Bangalore Airport Rail Link Ltd

Presentation on

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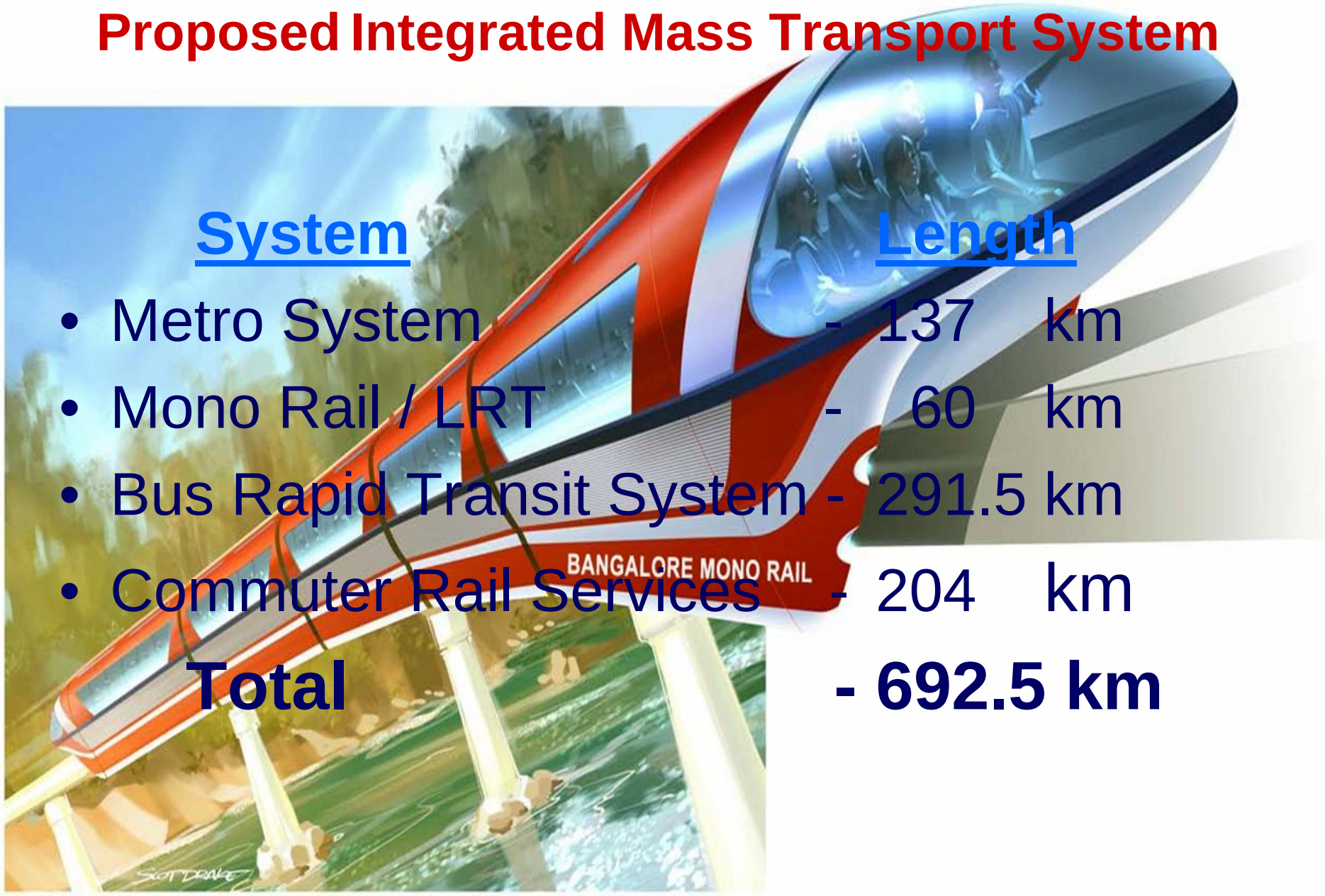
Proposed Integrated Mass Transport System

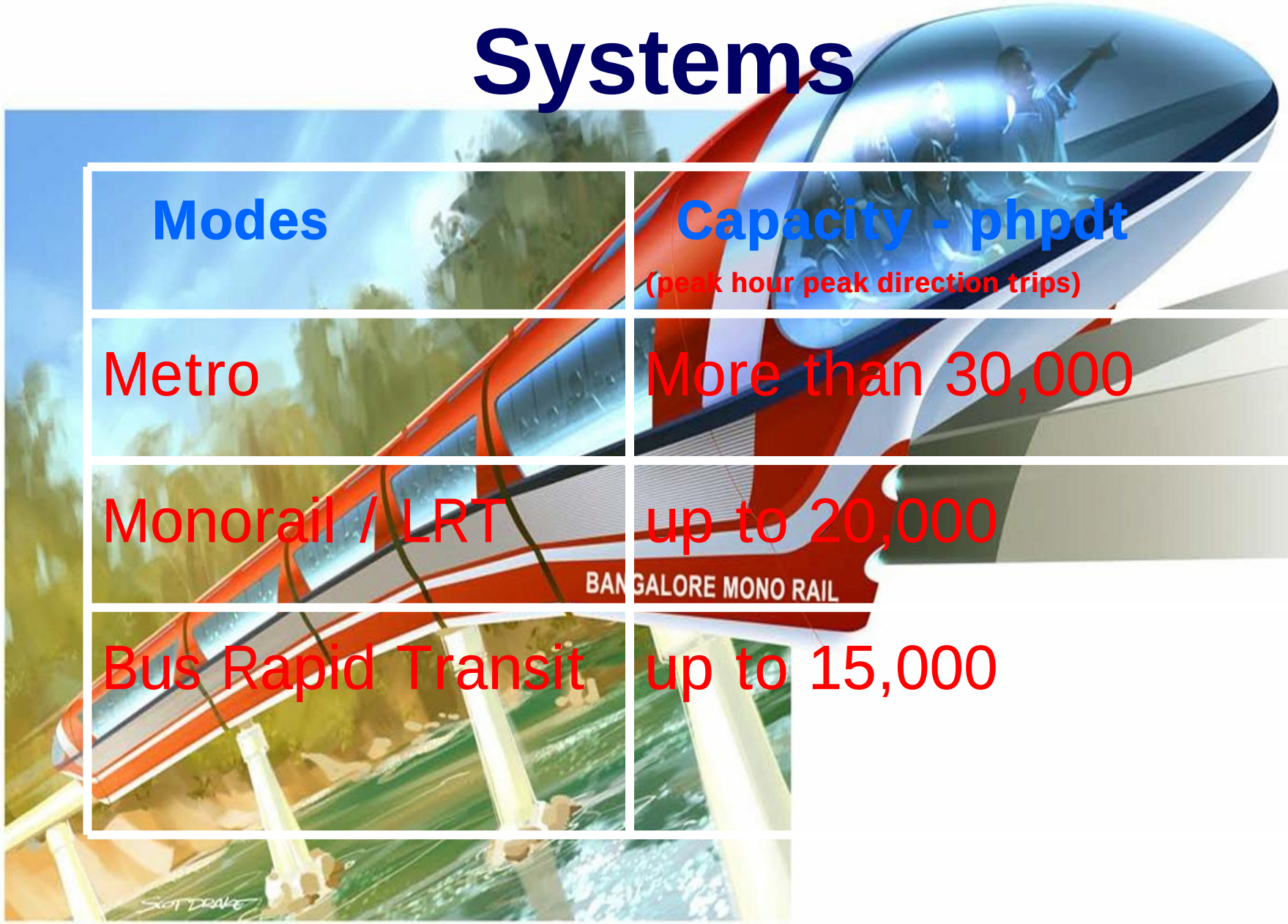


System		Length
• Metro System	-	137 km
• Mono Rail / LRT	-	60 km
• Bus Rapid Transit System	-	291.5 km
• Commuter Rail Services	-	204 km
Total		**- 692.5 km**

TRANSPORT DEMAND ANALYSIS

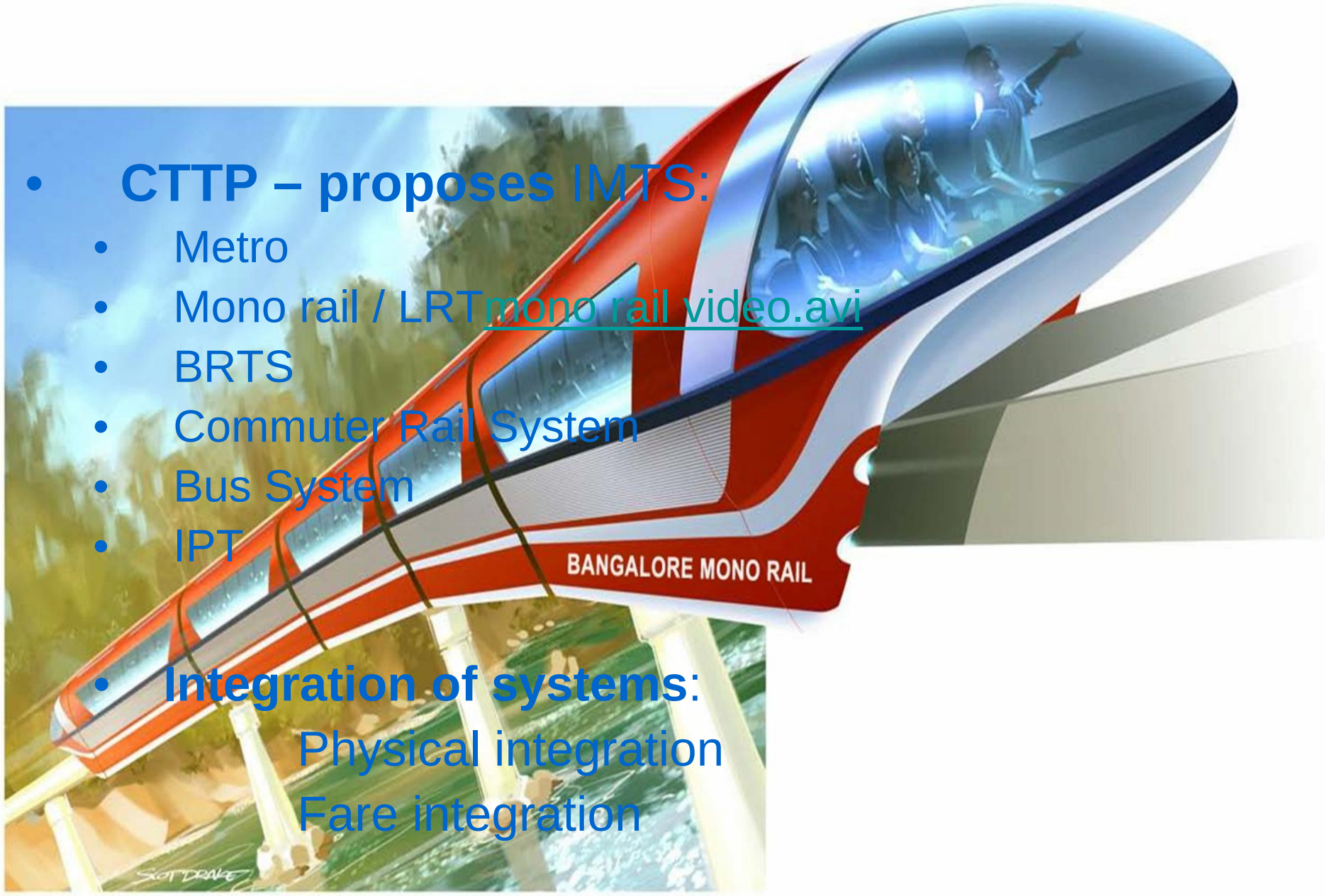
Modes	Daily Trips in Lakhs (Modal Split)			
	2006	2025		
		Scenario 1	Scenario 2	Scenario 3
Car	4.2 (7.5%)	15.5 (12.2%)	9.7 (7.6%)	7.0 (5.5%)
2W	18.4 (32.8%)	60.4 (47.5%)	45.6(35.9%)	20.6 (16.2%)
IPT	7.3 (12.9%)	14.9 (11.7%)	8.9 (7.0%)	6.7 (5.3%)
Public Transport	26.3 (46.8%)	36.3 (28.6%)	50.0(49.5%)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

Systems



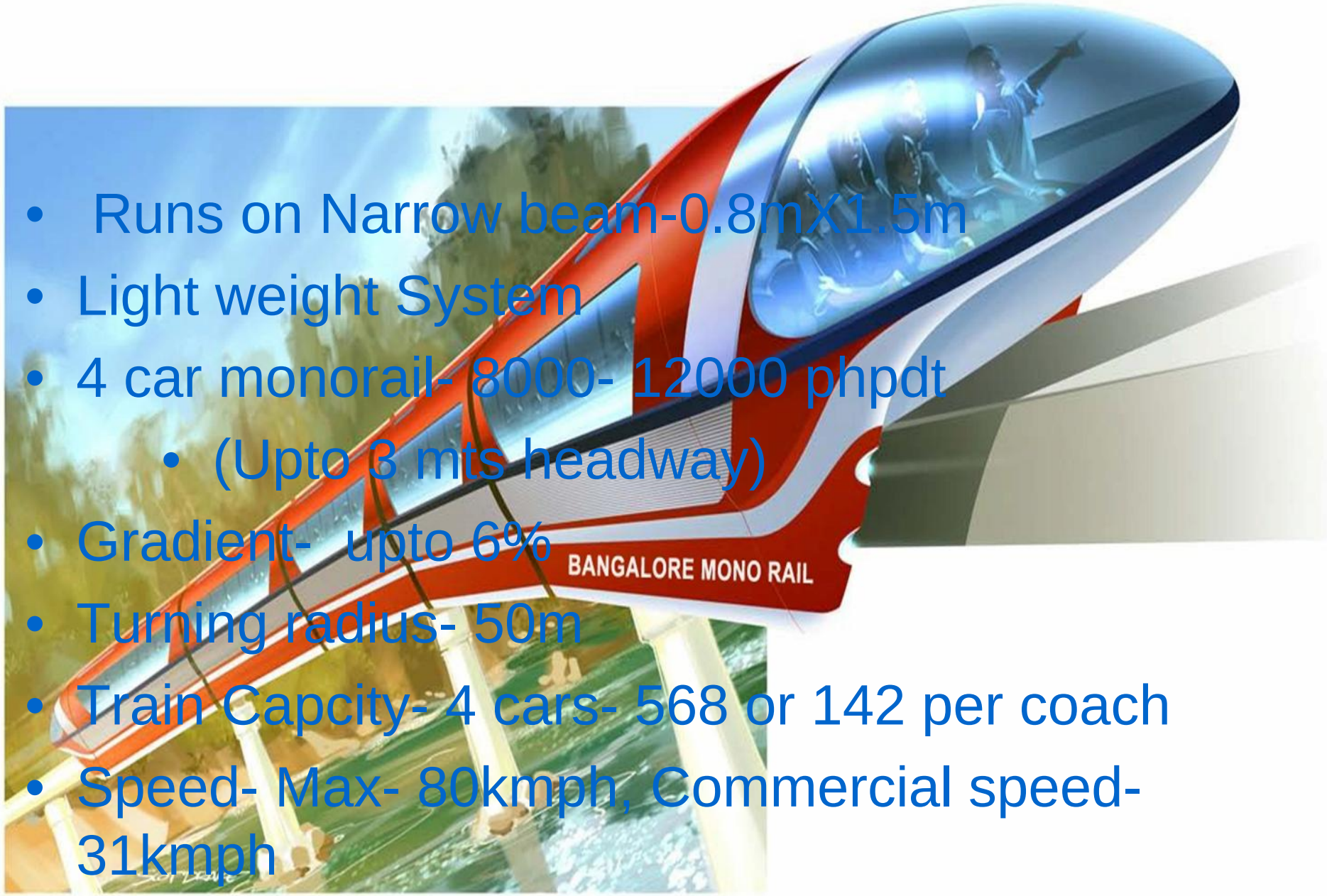
Modes	Capacity - phpdt (peak hour peak direction trips)
Metro	More than 30,000
Monorail / LRT	up to 20,000
Bus Rapid Transit	up to 15,000

Integrated Mass Transit System (IMTS)



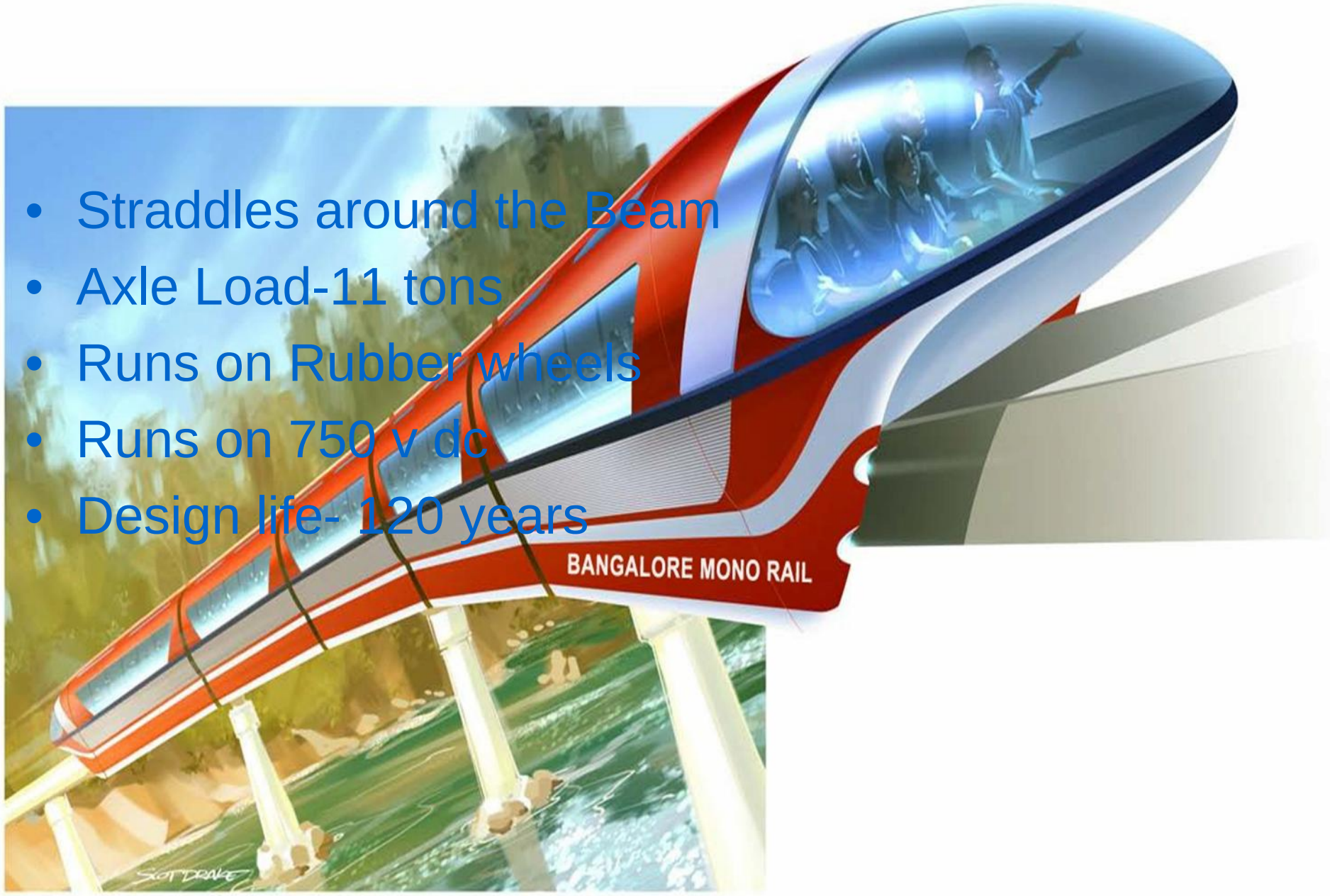
- **CTTP – proposes** IMTS:
  - Metro
  - Mono rail / LRT mono rail video.avi
  - BRTS
  - Commuter Rail System
  - Bus System
  - IPT
- **Integration of systems**:
  - Physical integration
  - Fare integration

Specifications



- Runs on Narrow beam-0.8mX1.5m
- Light weight System
- 4 car monorail- 8000- 12000 phpdt
  - (Upto 3 mts headway)
- Gradient- upto 6%
- Turning radius- 50m
- Train Capcity- 4 cars- 568 or 142 per coach
- Speed- Max- 80kmph, Commercial speed- 31kmph

Specifications



- Straddles around the Beam
- Axle Load-11 tons
- Runs on Rubber wheels
- Runs on 750 v dc
- Design life- 120 years

IMTS

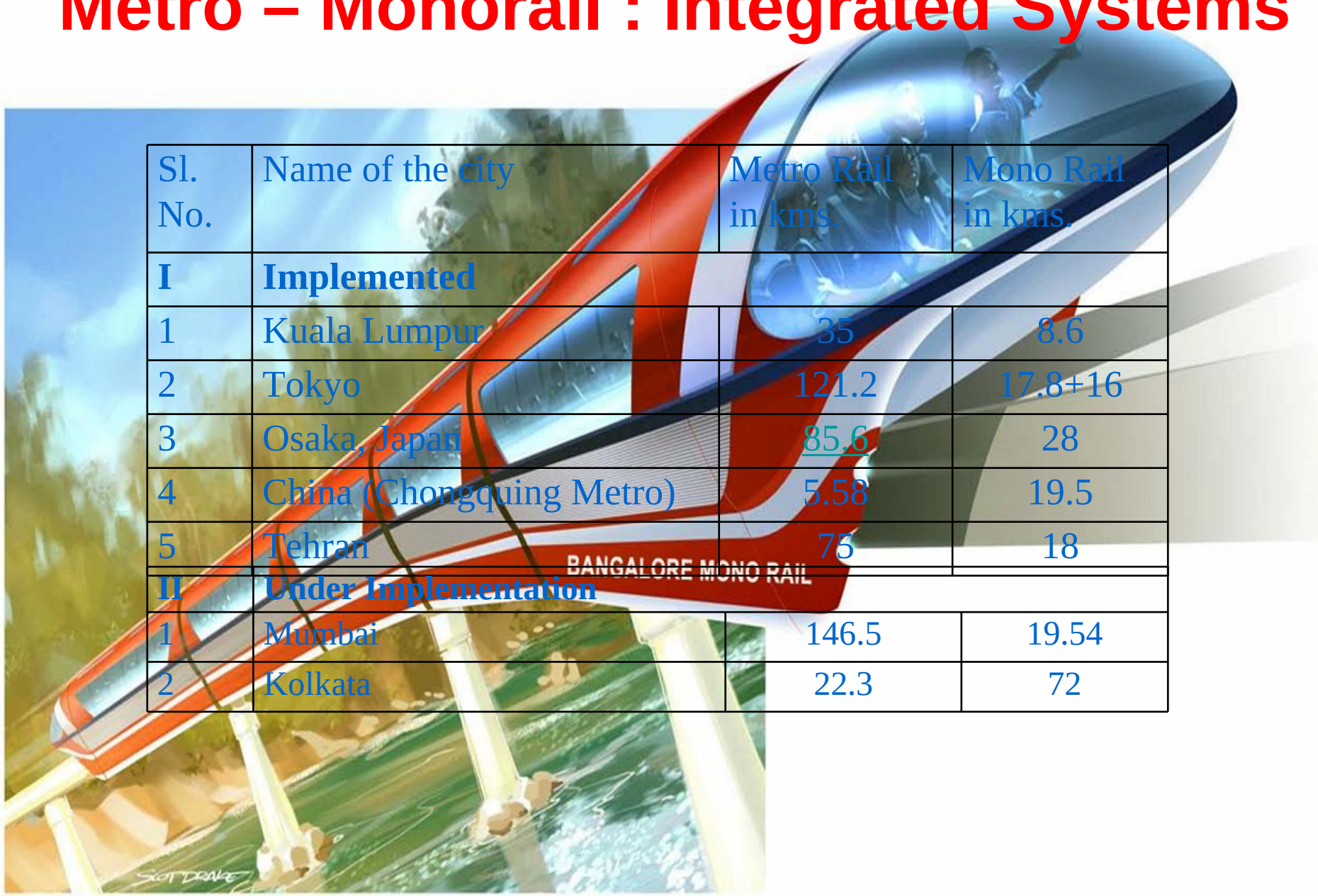
- **Metro System**
  - Major & high density corridors
  - Roads with better ROW & Geometrics

Feeder Services / Systems

- Mono Rail System
  - Relatively lower density corridors
  - Narrower roads with poor geometrics
  - On circular corridors - feeds Metro
  - No overlap (not parallel to Metro)

Complimentary / supplementary service to Metro

Metro – Monorail : Integrated Systems



Sl. No.	Name of the city	Metro Rail in kms.	Mono Rail in kms.
I	**Implemented**		
1	Kuala Lumpur	35	8.6
2	Tokyo	121.2	17.8+16
3	Osaka, Japan	85.6	28
4	China (Chongquing Metro)	5.58	19.5
5	Tehran	75	18
II	**Under Implementation**		
1	Mumbai	146.5	19.54
2	Kolkata	22.3	72

Monorails in the World

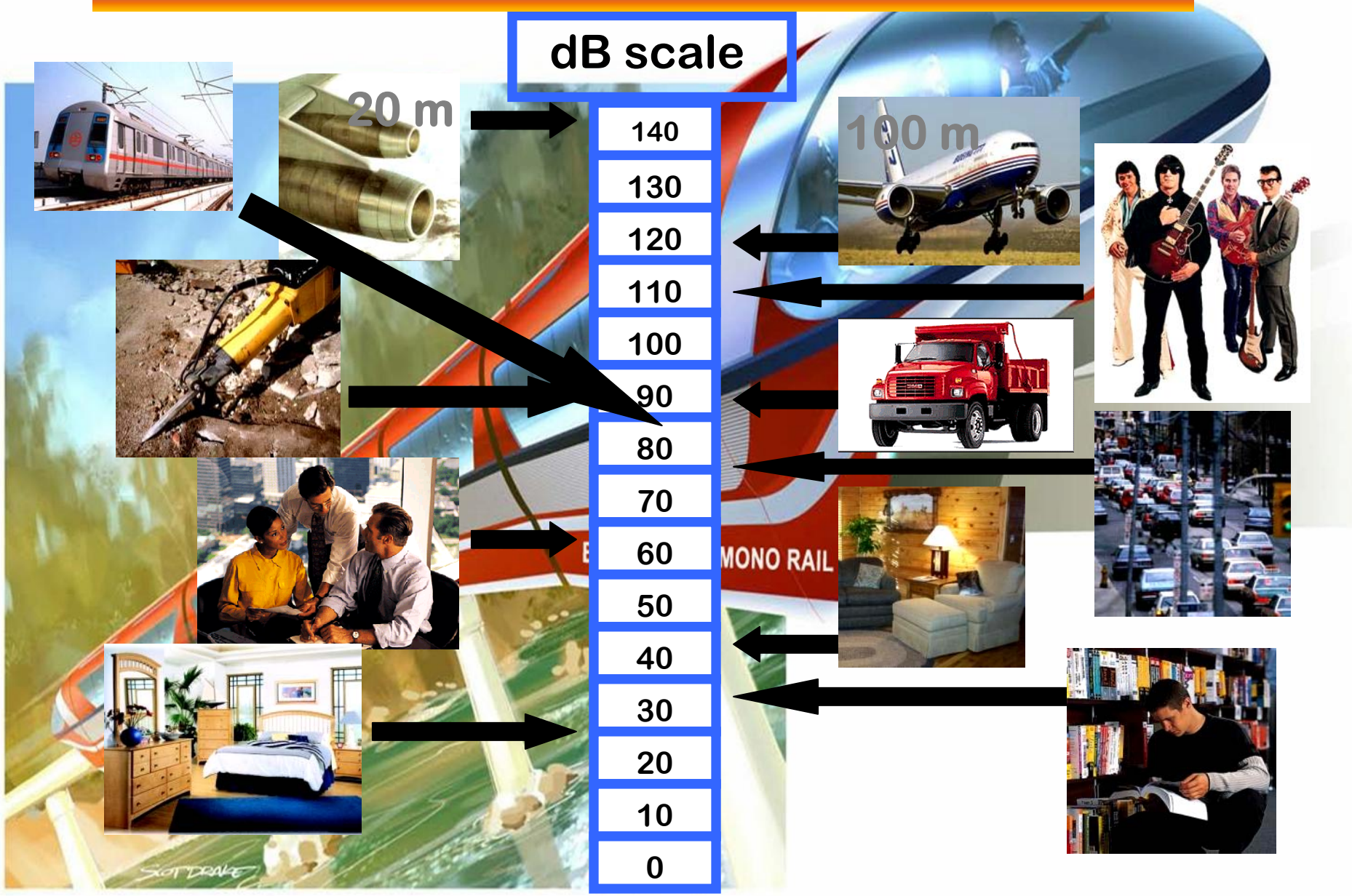
Palm Jumeirah Monorail

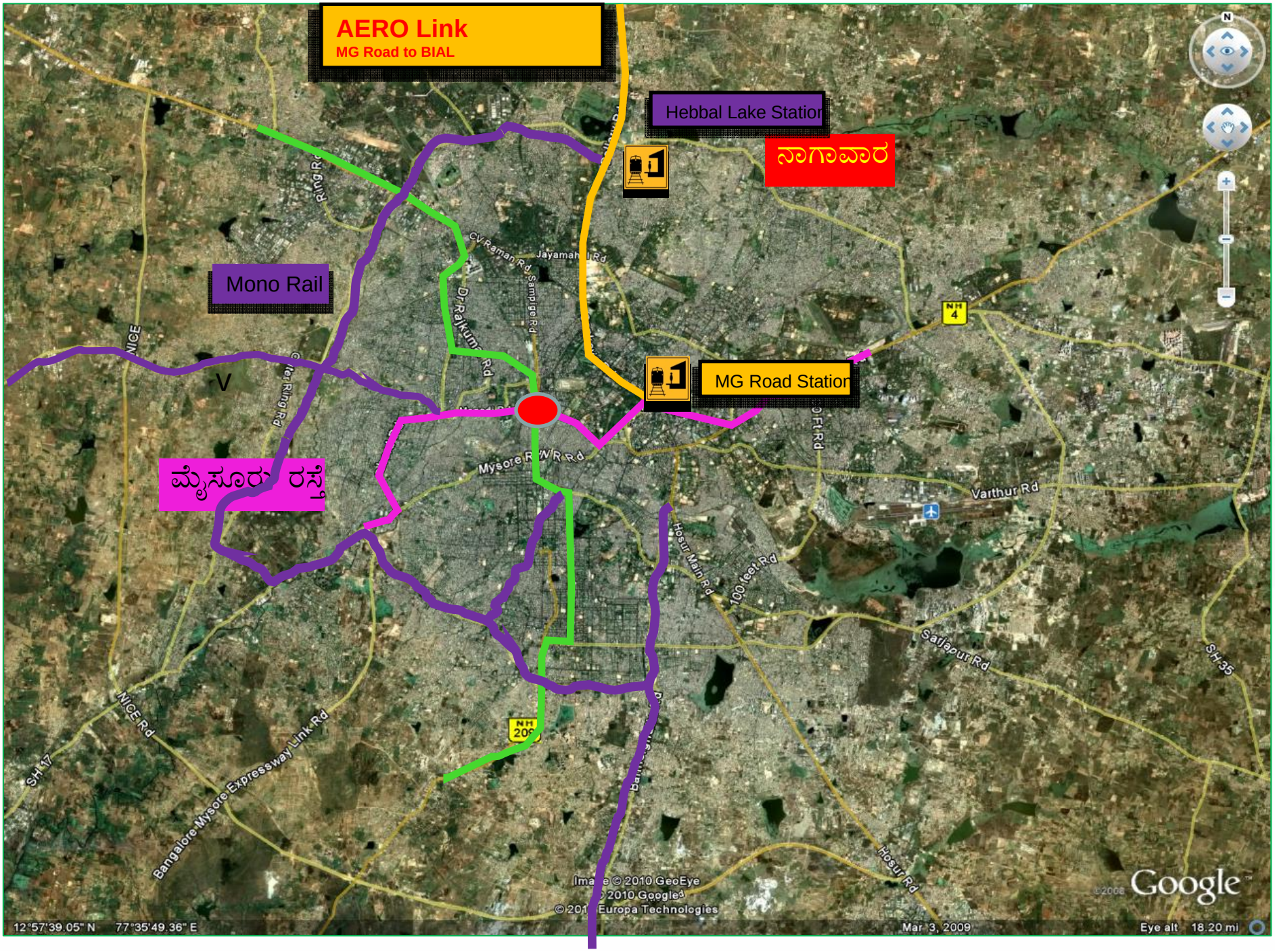
Las Vegas Monorail

Kuala Lumpur Monorail

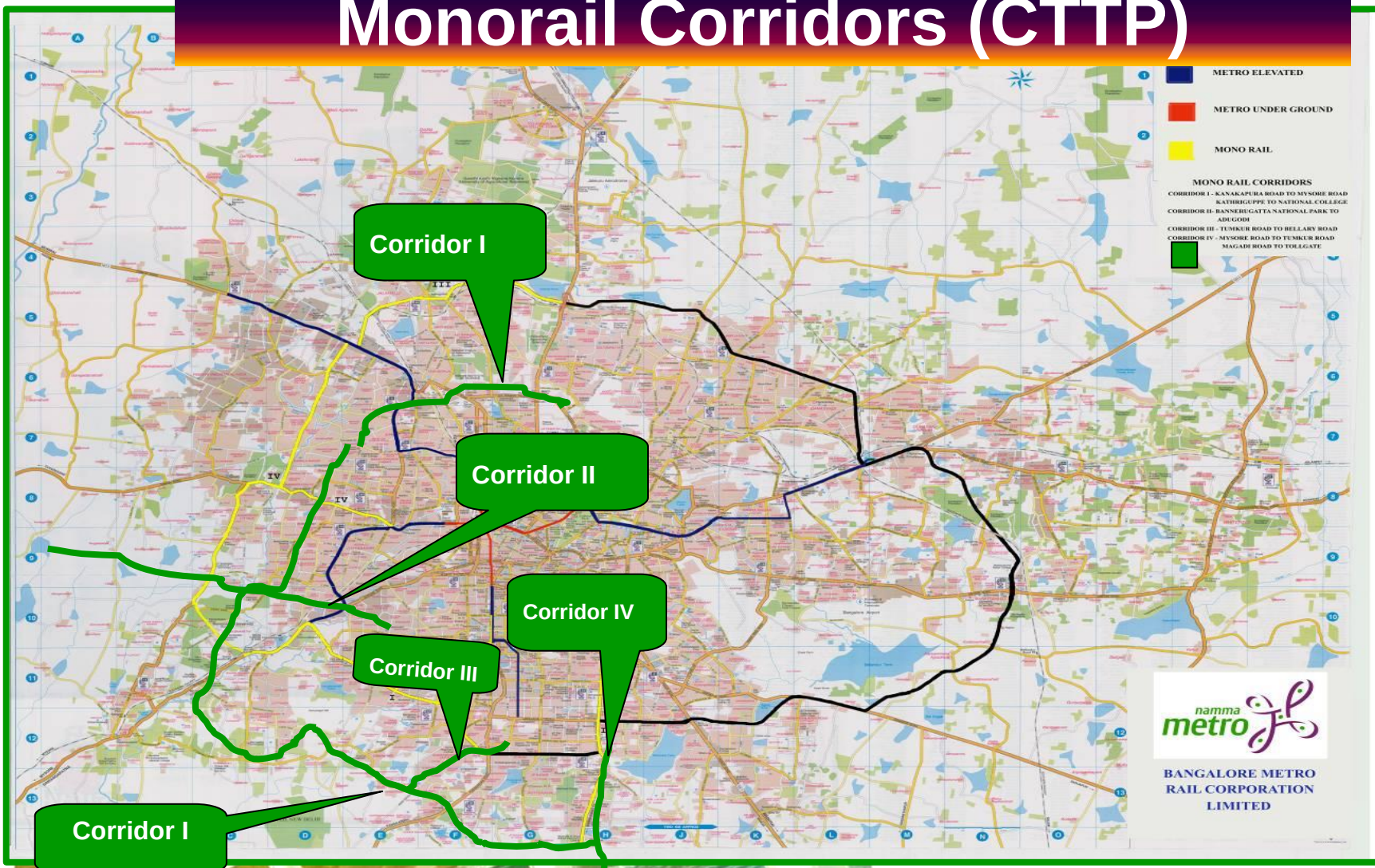
Tokyo-Haneda Monorai

Levels of Common Sounds




AERO Link
MG Road to BIAL
Hebbal Lake Station
ನಾಗಾವಾರ
Mono Rail
MG Road Station
ಮೈಸೂರು ರಸ್ತೆ
Mysore R W R Rd
Varthur Rd
Hosur Main Rd
100 feet Rd
Sarjapur Rd
Hosur Rd
NICE Rd
Bangalore Mysore Expressway Link Rd
SH 17
SH 35
Google
12°57'39.05" N 77°35'49.36" E
Mar 3, 2009
Eye alt 18.20 mi

Monorail Corridors (CTTP)



CTTP - Mono Rail Corridors

S.No.	Corridor	Length (Km)
1	Hebbal to J.P.Nagar (Bannerghatta Road) along the western portion of outer ring road	31.0
2	PRR to Toll Gate along Magadi Road	9.0
3	Kathriguppe Road / Ring Road Junction to National College	5.0
4	Hosur Road – Bannerghatta Road Junction to PRR along Bannerghatta Road	15.0
	Total	60.0

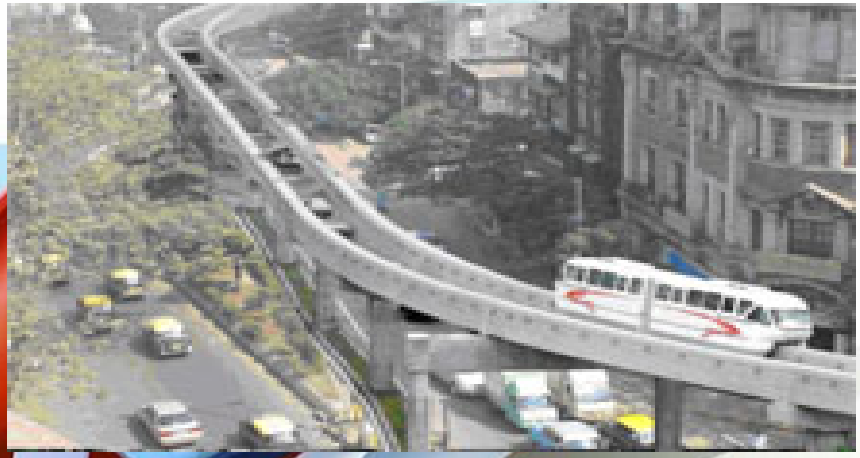
VOIR

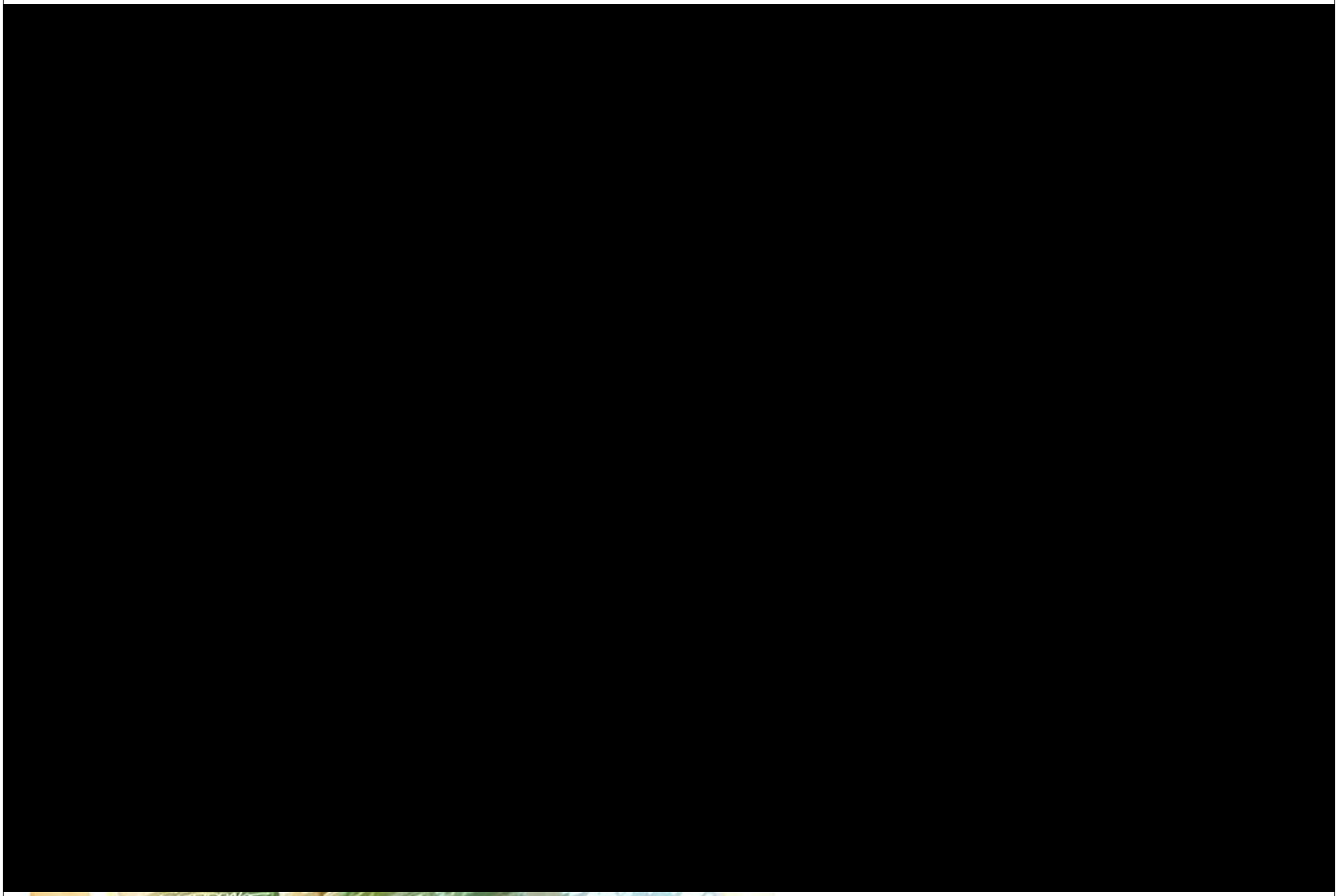
三菱电梯

上江城

中国工商银行
鸿昌宾馆

新车





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

Integration Points – Monorail Corridors

- **Corridor I (along ORR)**
  - Ganapathi Temple on J.P. Nagar with Metro (Phase II)
  - Banashankari with Metro (Phase I)
  - Kathriguppe with Metro (Phase II)
  - Mysore Road with Metro (Phase I)
  - Magadi Road with Metro / Mono
  - Tumkur Road with Metro
  - Hebbal with HSRL
- **Corridor II (Magadi Road)**
  - Chord Road Junction (Phase I)
  - Beggars colony Junction (Phase I)

Action Plan
CTTP - Mono Rail

A. Preparation of DPR:

- LOI — 4th May 2010
- Appointment of Consultants — 15th July 2010
- DPR — 30th Nov 2010

B. Procurement

- Request For Qualification (RFQ) 31st Dec 2010
- Request For Proposal (RFP) — 15th March 2011
- Appointment of Concessionaire — 15th June 2011
- Commissioning — May 2014

NAMASKARAGALU
BANGALORE MONO RAIL