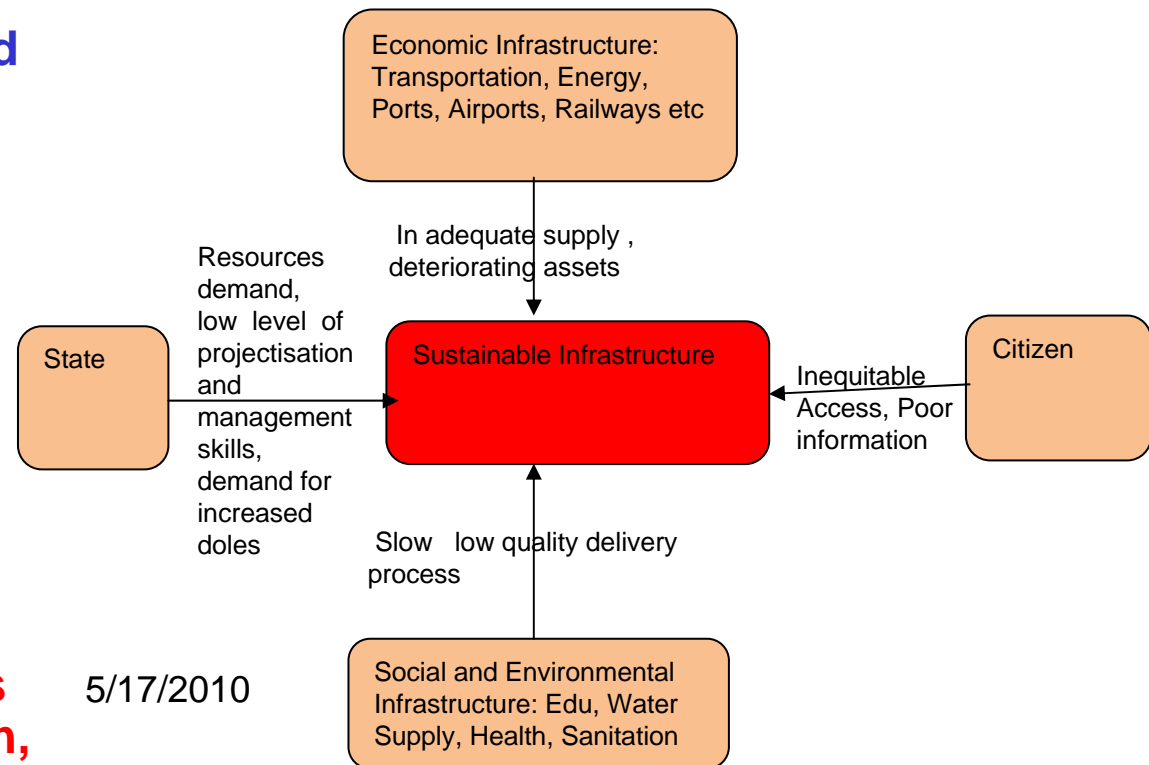
[1] Business as usual: trends of the past 12 years of sectoral growth rates and sectoral shares of GSDP and employment to continue.

[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

# Economic & Social Background

- The road to sustainable infrastructure is challenged



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

# Sustainable Infrastructure Action Plan

- Projects for Sustainable Funding: Costs, %age assistance sought, Phasing, Phase-wise fund requirement

| SI No  | Sector   | Projects |               |              |            | Assistance as %age of Projects Cost | Phases <sup>[1]</sup> | Sustainable Fund Requirement in Phases (USD Mn) |          |           |
|--|--|----------|---------------|--------------|------------|-------------------------------------|-----------------------|---|----------|-----------|
|  |  | No       | Cost          | Remarks      | I, II, III |                                     |                       | Phase I   | Phase II | Phase III |
|  |  |          | (USD million) | (PPP/ Other) |            |                                     |                       |   |          |           |
| 1  | 2  | 3(a)     | 3(b)          | 4            | 5          | 6                                   | 7                     | 8   | 9        |           |
| PPP projects in sectors needing sustainability funding |  |          |               |              |            |                                     |                       |   |          |           |
| 1  | Agri-Infrastructure  | 5        | 185.08        | PPP          | 20%        | Phase I                             | 37.02                 |   |          |           |
| 2  | Energy   | 4        | 10416.67      | PPP          | 20%        | I (50%)<br>II (50%)                 | 1041.67               | 1041.67   |          |           |
| 3  | Industrial Infrastructure  | 11       | 3233.75       | PPP          | 10%        | I                                   | 323.38                |   |          |           |
| 4  | Transportation & Logistics((a)CTTP Bangalore annexure-II, (b) 10000 KM road network in 51 packages annexure-VII) | 67       | 14992.71      | PPP/ Other   | 20%        | II (50%)<br>III (50%)               |                       | 1499.27   | 1499.27  |           |

<sup>[1]</sup> The shelf of projects is of an enormous size. The same has to be taken up in phases as per priority. Phase I: Started and Completed in 11th Plan (FY 2007-12) Phase II: Started in 11th Plan (before FY 12) and Completed in 12th Plan (Yr 2012-17), Phase III: Started and Completed in 12th Plan (FY 2012-17). 7

# Sustainable Infrastructure Action Plan

- **Projects for Sustainable Funding: Costs, %age assistance sought, Phasing, Phase-wise fund requirement**

|  |   |    |         |               |        |    |       |        |  |
|--|---|----|---------|---------------|--------|----|-------|--------|--|
| 5  | Tourism   | 5  | 32.60   | PPP           | 10%    | I  | 3.26  |        |  |
| 6  | Urban & Municipal Infrastructure                                      | 12 | 104.47  | PPP           | 10%    | I  | 10.45 |        |  |
| <b>Individual Infrastructure projects needing sustainability funding</b> |   |    |         |               |        |    |       |        |  |
| 7  | Karnataka Rural Water Supply and Sanitation project (Annexure I)      | 1  | 312.50  | Other         | 33.33% | II |       | 104.16 |  |
| 8  | Water Projects for Drinking and Irrigation (Annexure III)             | 1  | 1229.17 | Other         | 33.33% | II |       | 409.68 |  |
| 9  | Connectivity plan between cities and Growth Zones- Rail (Annexure IV) | 48 | 4533.33 | PPP/<br>Other | 20%    | II |       | 906.67 |  |
| 10   | Connectivity plan between cities and Growth Zones-Road (Annexure V)   | 1  | 811.13  | PPP           | 10%    | II |       | 81.11  |  |



# Sustainable Infrastructure Action Plan

- Projects for Sustainable Funding: Costs, %age assistance sought, Phasing, Phase-wise fund requirement

|       |   |     |          |            |      |    |                  |         |         |
|-------|---|-----|----------|------------|------|----|------------------|---------|---------|
| 11    | <a href="#">Comprehensive Development Plan of Rural Roads in Karnataka (Annexure VI)</a> <sup>[1]</sup> | 1   | 1628.75  | Other/ PPP | 100% | II |                  | 1628.75 |         |
| TOTAL |   | 156 | 37480.15 |            |      |    | 1415.76          | 5671.30 | 1499.27 |
|       |   |     |          |            |      |    | Total Assistance | 8586.34 |         |

<sup>[1]</sup> Comprehensive Development Plan of Rural Roads requires a total funding of USD 11,000 Mn. GoK has been able to carry forward many of the projects with assistance. There are projects worth USD 1628.75 Mn which need to be funded.

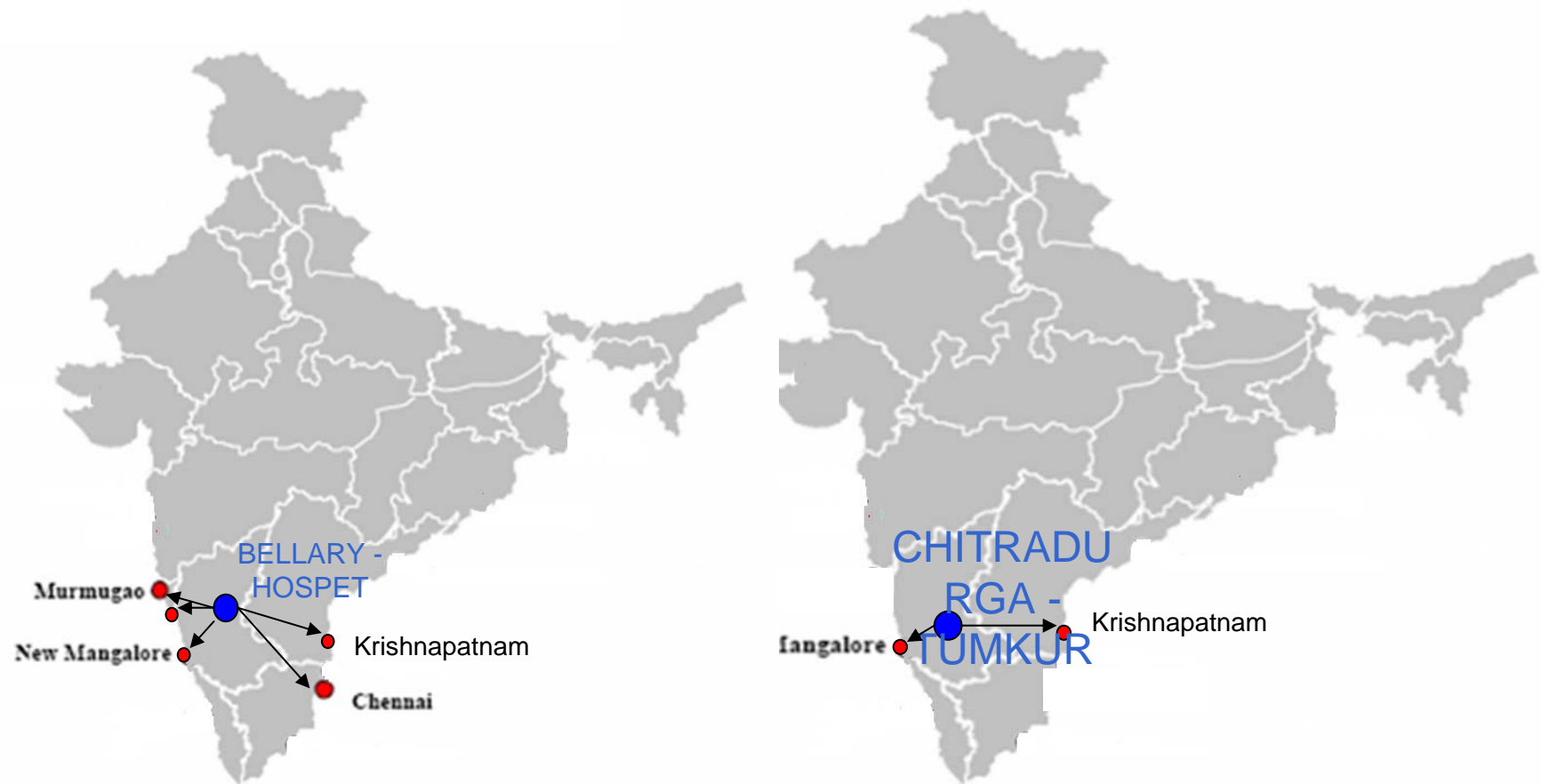
# Focus Area

- Logistics
  - Railways
  - Airports
  - Ports
  - Roads
  - Urban transportation
- Energy
- Industrial Infrastructure
- Tourism

## LOGISTICS – INDIAN SCENARIO

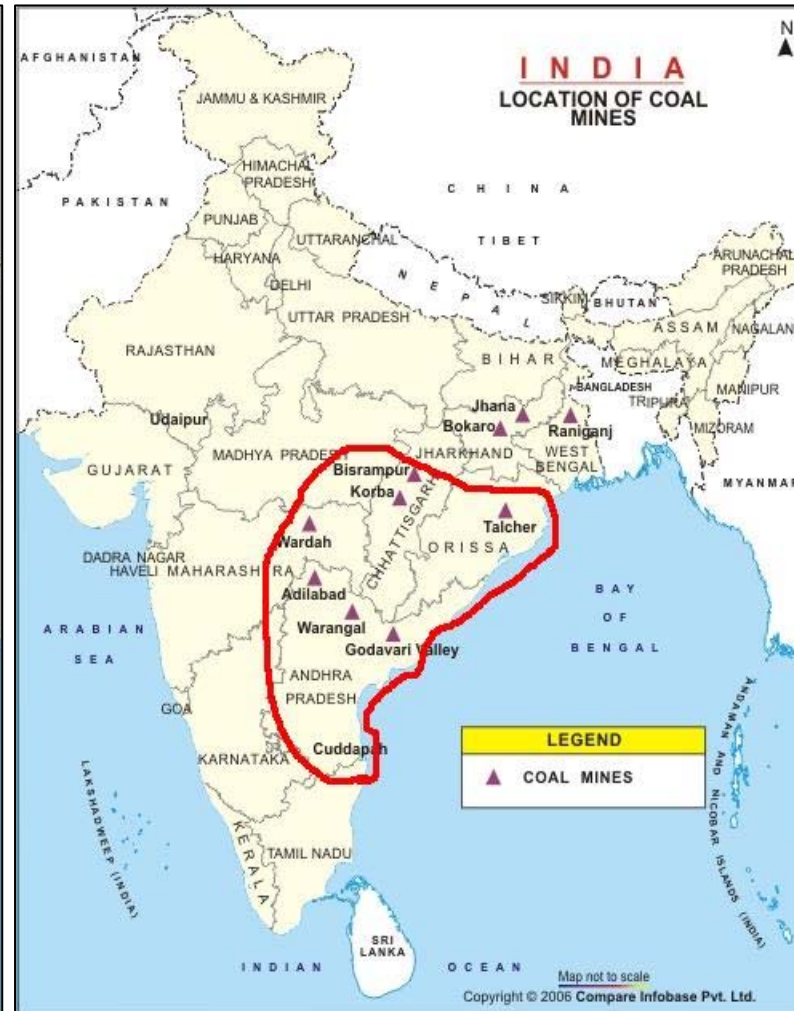
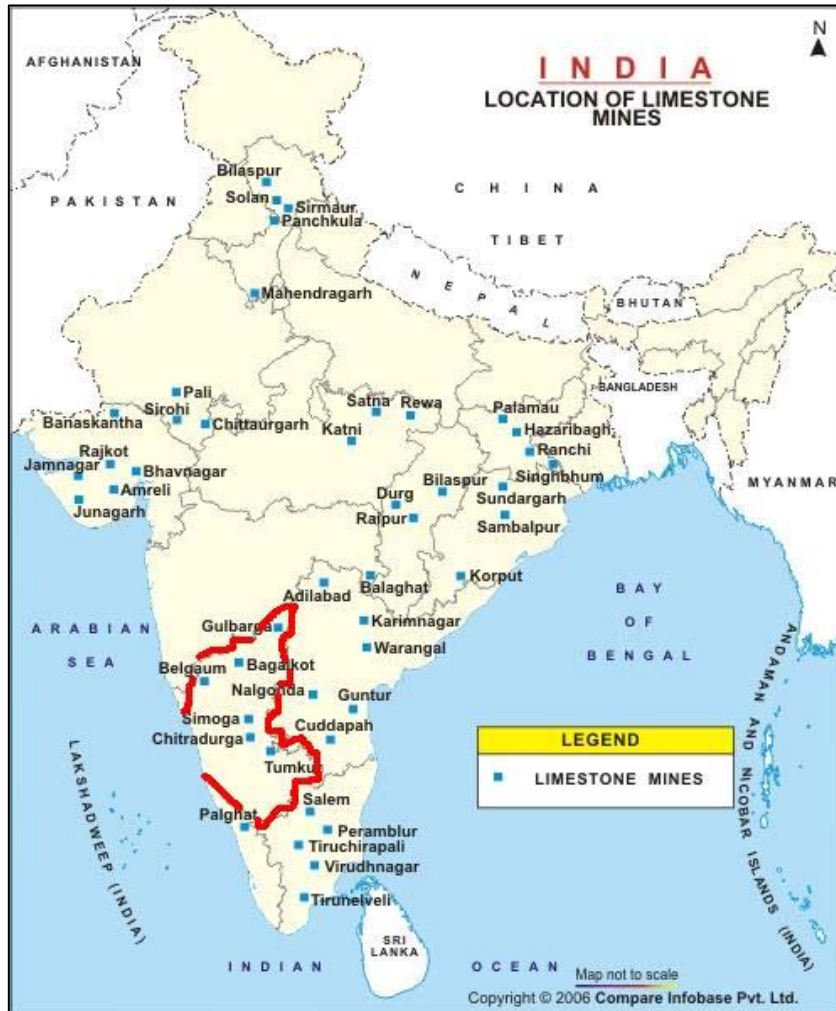
- **Logistics costs (i.e. inventory holding, transportation, warehousing, packaging, losses and related administration costs) have been estimated at 15 -20% of India's GDP, which is**
  - **Higher than 8% of USA's**
  - **Lower than 21% of China's GDP**
- **The transportation industry is fragmented and largely un-organized.**
- **Carries a large percent of the national load and almost all of the regional load.**

# Logistics



- Road and Rail are the major modes of Transport to the ports.

The main cement production region is North Karnataka due to easy availability of main raw materials like lime stone, coal



# PPP Projects

# Project Identification

| <b>Time</b>       | <b>No of Studies</b>     | <b>Projects</b>  |
|-------------------|--------------------------|--|
| <b>30/04/10</b>   | <b>32</b>                | <b>49</b>  |
| <b>31/ 07/ 10</b> | <b>26</b>                | <b>26</b>  |
| <b>30/ 09/10</b>  | <b>Dept Master Plans</b> | <b>100</b><br><br>* each studies has more than one project |

# Project Development

| Sl.No.       | Sector                             | Under Planning/Pipeline Annex- I |                 | Under Implementation - Annex- II |                | Completed Annex- III |                | Total     |                 |
|--------------|------------------------------------|----------------------------------|-----------------|----------------------------------|----------------|----------------------|----------------|-----------|-----------------|
|              |                                    | Nos                              | Cost (in Cr.)   | Nos                              | Cost (in Cr.)  | Nos                  | Cost (in Cr.)  | Nos       | Cost (in Cr.)   |
| 1            | Agri-Infrastructure                | 7                                | 173.73          | 0                                | 0.00           | 0                    | 0.00           | 7         | 173.73          |
| 2            | Education                          | 0                                | 0.00            | 0                                | 0.00           | 0                    | 0.00           | 0         | 0.00            |
| 3            | Energy                             | 4                                | 8400.00         | 0                                | 0.00           | 0                    | 0.00           | 4         | 8400.00         |
| 4            | Healthcare                         | 0                                | 0.00            | 0                                | 0.00           | 0                    | 0.00           | 0         | 0.00            |
| 5            | Industrial Infrastructure          | 10                               | 41231.00        | 0                                | 0.00           | 0                    | 0.00           | 10        | 41231.00        |
| 6            | Tourism                            | 7                                | 1192.00         | 0                                | 0.00           | 1                    | 32.00          | 8         | 1224.00         |
| 7            | Transport & Logistics              | 44                               | 32126.79        | 5                                | 1104.00        | 3                    | 3006.29        | 52        | 36237.08        |
| 8            | Urban and Municipal Infrastructure | 2                                | 144.32          | 0                                | 0.00           | 4                    | 108.64         | 6         | 252.96          |
| <b>Total</b> |                                    | <b>74</b>                        | <b>83267.84</b> | <b>5</b>                         | <b>1104.00</b> | <b>8</b>             | <b>3146.93</b> | <b>87</b> | <b>87518.77</b> |



## KEY PROJECTS

| SI No | Name of the Project                                  | Project cost (Rs Crore) | Relevance   | Status   |
|-------|--|-------------------------|---|--|
| 1     | Bellary Airport                                      | 140                     | Connectivity<br>Steel City- Fast growing region                   | The project developer under selection                      |
| 2     | High Speed Rail Link                                 | 5767                    | Connects City to Airport  | Request for Qualification (RFQ) completed. RFP under issue |
| 3     | Devanahally Business Park                            | 9500                    | Business Hub by the side of the fastest growing Airport-Bangalore | RFQ to be issued shortly                                   |
| 4     | Sea Port at Tadri (35 MT expandable to 114 MT)       | 3000                    | To serve the Cement, Steel & auto Region                          | RFQ issued; under procurement                              |
| 5     | Sea Port at Haldipur (19MT- Swiss Challenge Project) | 2000                    | To serve the Cement, Steel & auto Region                          | DPR Stage  |

# KEY PROJECTS

| SI No | Name of the Project                                  | Project cost (Rs Crore) | Relevance  | Status                     |
|-------|--|-------------------------|--|----------------------------|
| 6     | Convention Centre at Devanhally (Tourism)            | 1050                    | Will be the largest in South India                           | Request for Proposal (RFP) |
| 7     | Logistic Park  |                         | Transportation, storage and Logistics in Bangalore           | Feasibility report ready   |
| 8     | Monorail Project in Bangalore- Corridor- 31 Km       | 5600                    | To serve as feeder to Metro                                  | DPR under process          |
| 9     | Monorail Project in Bangalore (Swiss Challenge-15KM) | 2400                    | To serve as feeder to Metro                                  | DPR stage                  |
| 10    | Food Parks   | 200                     | Forward integration to large Fruit and Veg. producing entres | Procurement stage          |

# KEY PROJECTS

| SI No | Name of the Project                   | Project cost (Rs Crore)                 | Relevance   | Status                            |
|-------|---------------------------------------|---|---|-----------------------------------|
| 11    | VADA- Industrial Infrastructure       | 30345 Rlys, watersupply, telecom, Power | 500 Sq Km of Industrial Development outside Bangalore       | Feasibility done RFP being issued |
| 12    | Logistics Architecture in Karnataka   |   | To serve Karnataka's growing Industrial and Consumer Market | Feasibility Study under way       |
| 13    | Intermodal Terminal HUBs in Bangalore | 6 in Bangalore+ 1 in Mangalore          | To provide seamless interchange                             | Project study partly completed    |
| 14    | Mega Power Projects ( gas based)      | 2100 MW 12000                           | To meet the Karnataka's Power needs                         | Feasibility done                  |
| 15    | Gas Pipeline Project                  | 4500 by GAIL                            | From Dhabhol- Bangalore                                     | COD by Mar 2010                   |
| 16    | City Gas distribution                 | 12 towns/                               | Green Field Development                                     | Feasibility under                 |

# KEY PROJECTS

| SI No | Name of the Project           | Project cost (Rs Crore) | Relevance   | Status   |
|-------|-------------------------------|-------------------------|---|--|
| 17    | Railway projects (1100 KM)    | 7000                    | To improve connectivity to ports, Industrial Zones. | Railway is examining to take on 5 projects under PPP |
| 18    | Roads                         | 3500                    | 1600 km   | Procurement be by June 2010                          |
| 19    | SH-69 & NH 63 - Roadsto Ports | 1600                    | 1600  | SH- 69 DPR ready<br>NH 63- DPR by NHAI under ppn     |
| 20    | Bangalore Metro               | 8000- GOI & GOK         | 42 km   | Under implementation                                 |
| 21    | SH 132                        | 160                     | 28 Km   | Under Procurement                                    |

# RAILWAY NETWORK



5/17/2010

Infrastructure Policy 2007

21

# Railway projects in progress



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

|                                | <b>Railway Projects</b> |               |                           |   |
|--------------------------------|-------------------------|---------------|---------------------------|---|
| <b>Particulars</b>             | <b>Details</b>          |               |                           | <b>Remarks</b>  |
|                                | <b>No</b>               | <b>Kms</b>    | <b>Cost<br/>(Rs. cr.)</b> |   |
| <b>A. Under Implementation</b> |                         |               |                           |   |
| 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.                                      |
| <b>Sub Total</b>               | <b>20</b>               | <b>2162.2</b> | <b>9788.6</b>             |   |
| <b>B. Electrification</b>      | <b>3</b>                | <b>347.0</b>  | <b>246.6</b>              | 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.            |
| <b>C. Surveys</b>              |                         |               |                           |   |
| Completed                      | 11                      | 1335.0        | 6675.0                    | With Rly. Board for consideration   |
| Under Progress                 | 15                      | 1386.0        | 6930.0                    | Survey under different stages   |
| <b>Sub Total</b>               | <b>26</b>               | <b>2721.0</b> | <b>13605.0</b>            |   |
| <b>Total (A+B+C)</b>           | <b>49</b>               | <b>5230.2</b> | <b>23640.2</b>            |   |

# Priority Projects

(Rs. in crores)

| N o.   | Name of the Project               | Total Kms  | Remarks                      | Purpose   | GOK Share |
|--|-----------------------------------|------------|------------------------------|---|-----------|
| <b>New Cost Sharing( earlier non- cost sharing, now cost- sharing)</b> |                                   |            |                              |   |           |
| 1  | Hassan – Bangalore                | 166        | The project is on from 96-97 | Straight Connectivity from Mangalore                  | 267.44    |
| 2  | Kadur – Chickmagalur – Sakleshpur | 93         | The project is on from 96-97 | Mangalore- North Karnatak                             | 194.48    |
| 3  | Arsikere – Birur                  | 44         | 2007-08                      | Doubling- choked line                                 | 71.11     |
| 4  | Kolar- Chickballapur              | 90         | GC- NG to BG                 | Goods train from AP to Bangalore could be diverterted | 96.12     |
| <b>New Works</b>   |                                   | <b>430</b> |                              |   |           |
| 5  | Shimoga – Harihara                | 84         | Survey under progress        | Direct Link from Port to Hinterland                   | 277.20    |
| 6  | Whitefield – Kolar                | 52         | Survey done                  | For movement of Labour                                | 184.34    |
| 7  | Davangere – Tumkur                | 210        | Survey done                  | Straight movement from Hubli                          | 502.17    |
| 8  | Gadag – Haveri                    | 84         | Survey under progress        | For direct link from Bagalkote                        | 192.50    |



# Priority Projects

(Rs. in crores)

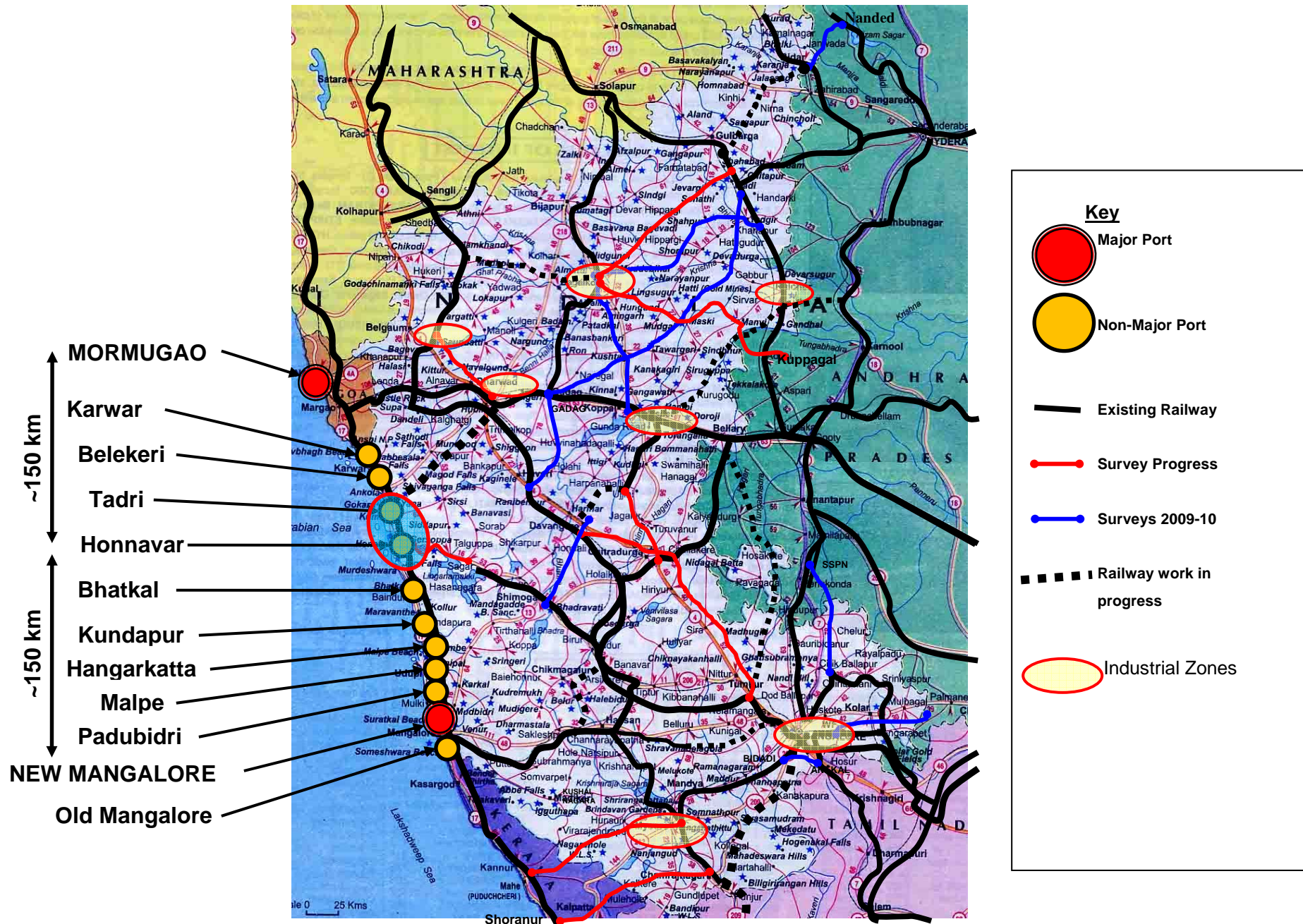
| N o.             | Name of the Project   | Total Kms | Remarks                            | Purpose                           | GOK Share |
|------------------|-----------------------|-----------|------------------------------------|-----------------------------------|-----------|
| <b>PPP Works</b> |                       |           |                                    |                                   |           |
| 9                | Hubli – Ankola        | 167       | DPR ready- partly , 40km, executed | Port Connectivity                 | 39.00     |
| 10               | Talaguppa Honnavara – | 83        | DPR Ready                          | Port Connectivity                 | 38.883    |
| 11               | Kudachi Bagalkot –    | 142       | DPR Ready                          | Connectivity to power Station     | 31.824    |
| 12               | Bijapur Shahabad –    | 140       | Survey done                        | Port Connectivity for Cement Zone | 32.76     |
| 13               | Dharwad Belgaum –     | 97        | Survey done                        | To straighten                     | 14.63     |
|                  | Sub Total             | 629       |                                    |                                   |           |
|                  | GT                    | 1452      |                                    |                                   |           |

# Priority Projects

(Rs. in crores)

| Sl.N<br>o. | Type  | Share of costs and its agencies |                |               |               |                |                |                |
|------------|---|---------------------------------|----------------|---------------|---------------|----------------|----------------|----------------|
|            |   | GoI                             |                | GoK           |               |                | Total          |                |
|            |   | Share Capital                   | Others         | Land          | Share Capital | Others         | GoI            | GoK            |
| 1          | Cost Sharing works – Jan 2010                                     |                                 | 504.46         |               |               | 587.36         | 504.46         | 587.36         |
| 2          | Cost Sharing of works (out of present non-sharing works underway) |                                 | 629.14         |               |               | 629.14         | 629.14         | 629.13         |
| 3          | New Cost Sharing  |                                 | 945.99         | 210.22        |               | 945.99         | 945.99         | 1156.20        |
| 4          | Priority works (PPP)  | 157.09                          |                |               | 157.09        |                | 157.09         | 157.09         |
|            | <b>Total</b>  | <b>157.09</b>                   | <b>2079.59</b> | <b>210.22</b> | <b>157.09</b> | <b>2162.49</b> | <b>2236.68</b> | <b>2529.78</b> |

# Port / Railways/ Industrial Zones



# Airport Projects

| <b>No.</b> | <b>Airports</b> | <b>Name of District served</b>  | <b>Mode</b> | <b>CoD</b>  |
|------------|-----------------|---|-------------|---|
| 1          | Bangalore       | Bangalore Urban,<br>Bangalore Rural, Kolar,<br>Tumkur,<br>Chikkaballapura,<br>Raichur, Mandya | PPP         | Commissioned  |
| 2          | Hassan          | Hassan  | PPP         | July 2012   |
| 3          | Shimoga         | Shimoga   | PPP         | Feb 2012  |
| 4          | Bidar           | Bidar   | PPP         | July 2012   |
| 5          | Bijapura        | Bijapura  | PPP         | Jan 2012  |
| 6          | Mangalore       | Mangalore   | AAI         | Expansion (Terminal Building to be commissioned on 15 <sup>th</sup> May 2010) |
| 7          | Mysore          | Mysore  | AAI         | AAI to commission Phase - I on May 15 <sup>th</sup> 2010.                     |
| 8          | Hubli           | Dharwad   | AAI         | Expansion date to be finalized  |
| 9          | Belgaum         | Belgaum   | AAI         | Gol & AAI to be decide date   |
| 10         | Bellary         | Bellary   | PPP         | June 2012   |
| 11         | Gulbarga        | Gulbaraga   | ppp         | Feb 2012.   |

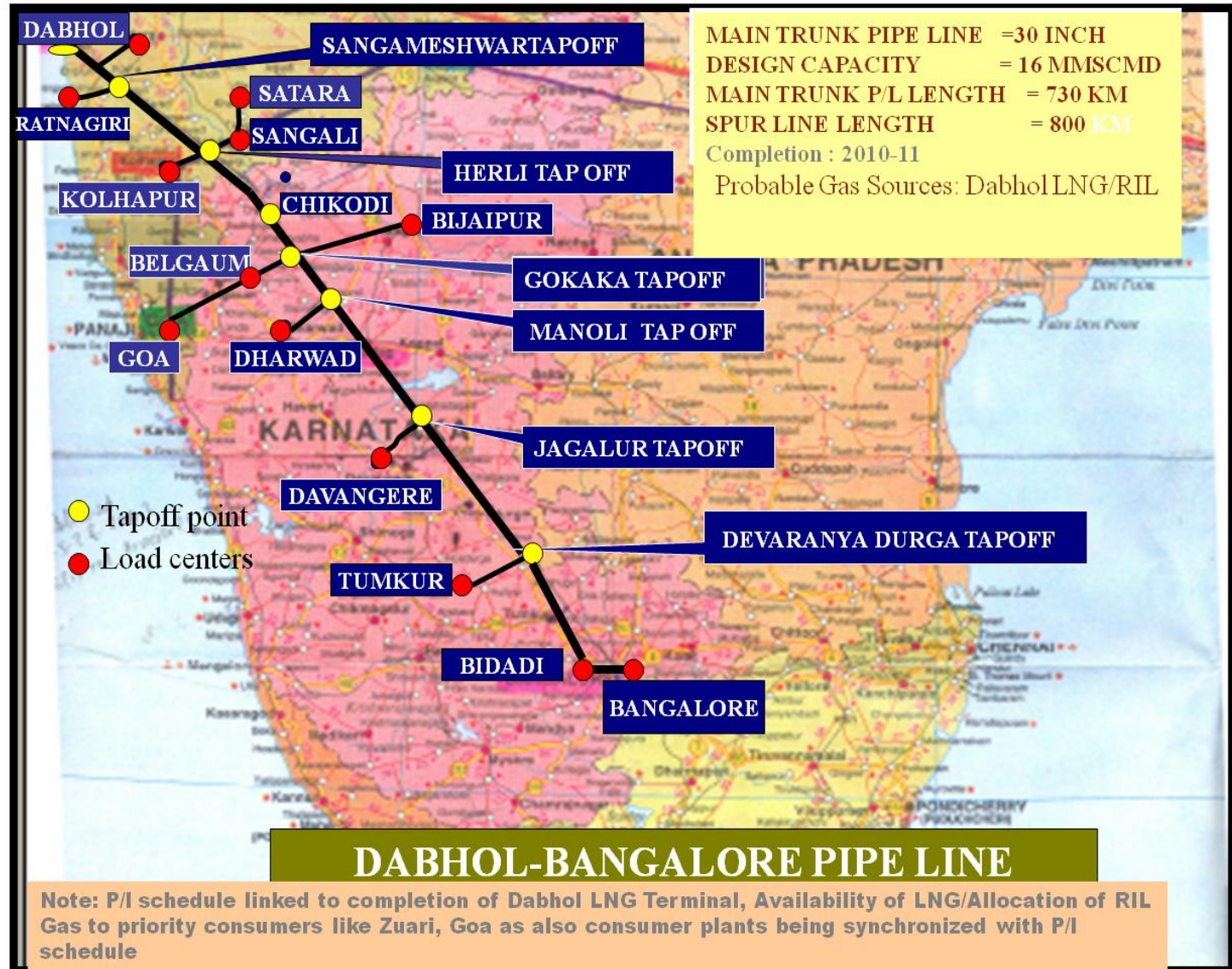
# Airstrips Projects

| <b>No.</b> | <b>Name of District</b> | <b>District served</b> |
|------------|-------------------------|------------------------|
| 1          | Davanagere              | Davagere               |
| 2          | Raichur                 | Raichur                |
| 3          | Chitradurga             | Chitradurga            |
| 4          | Udupi                   | Udupi                  |
| 5          | Kushalnagar             | Kodagu                 |
| 6          | Gokarna                 | Karwar                 |
| 7          | Bagalkot                | Bagalkot               |
| 8          | Haveri                  | Haveri                 |
| 9          | Kollegala               | Chamarajanagara        |
| 10         | Gadag                   | Gadag                  |
| 11         | Chikkamagalore          | Chikkamagalore         |

# Gas Pipeline

Dabhol to Bangalore-  
Cost Rs 4500Cr

GoK has plans to generate at least 2100 MW of power



# PORTS







# TADAI Port 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<br><b>(Dredging envisaged for Panamax vessel only, assuming no rock strata to be encountered).</b> |
| Capacity:-            | <b>34MTPA</b>   |
| Vessel Size:-         | Upto Post-Panamax of 105,000 DWT class  |
| Completion Schedule:- | 2010 - 2014   |

# Traffic Projections & Cost

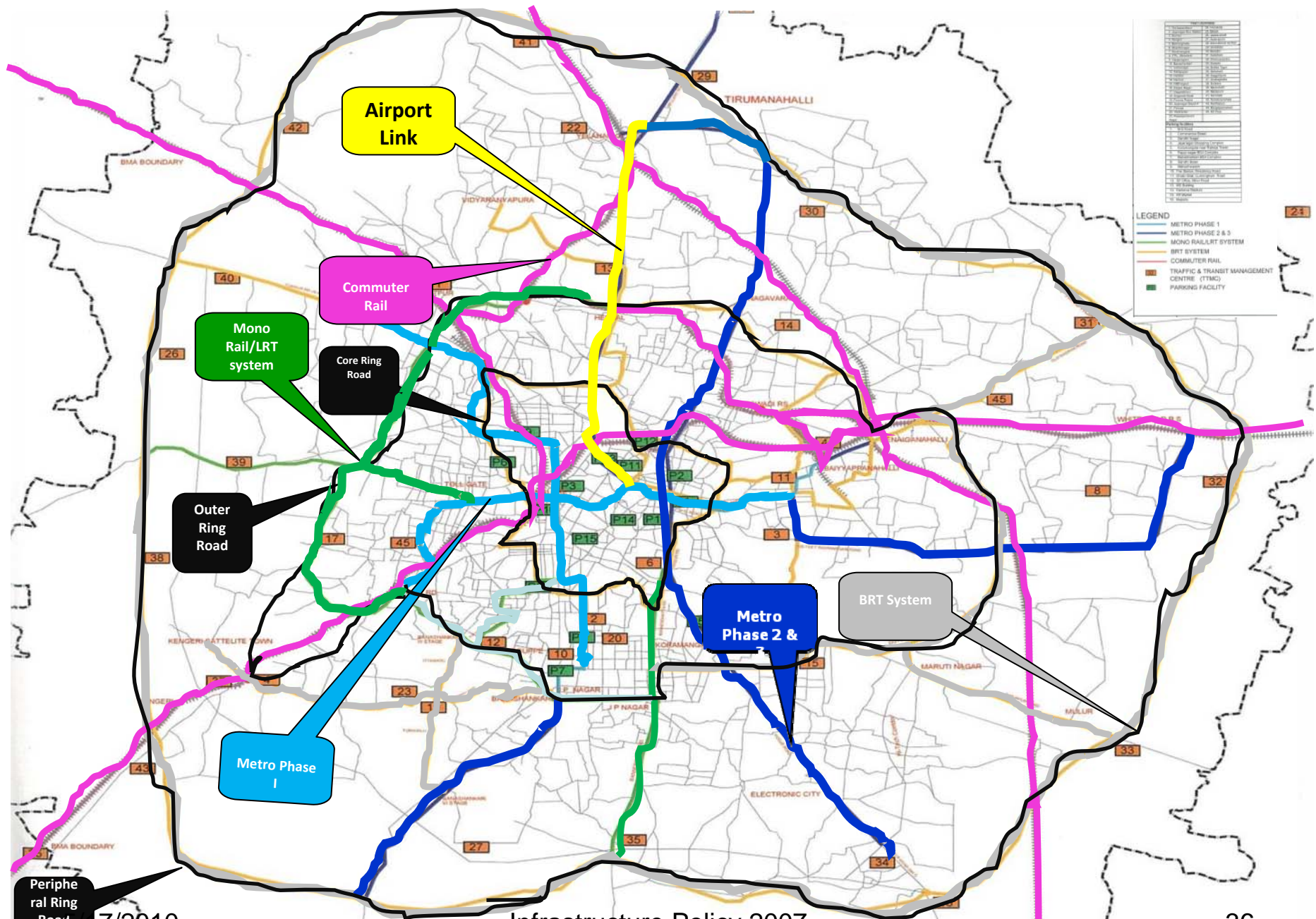
(Cargo in Mil MT – Cost in Rs. Crore)

| <b>Phase / Year<br/>Commodity</b>      | <b>Phase 1<br/>(2014)</b> | <b>Phase 2<br/>(2022)</b> | <b>Phase 3<br/>(2027)</b> | <b>Total<br/>(2014-27)</b> |
|--|---------------------------|---------------------------|---------------------------|----------------------------|
| <b>No. of Berths</b>                   | <b>3</b>                  | <b>8</b>                  | <b>5</b>                  | <b>16</b>                  |
| <b>Coal</b>                            | <b>12</b>                 | <b>12</b>                 | <b>16</b>                 | <b>40</b>                  |
| <b>Iron ore</b>                        | <b>19</b>                 | <b>15</b>                 | <b>-</b>                  | <b>30</b>                  |
| <b>General cargo</b>                   | <b>3</b>                  | <b>3</b>                  | <b>3</b>                  | <b>9</b>                   |
| <b>Container</b>                       | <b>-</b>                  | <b>12</b>                 | <b>18</b>                 | <b>30</b>                  |
| <b>Liquid Cargo</b>                    | <b>-</b>                  | <b>3</b>                  | <b>2</b>                  | <b>5</b>                   |
| <b>Total</b>                           | <b>34</b>                 | <b>45</b>                 | <b>39</b>                 | <b>114</b>                 |
|  |                           |                           |                           |                            |
| <b>Total Project<br/>Cost (Rs. Cr)</b> | <b>1550</b>               | <b>2606</b>               | <b>1521</b>               | <b>5677</b>                |

# Bangalore

## *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        |
| <b>Total</b>               | <b>692.5 km</b> |



7/2010

Infrastructure Policy 2007

# CTTP for Bangalore

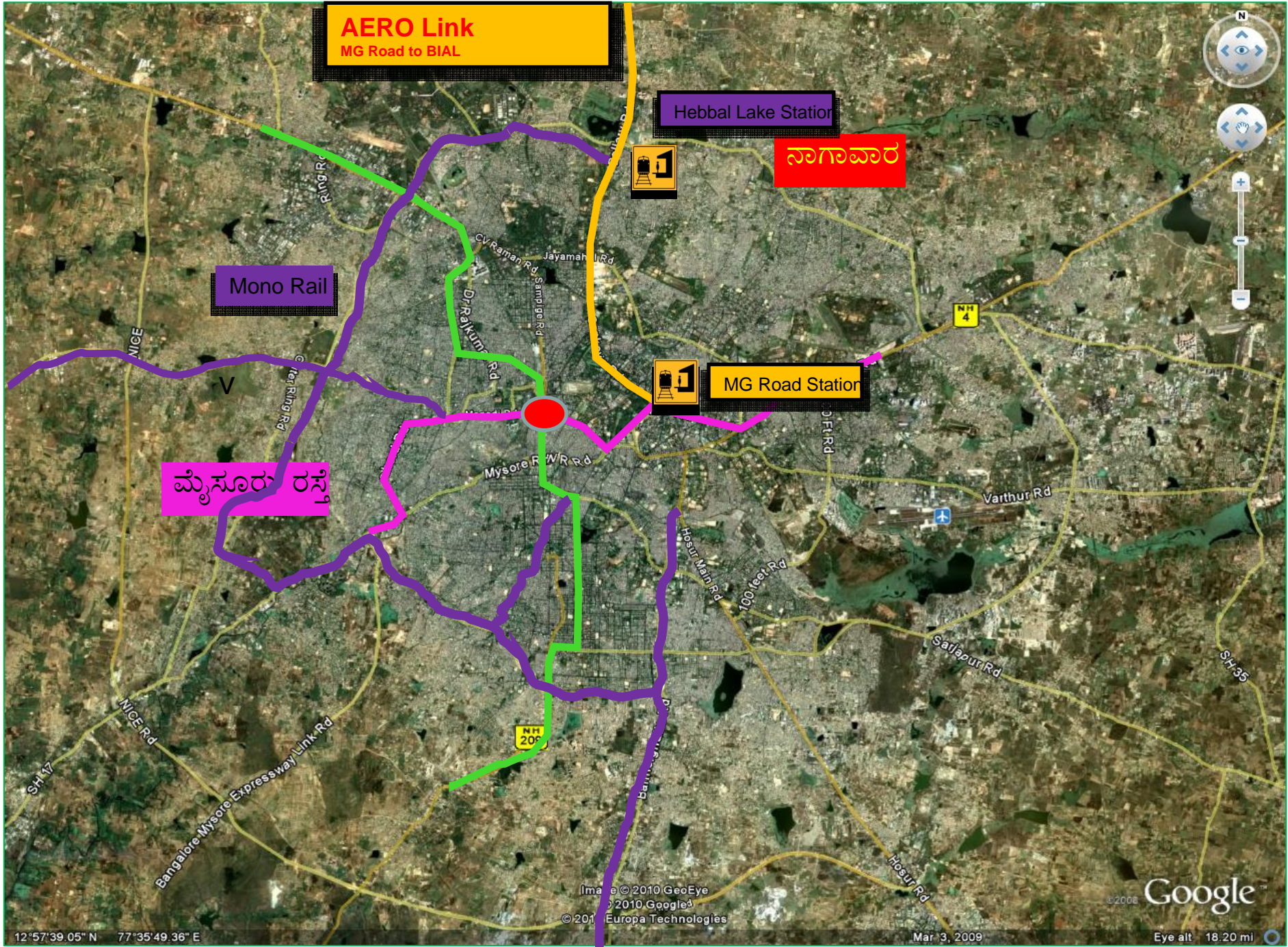
# HIGH SPEED RAIL LINK (HSRL) TO BANGALORE INTERNATIONAL AIRPORT



5/17/2010

Infrastructure Policy 2007

37



**AERO Link**  
MG Road to BIAL

Hebbal Lake Station

ನಾಗಾವಾರ

Mono Rail

MG Road Station

ಮೈಸೂರು ರಸ್ತೆ

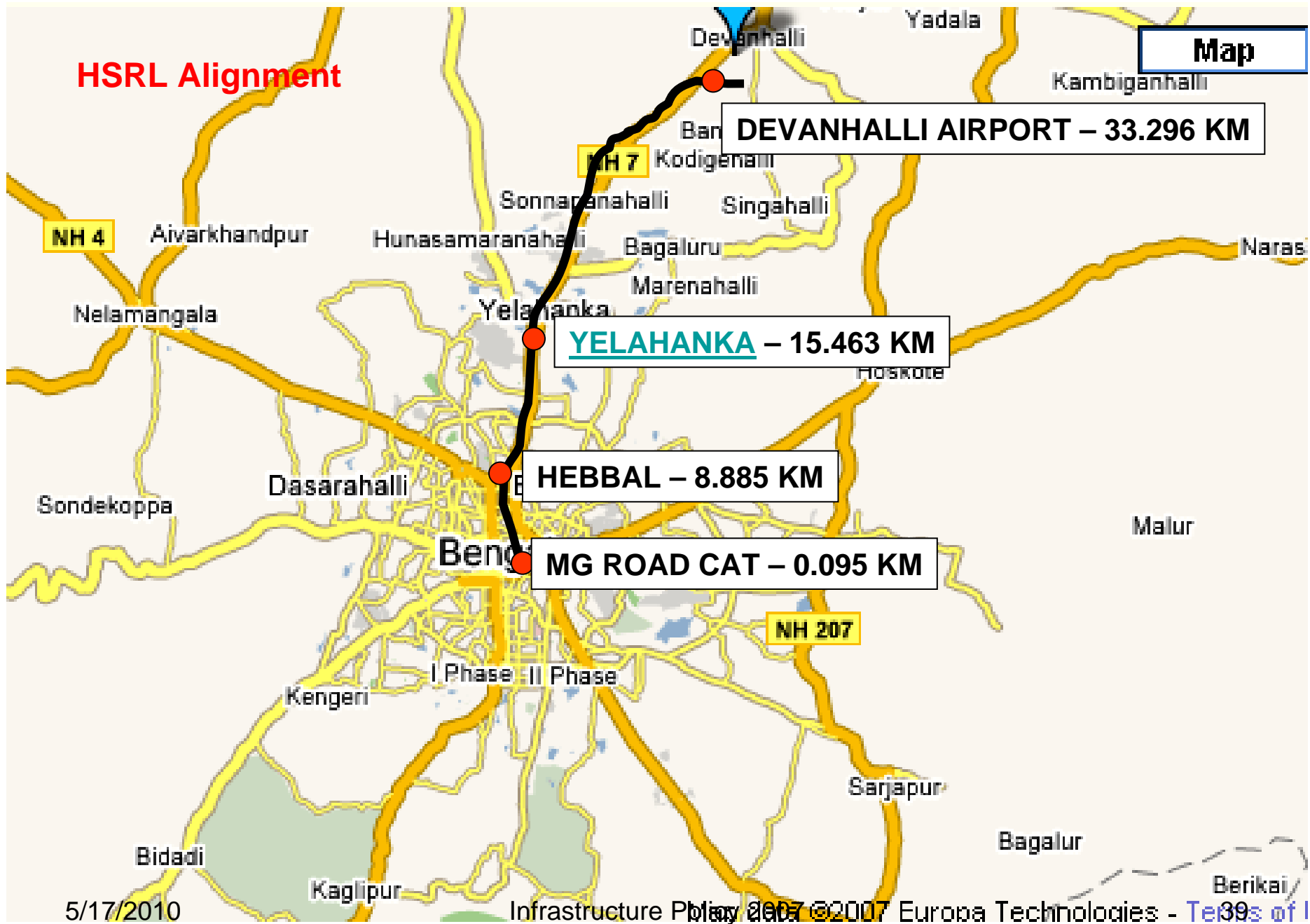
12°57'39.05" N 77°35'49.36" E

Image © 2010 GeoEye  
© 2010 Google  
© 2010 Europa Technologies

Mar 3, 2009

Google

Eye alt 18.20 mi

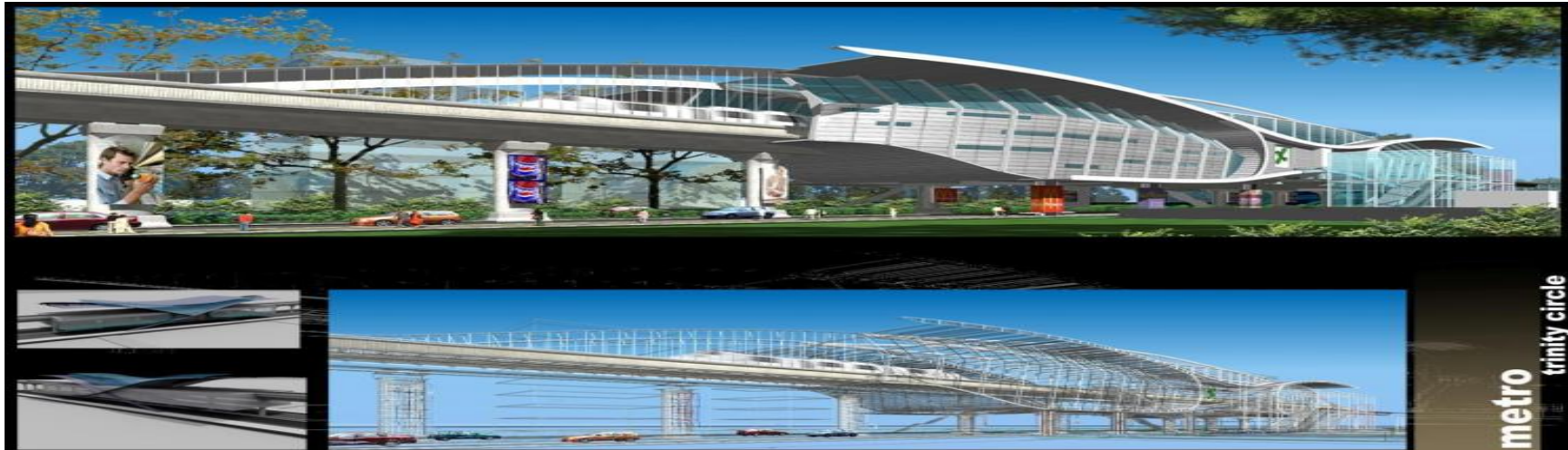


# Short Listed Firms

- M/s Pioneer Infratech Pvt. Ltd. & Siemens Project Ventures
- M/s Lanco Infrastech Ltd. & OHL Concesiones S.L.
- M/s L&T Transco Ltd.
- M/s Reliance Infrastructure Ltd. & CSR Nanjing Puzhen Rolling Stock Co. Ltd.
- M/s ITD-ITD Cem – SOMA Enterprises Joint Venture

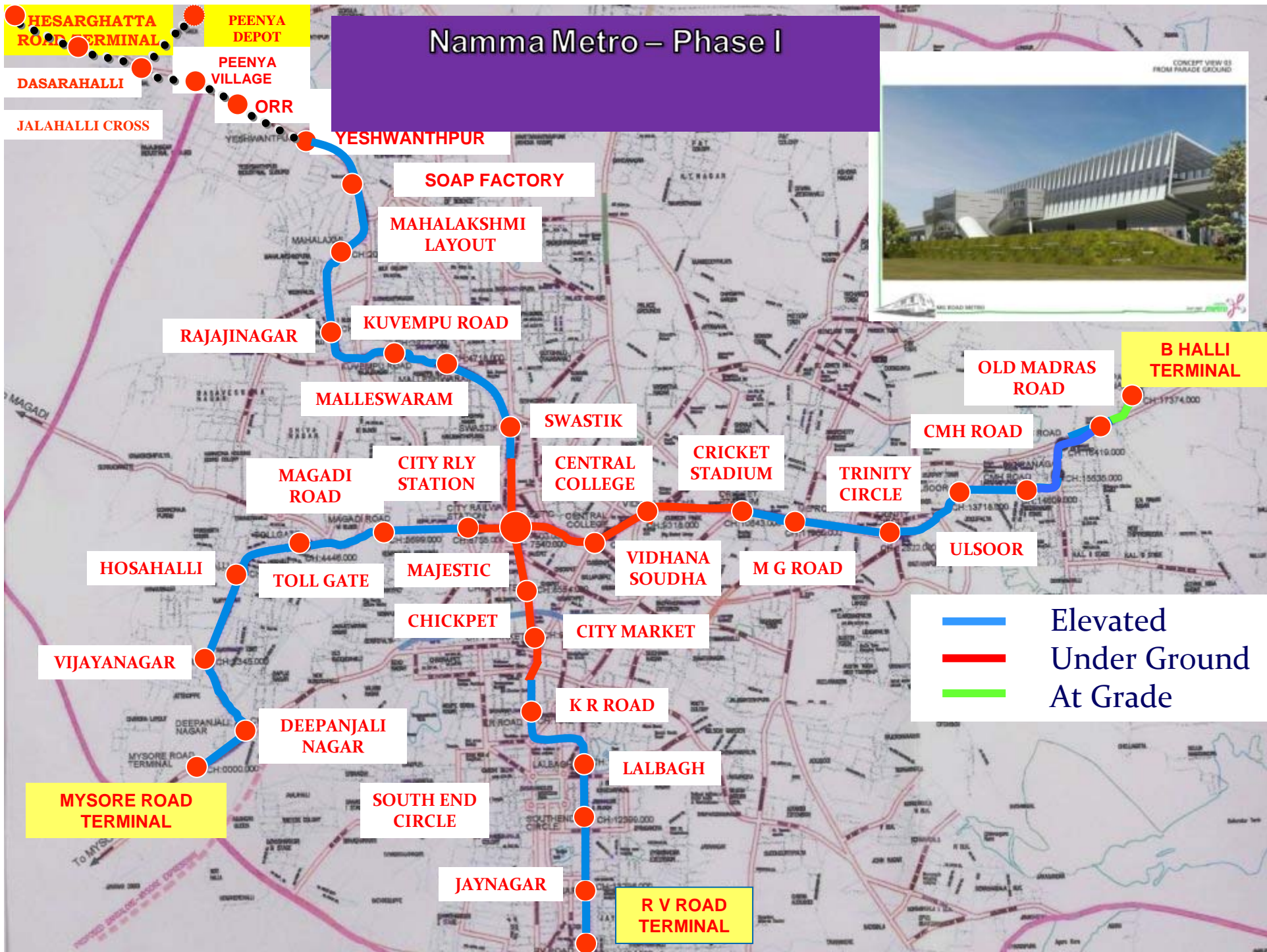


# Namma Metro



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

# Namma Metro – Phase I



# Monorails in the World

Palm Jumeirah Monorail



Las Vegas Monorail



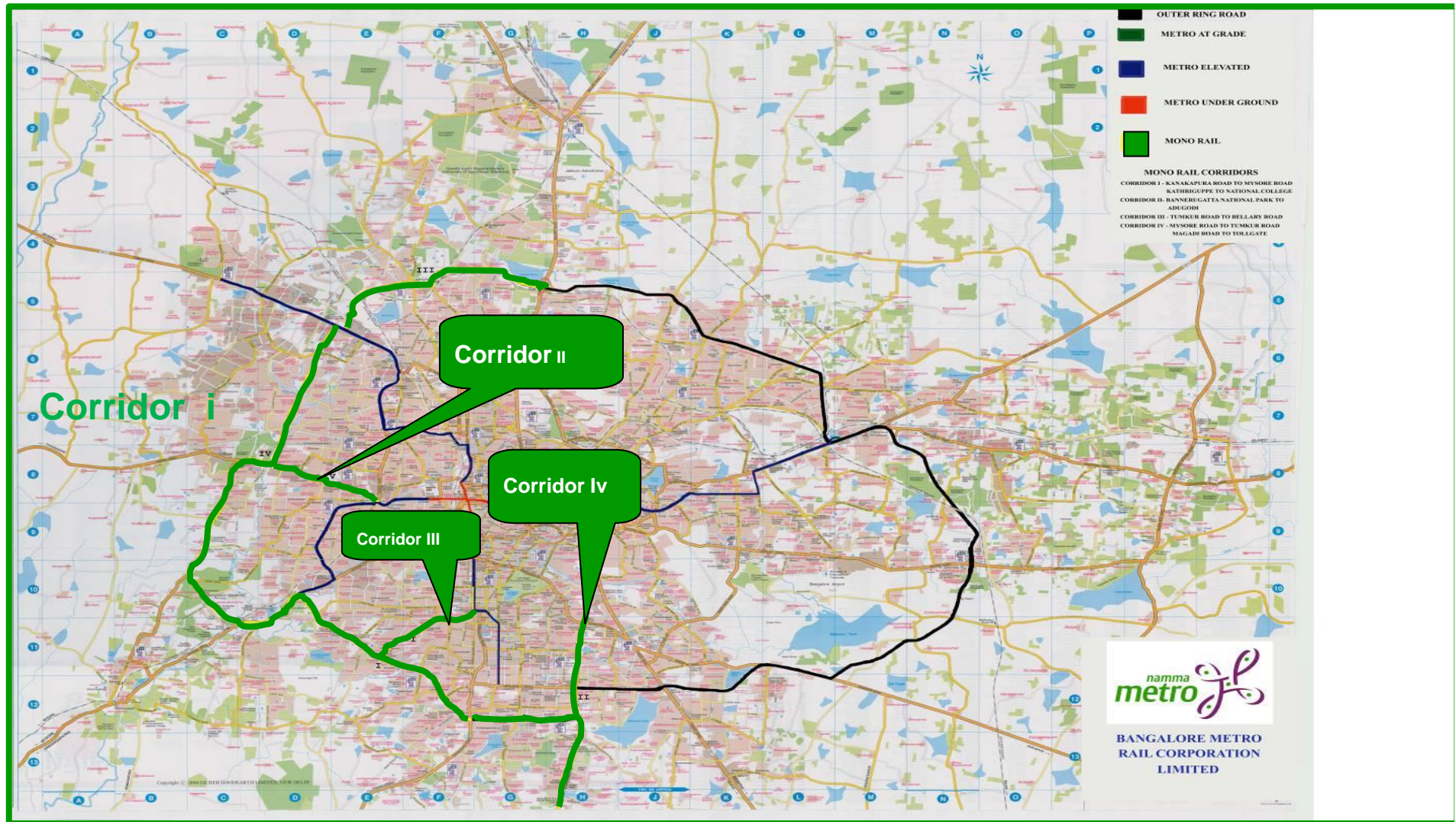
Kuala Lumpur Monorail

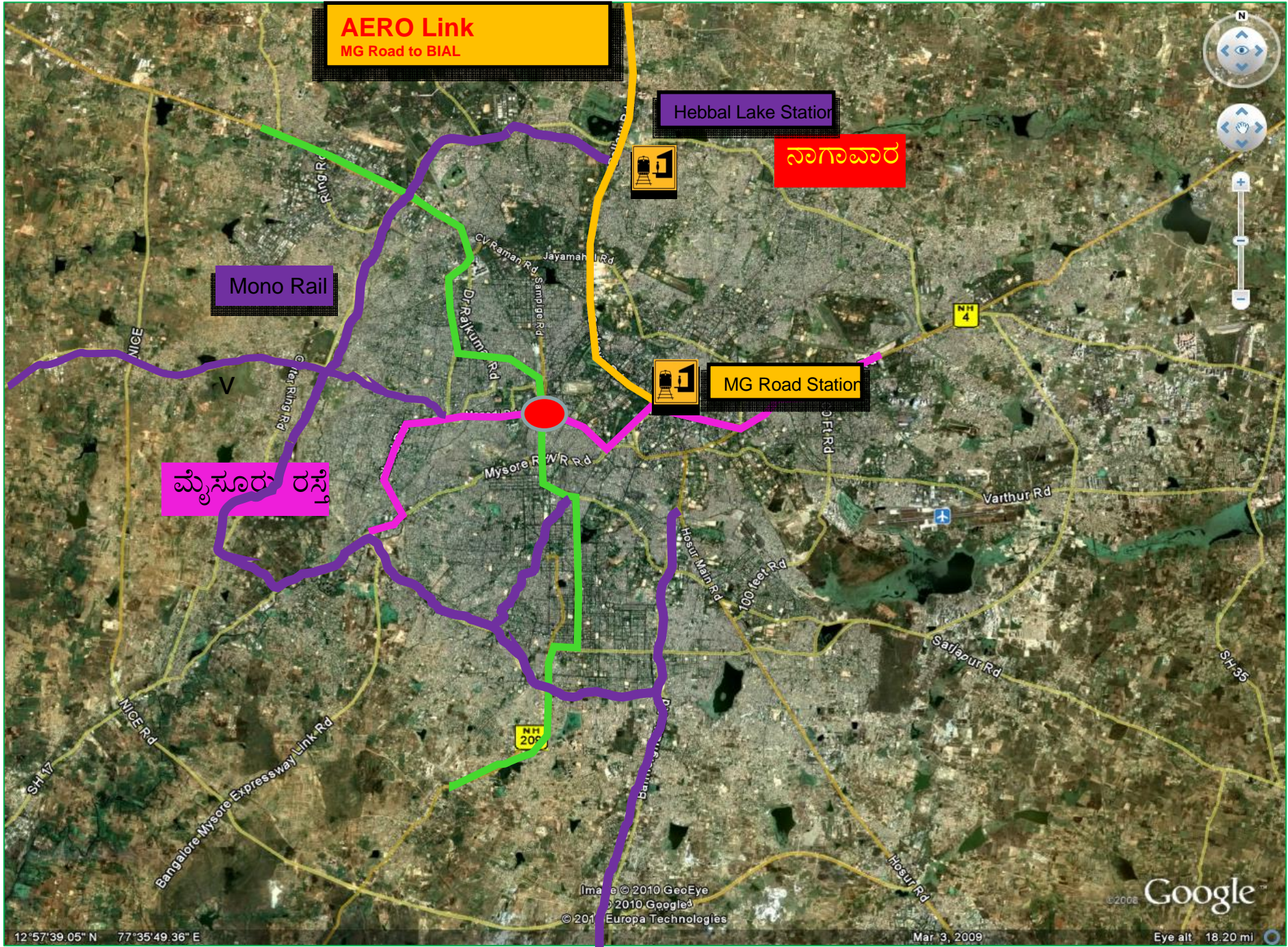


Tokyo-Haneda Monorail



# Monorail Corridors (CTTP)





**AERO Link**  
MG Road to BIAL

Hebbal Lake Station

ನಾಗಾವಾರ

Mono Rail

MG Road Station

ಮೈಸೂರು ರಸ್ತೆ

12°57'39.05" N 77°35'49.36" E

Image © 2010 GeoEye  
© 2010 Google  
© 2010 Europa Technologies

Mar 3, 2009

Google

Eye alt 18.20 mi





- Commuter rail
- Yeshwantpur- Electronic City- 2 pair of services
- Yeshwantpur- Devanahally- 1

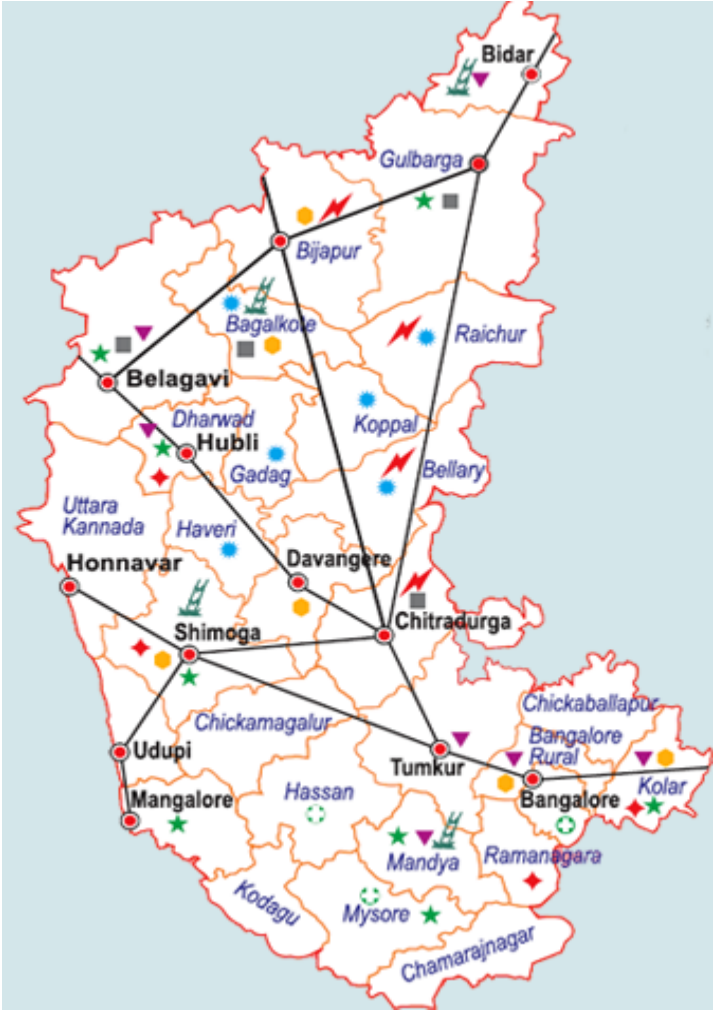


# Industrial Zones



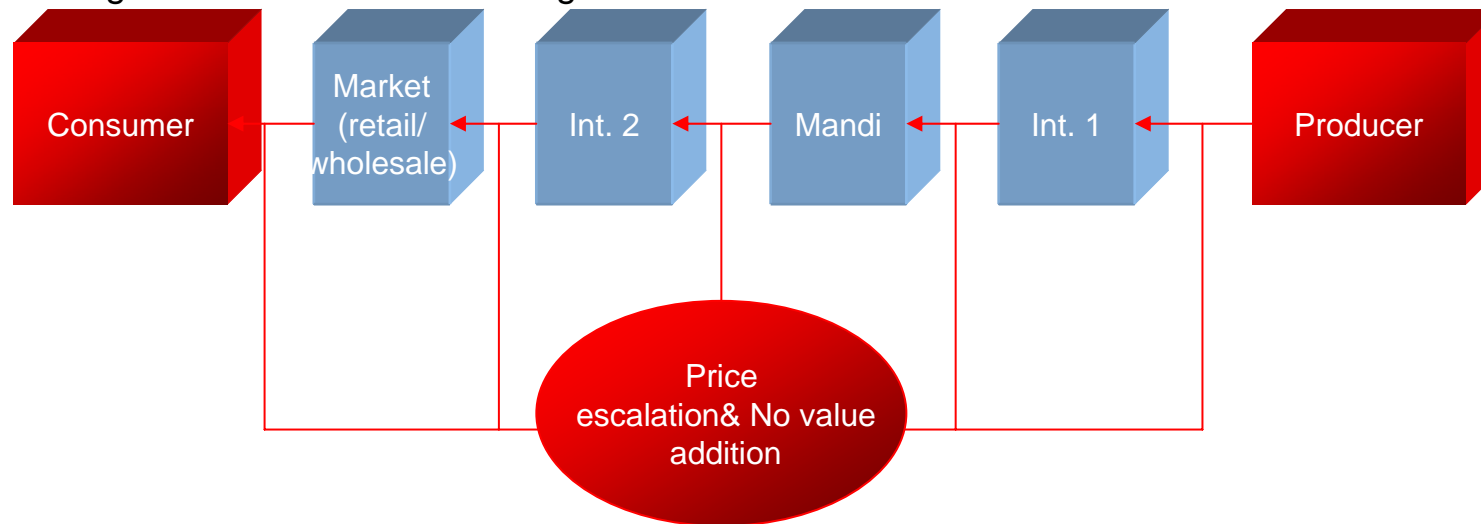
| Sl. No. | Industrial Zones                      | Districts  |
|---------|---------------------------------------|--|
| 1       | Steel                                 | Bellary, Koppal, Bagalkot, Haveri, Gadag & Raichur   |
| 2       | Cement                                | Gulbarga, Bagalkot, Chitradurga, 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  |

# Proposed special industry zones



## Agri-market Value chain

- Agri marketing supply chain prevailing in the state lacks a systematic approach.
- 75 % of the farmers in the state sell their produce at the farm level
  - Inability to go to distant mandis on account of lack of facilities
  - Expensive and inefficient transportation system
  - Malpractices at each level of value chain
- Long and detrimental marketing channel



# Need for Integrated operations

- To minimize the involvement of intermediaries in the supply chain
- To avoid wastage of primary agricultural-horticultural produce in all stages namely pre-harvest and post-harvest
- To tap the full potential of the rich bio-diversity of the state
- To encourage technology up-gradation in all stages of food production
- To reduce marketing risks faced by farmers
- To provide high quality front end infrastructure facilities: warehouses, cold storages, storage facilities, food processing facilities and other value added services



## Need for Integrated operations .... 2

- To provide efficient back end services: transportation services, cold chain etc

An integrated approach is required to provide efficient linkages between the farmer, village cluster, producer, and the Terminal Market Centre (TMC).



DEVELOPMENT OF AGRI LOGISTICS HUBS (ALH)

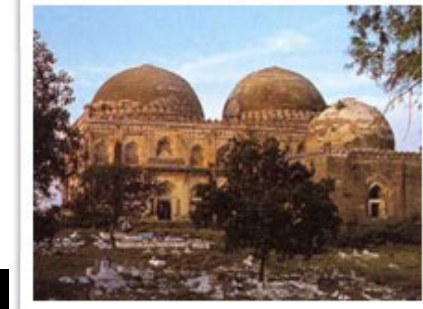


# Food Parks

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



# Tourism Projects in Karnataka on PPP Format



# 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
- Project preparation





# 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    |

# **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 11<sup>th</sup> 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**

**NAMASKARAGALU**

