

Kolkata Traffic Problems

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Background

- ◉ Strategic location
- ◉ 2 major railway junctions
- ◉ International airport
- ◉ Economic hub of east India
- ◉ 8th largest city in the world



Road Surface

- Population of cars have tripled in the past 10 years
- "Kolkata is a metropolis with a very limited road space and one of the highest vehicle density ratios" – G.M. Police Commissioner
- 2 million cars for 1400
 - Kolkata: 345 vehicles/km
 - Mumbai: 448 vehicles/km
 - Delhi: 184 vehicles/km





Non-motorized transport

- ◉ Slower speed than rest of the traffic
- ◉ Don't follow one-way traffic rule
- ◉ Cheap and reliable
- ◉ Employment
- ◉ Zero- Emissions
- ◉ [Play Video](#)

Salt Lake City <=> Kolkata

Mode of Transport	Distance
● Train (requires bus use)	● 10.1km
● Taxi	● 8.7km
● Bus	● 8.7km
● Metro (requires bus use)	● 18.0km
● Personal Vehicle	● 8.7km

Salt Lake City

South Dum Dum



Bus Station



Train Station



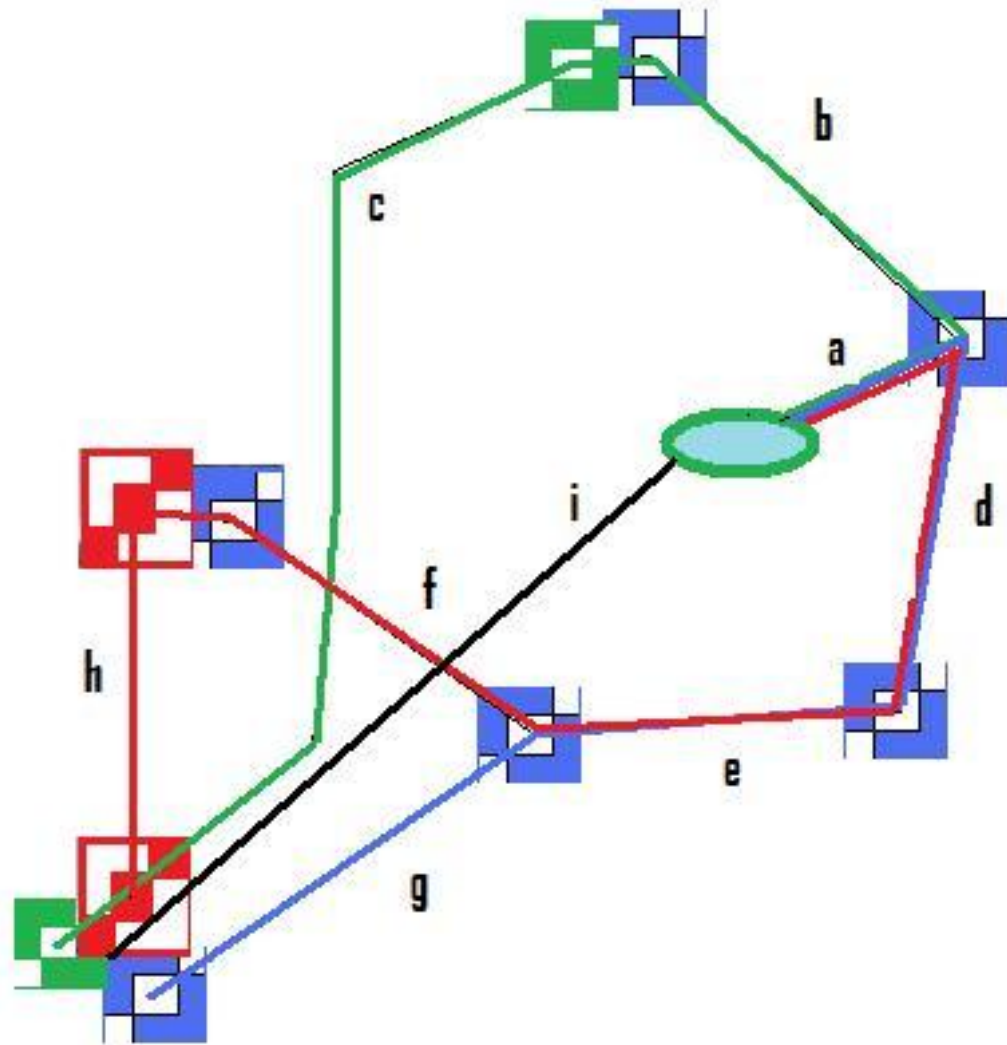
Metro Station

To Calcutta Center



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Telecommuting

- Promoted with government incentive program
- Can pose significant benefits for:
 - Individual Employees
 - Organization
 - Government
- Information technology jobs tend to be primary candidates for telecommuting
- Assumption that IT jobs grow in proportion to telecommuting jobs

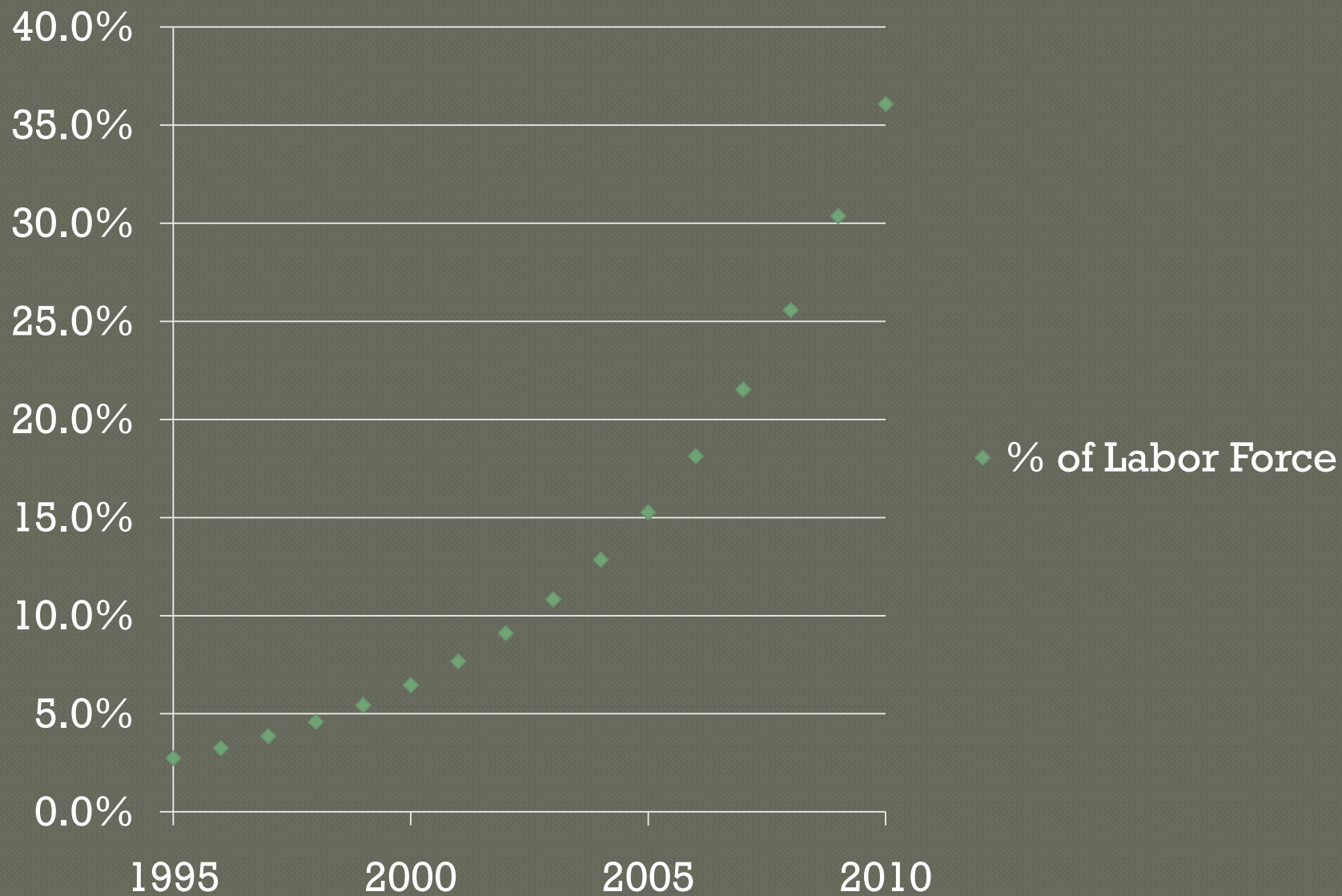
Previous Telecommuting Study

- United States DOT did a cost / benefit analysis of Telecommuting in 1993
- Estimates seemed ambitious at the time
- With an estimated 2% growth rate in IT jobs, predicted 20.2% annual growth in telecommuters
- As technology has progressed over the years, estimates have proven conservative even without government incentives

DOT Estimates (1993)

Year	US Population	Labor Force	IT Workers	Telecommuters
1992	253.3	127.6	72.1	2.0
1993	255.1	129.1	73.3	2.5
1994	256.9	130.7	74.6	3.0
1995	258.7	132.2	75.8	3.6
1996	260.5	133.8	77.1	4.3
1997	262.3	135.4	78.4	5.2
1998	264.1	137.1	79.8	6.3
1999	266.0	138.7	81.1	7.5
2000	267.8	140.4	82.5	9.1
2001	269.7	142.1	83.9	10.9
2002	271.6	143.8	85.3	13.1

% of Labor Force



Application to Kolkata

- While growth rate of IT jobs in the US is 2%, in Kolkata the rate is 70% (twice India's growth rate)
- Kolkata and its suburbs are populated by over 15 million people
- The city itself has an estimated 7 million commuters daily
- With the right government incentives, exponential growth in telecommuting would be possible

Overall Incentives

● Employees

- Decreased travel costs
- Increased time at home

● Businesses

- Increased Employee Productivity
- Decreased Sick Days (cost >\$600/employee/year)

● Government

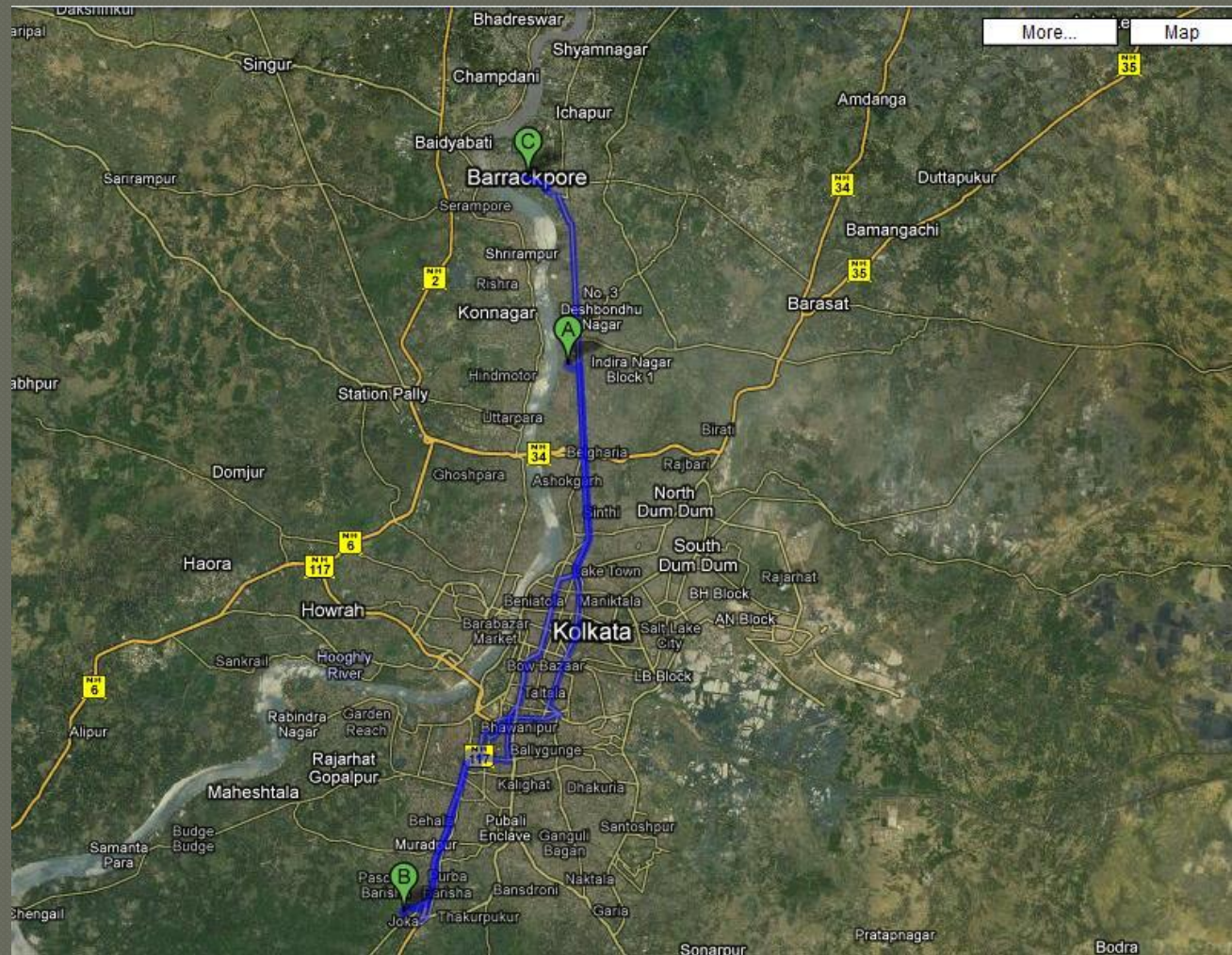
- Decreased road wear
- Decreased overall travel time
- Increased Productivity

Current Solutions Being Planned for Kolkata

- ◉ Light Rail Transit System
- ◉ East-West Metro
- ◉ Elevated Ring Road

Plans for the LRT

- A: Panihati
- B: Joka
- C: Barrackpore



Plans for the LRT

- Original plan was to run from Joka to Panihati on a 32km stretch
- Extended to Barrackpore with an additional 6km
- Will have 37 Stations

High Hopes for the LRT

- Anticipated Commuter Movement from Joka to Barrackpore Estimated to number 27,000 Passengers an Hour
- LRT will connect Northern and Southern districts of the city, spanning almost 40km, in an estimated 90 minutes.
- Anticipation of future vehicular growth the LRT will be an elevated track system

Elevated Ring Road Proposal

- Would Encircle Kolkata, connecting Rajarhat airport, Salt Lake, Shyambazar, Burrabazar, Howrah, Vidyasagar Setu, Behala, Tollygunge, Kalighat, Park Circus, Baghajatin, and Dhapa
- 40.3km Stretch and planned as a six-lane elevated road.

Conculsions

- Although a possible solution, the Ring Road has been estimated to cost Rs 8,500 crore or roughly 1.77 billion USD
- Plan of LRT, and 400km of ring roads estimated to cost 19,000 crore.
- Vision for 2025, but population estimated to grow to 22mil while the system can only hold 16.2mil.