PRESENTATION ON

PERFORMANCE ASSESSMENT AND EXPANSION STRATAGIES OF CITY SERVICE AT KALABURAGI

BY

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सत्यमेव जयते
Ministry of Urban Development
Government of India

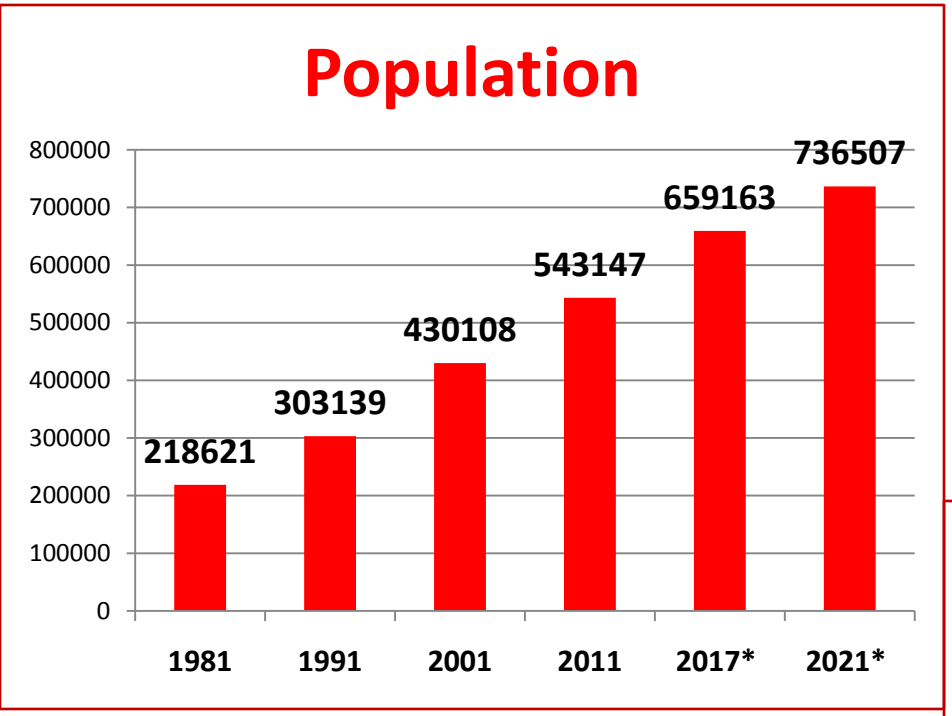
World Bank

CEPT University

PROFILE OF KALABURAGI CITY

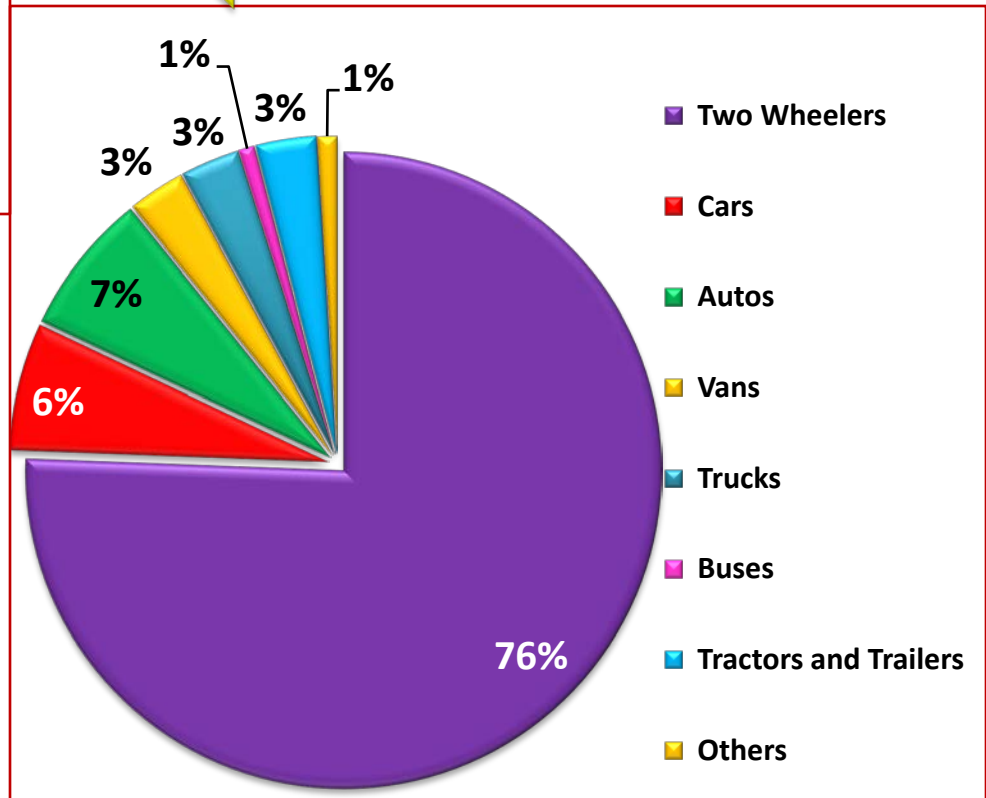
- 6Th largest city in Karnataka
- Divisional HQ of 6 NE Districts of Karnataka
- Wards-55
- LPA: 253sq km
- Coverage area :64sq. Kms.
- Road network :825Kms.
- Population : 5.32 lakhs.
- Population decadal growth rate :35.60%.
- PopulationDensity:8313/sq Km.

DEMOGRAPHY

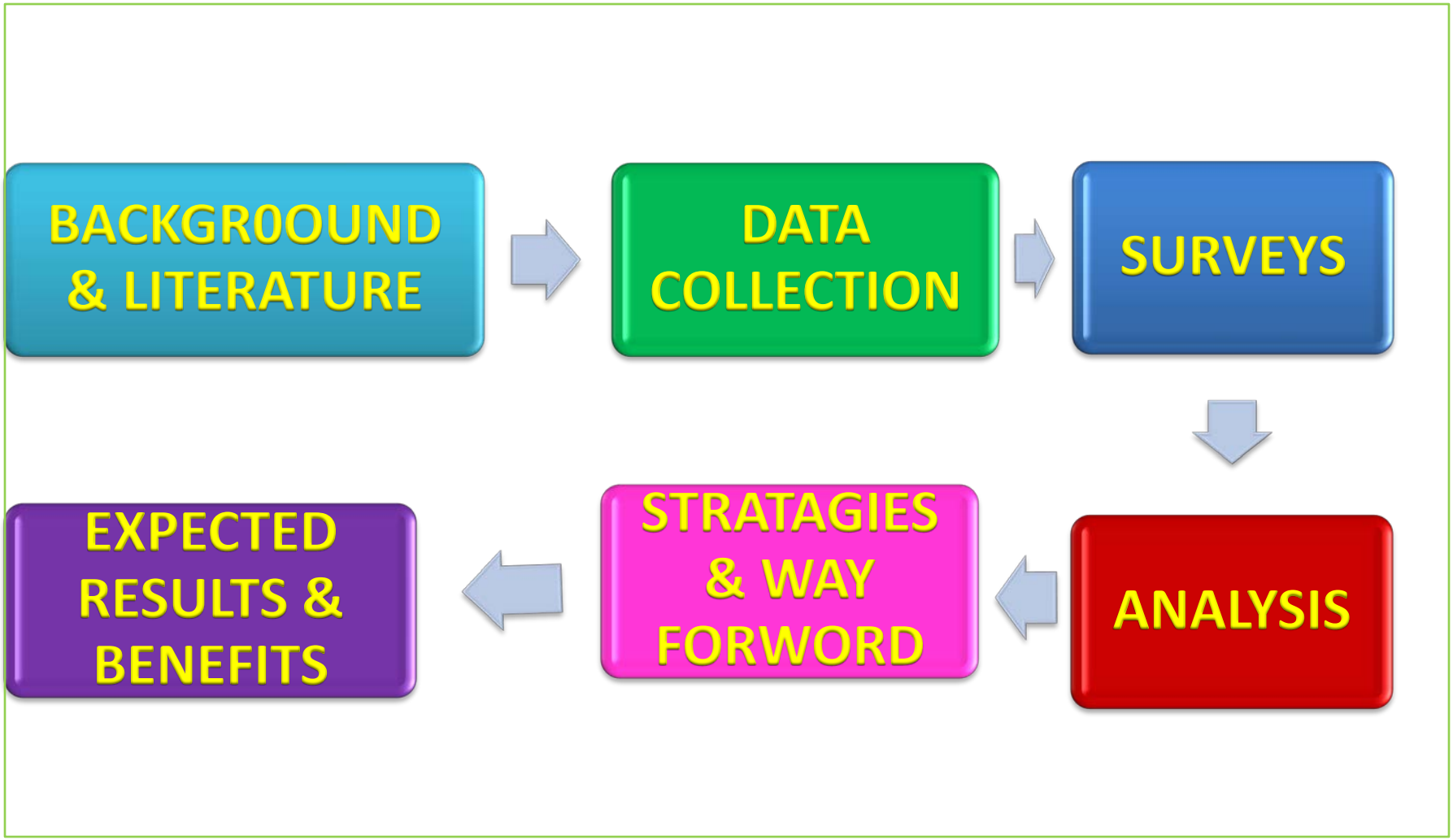


POPULATION GROWTH

COMPOSITION OF VEHICLES



APPROACH & METHODOLOGY



PRESENT OPERATION OF CITY SERVICES

Type of Buses	No of Buses	Trips	Seating capacity
STANDARD (DULT)	46	844	42+14
MIDI (JnNURM)	49	744	32+12
Total	**95**	**1588**	

STANDARD BUS

MIDI BUS

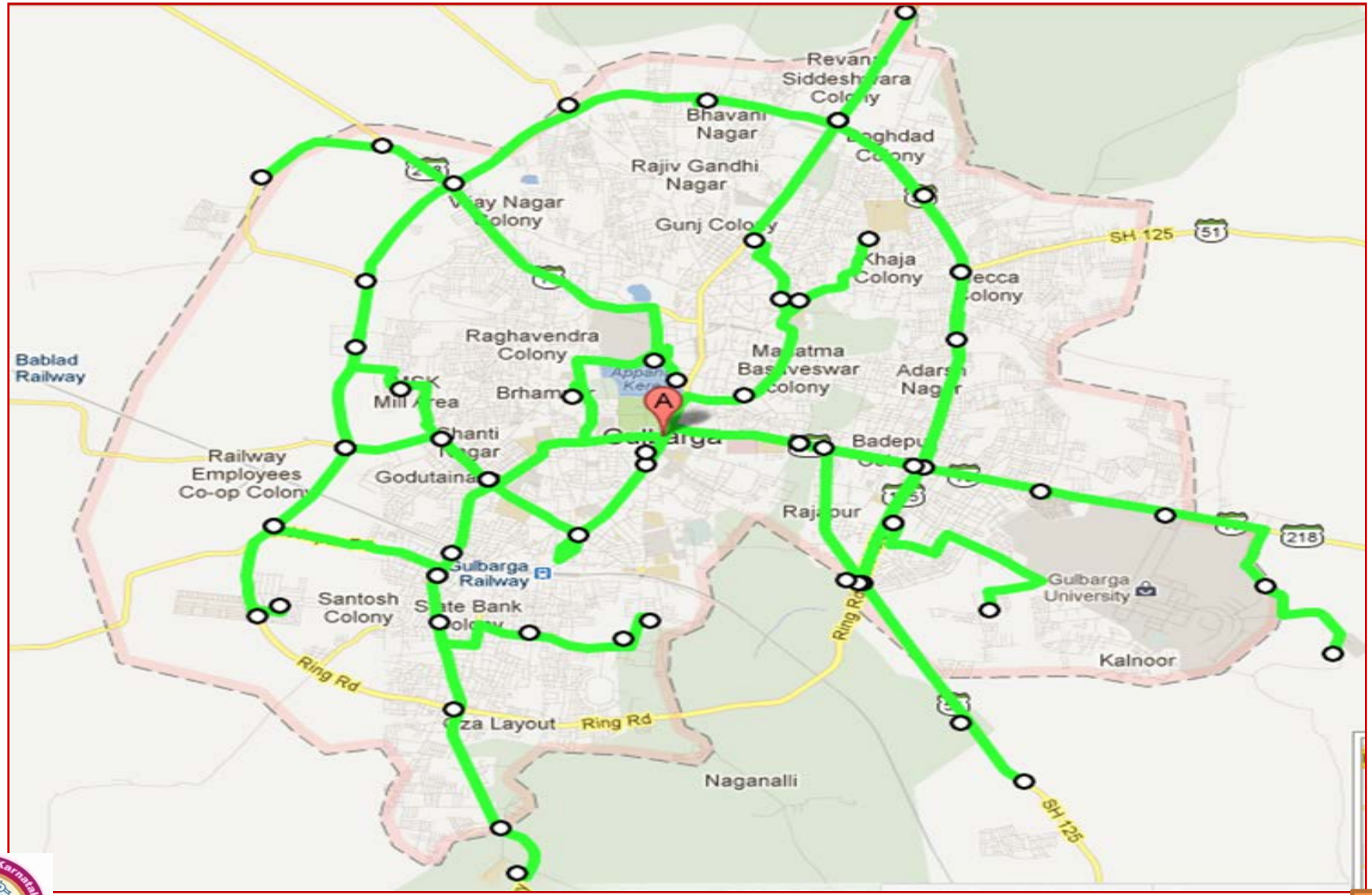
BUS SHELTER

- ITS such as GPS, ETM and PIS
- Buses are as per UBS
- Pneumatic door closure for safety

39 bus shelters

Solar powered light sensitive illumination

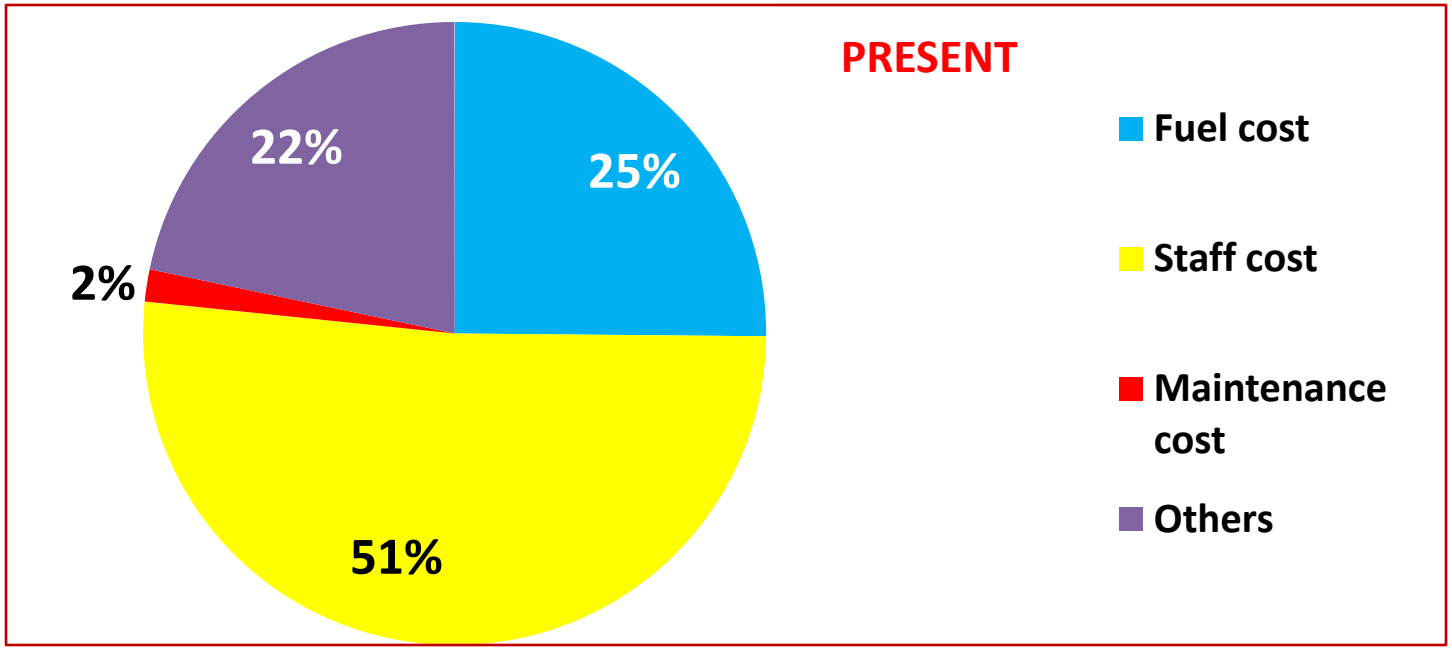
KALABURAGI CITY ROUTE COVERED WITH CITY SERVICES



PEREFORMANCE OF EXISTING CITY SERVICES

S.N	Parameters	Before (Oct-14 –March-15)	After (Oct-15 –March-16)	Present (April-17-Sept-17)
1	No. of Schedules	78	88	95
3	No. of Trips	1412	1558	1588
4	Trips operated daily	1380	1496	1516
5	Trip efficiency (%)	97.80%	96.00%	95.50%
6	Schedule kms	13026	15048	16956
7	Daily effective Kms	12664	14563	16184
8	Kms efficiency(%)	97.22%	96.78%	95.45%
9	No of Routes	19	23	45
10	Total Route length(Kms)	135	172	286
11	Avg route length(Kms)	7.15	7.50	6.35
12	Average headway(Min)	10	12	13
13	Vehicle Utln (in Kms)	167	171	182
14	Ridership per day	96016	84920	73795
15	Ridership per bus	1230	965	778
16	Occupancy Ratio(%)	112%	96%	85%
17	KMPL	4.79	4.85	5.12
18	Revenue / bus / day (in Rs)	5773.00	5776.00	6029.00
19	EPKM (In Rs.)	34.57	33.78	33.13
20	CPKM(In Rs.)	36.97	42.81	45.89
21	MPKM (In Rs.)	-3.94	-9.03	-12.77

COST ANALYSIS OF CITY SERVICES



Period	Cost of operation per Kms (In Rs/Km)				
	Staff	Fuel	Maintenance	Other	TOTAL
Oct-14-March-15	19.00	9.00	1.00	9.00	38.00
Oct15-March16	21.00	10.00	1.00	11.00	43.00
April-17-Sept-17	23.00	12.00	1.00	11.00	47.00

SOCIAL OBLIGATIONS

(Rs. In Crores)

S N	Passes	Nos	Total Expenditure	Subsidy From GoK	Deficit
1	Students passes (25:50:25)	11560	10.41	4.12	-6.29
2	Physically disabled person(25:50:25)	1245	0.18	0.12	-0.06
3	Blind person (0:50:50)	107	0.15	0.14	-0.01
4	Freedom fighter (0:50:50)	29	0.10	0.10	00.00
5	Senior citizens (75:12.5:12.5)	324777	0.41	0.26	-0.15
	Total	**337718**	**11.25**	**4.74**	**-6.51**

Expenditure sharing
Ben : GoK: NEKT

IMPACT OF FARE HIKE

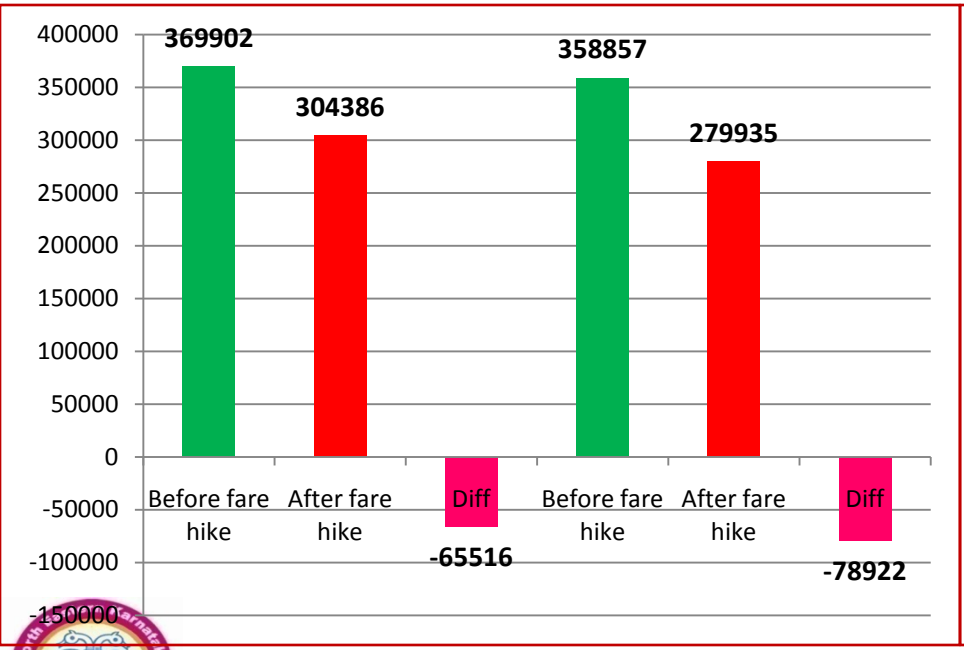
Kms	Stages	Fare in Rs.	
		BEFORE	AFTER
0-2 Km	1 stage	3.00	5.00
2-4 Km	2 stage	5.00	6.00
4-6 Km	3 stage	7.00	7.00
6-8 Km	4 stage	8.00	8.00
8-10 Km	5 stage	9.00	9.00
10-12 Km	6 stage	10.00	10.00
12-14 Km	7 stage	13.00	13.00

Revised fares are implemented w.e.f.1.10.2015

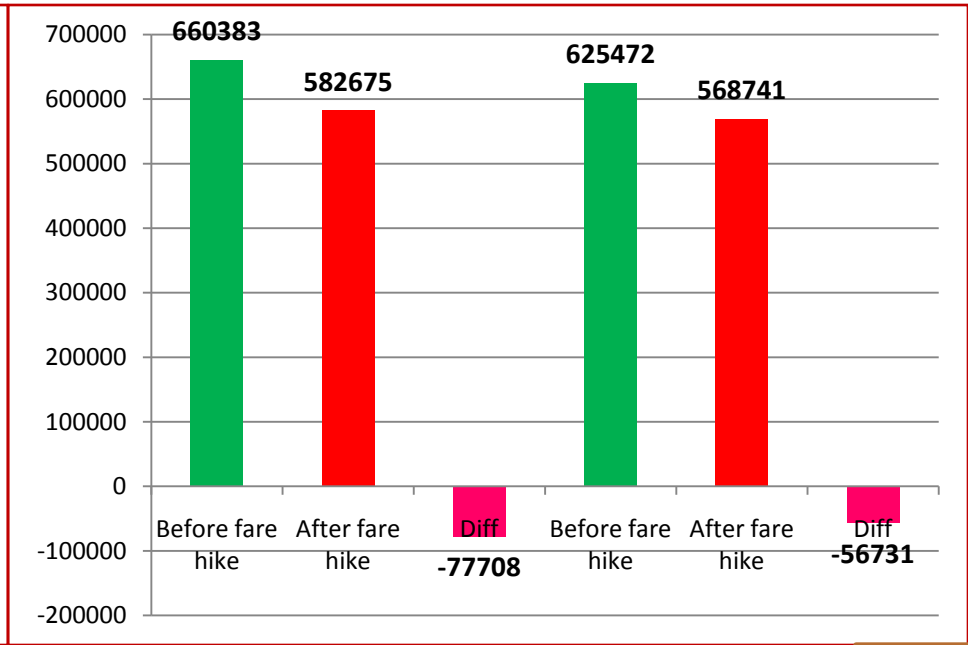
IMPACT OF FARE HIKE

Old Fare	Revised Fare	Ridership			Ridership		
		Before fare hike (Oct-14)	After fare hike (Oct-15)	Diff.	Before fare hike (Nov-14)	After fare hike Nov-15)	Diff.
3.00	5.00	369902	304386	-65516	358854	279935	-78919
5.00	6.00	660383	582675	-77708	625472	568741	-56731

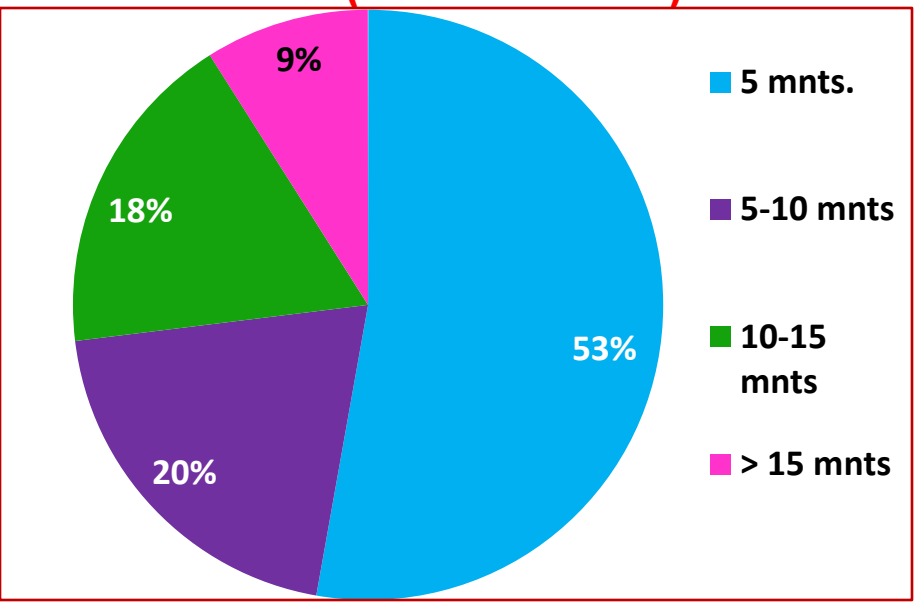
Ist Stage fare impact



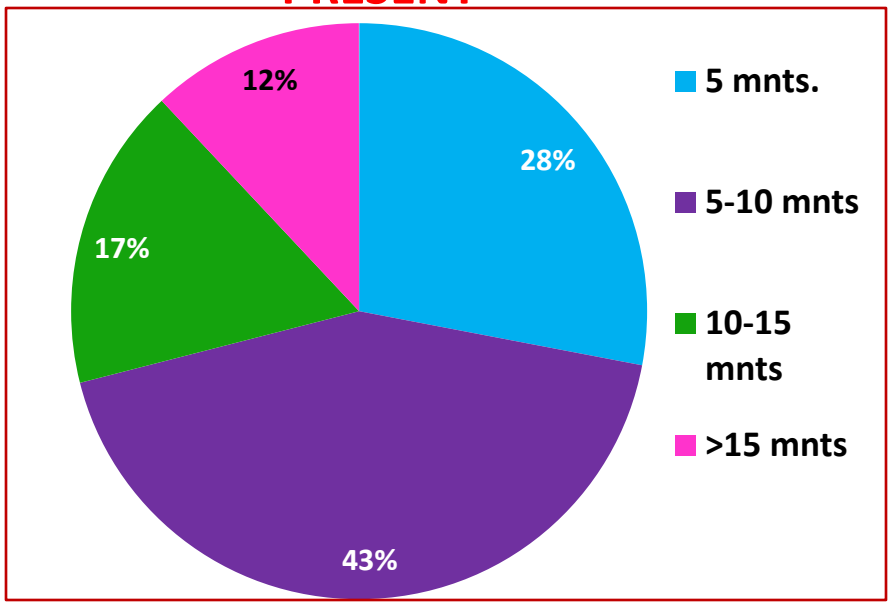
2nd Stage fare impact



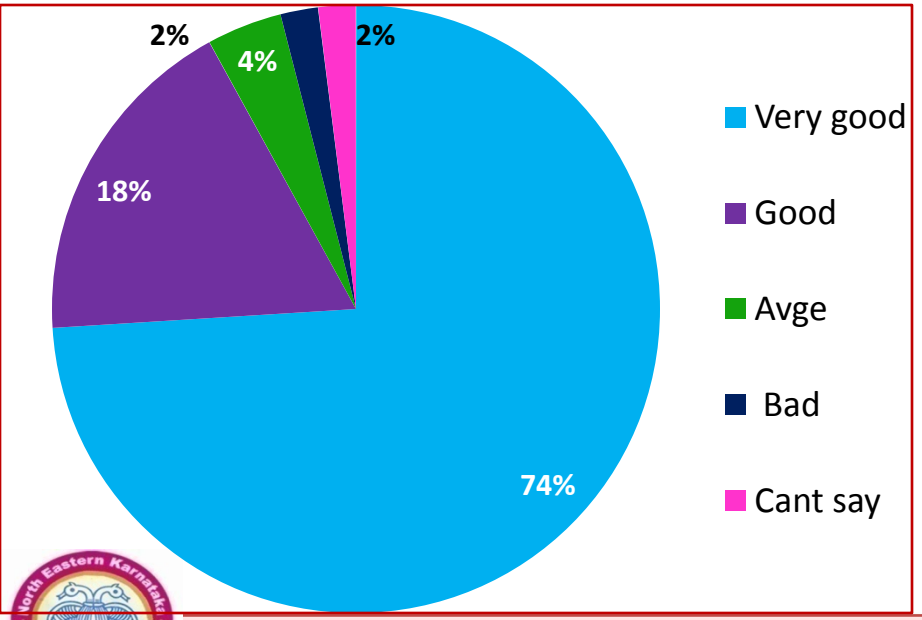
BEFORE (Oct14-March15)



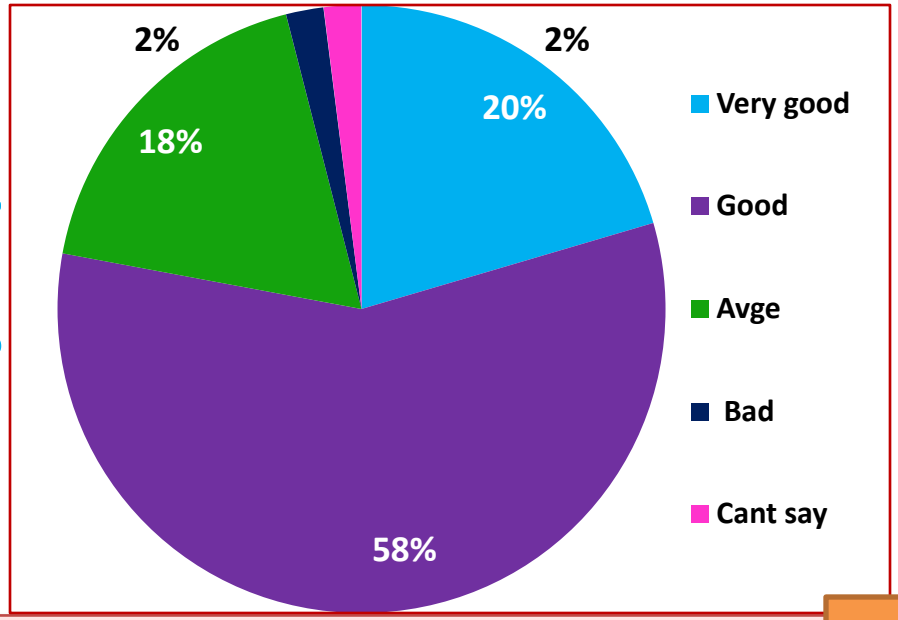
PRESENT



Waiting time

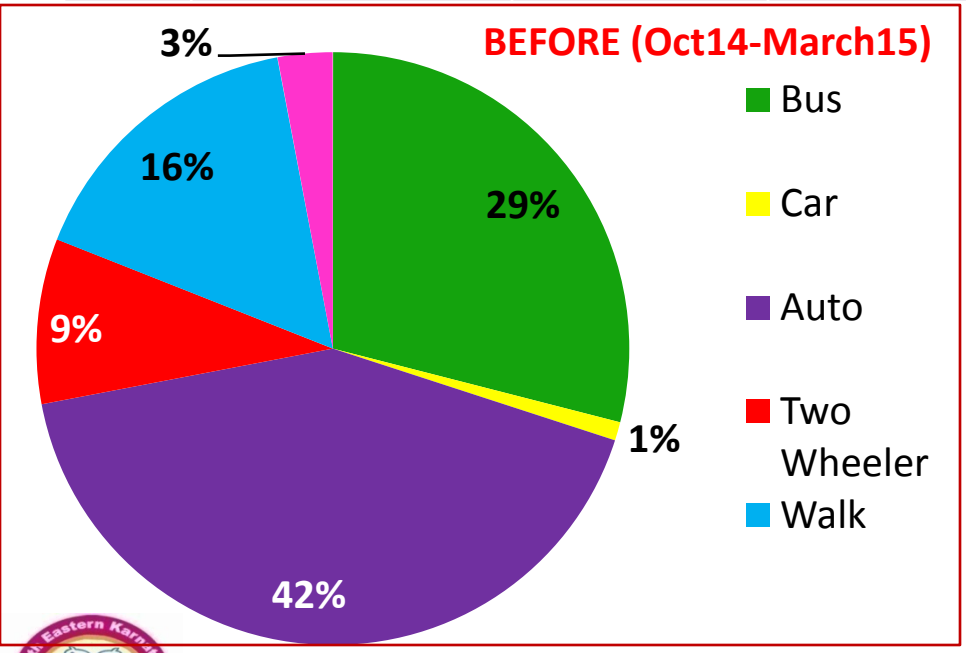


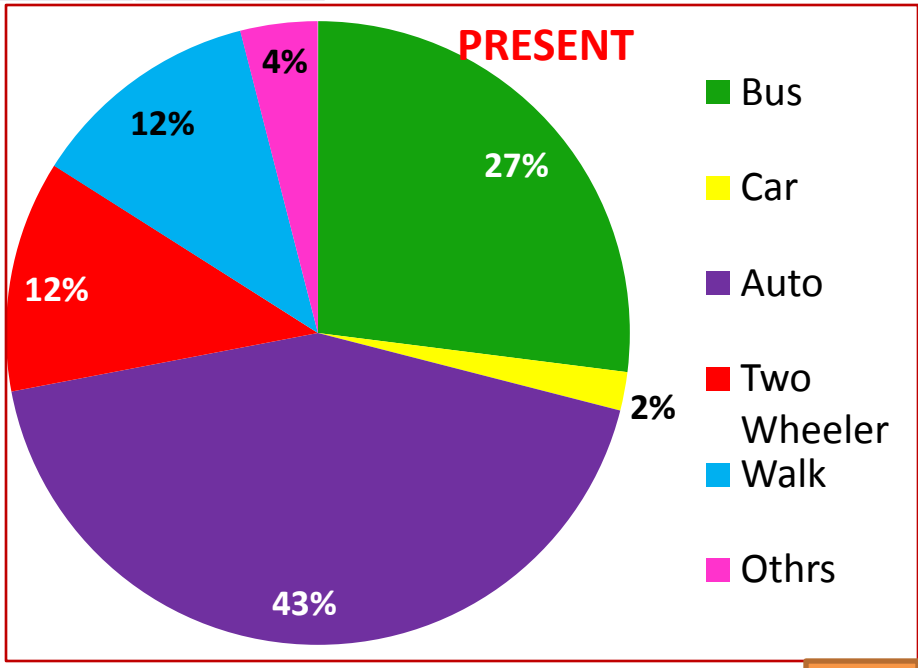
Quality of services



MODAL SHARE

S N	Modes	Share		Diff
		Before	Present	
1	Auto	42%	43%	+1%
2	Bus	29%	27%	-2%
3	Two wheeler	9%	12%	+3%
4	Walk	16%	12%	-4%
5	Car	1	2%	+1%
6	Others	3%	4%	+1%





REASONS FOR REDUCTION IN RIDERSHIP

AFTER DETAILED ANYLYTICAL STUDY AND VERIFYING SURVEY RESULTS THE FOLLOWING ARE MAIN CAUSES FOR REDUCTION IN RIDERSHIP

1. REVISION OF FARE @ stage 1 from Rs.3.00 to Rs. 5.00 and @ stage 2 Rs.5.00 to Rs. 6.00 as fare is so sensitive for middle or tier II Cities.
2. Introduction of Midi type buses with less seating capacity.
3. Shift of 2% PT trips to IPTs/2 wheelers appears to be logical in view of increased tariff and a significant drop in service quality as also increase in waiting time.
3. Personalised vehicles have increased as their per capita increased and also due to subsidised auto financing policy have liberalised
4. Competition from IPT's and clandestine operation
5. Modal shift to other modes
4. Change in frequency in some of routes due to obligatory services

STRATAGIES TO INCREASE RIDERSHIP

1. Present operation of City & Suburban services

Type of buses	No of buses	Trips	Frequency	AVG EPKM(In Rs)	Occ Ratio(%)
City services	95	1588	13 Min	33.13	85%
Suburban services	35	438	40 Min	21.62	55%

2. Fare structure

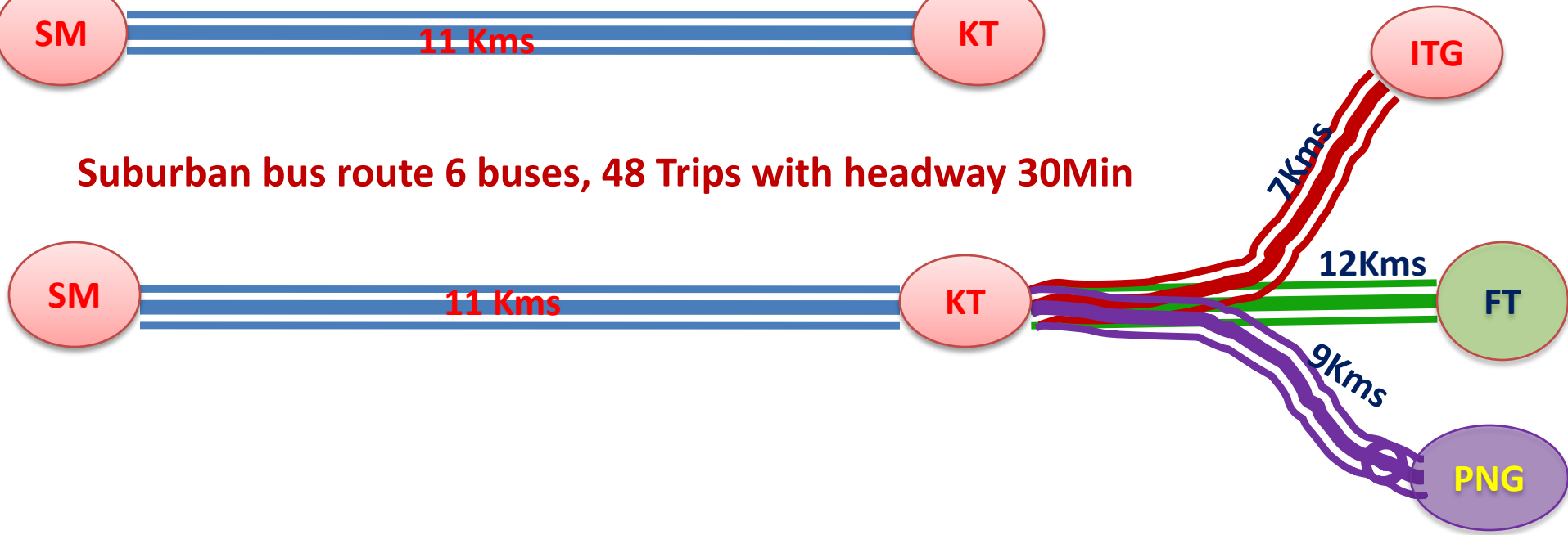
Stages	City fare	Sub Urban fare	Diff	Proposed common fare for both City & Suburban)
1 (0-2Kms)	5.00	5.00	0.00	5.00
2 (2-4Kms)	6.00	8.00	+2.00	6.00
3(4-6 Kms)	7.00	10.00	+3.00	7.00
4(6-8Kms)	8.00	13.00	+5.00	8.00
5(8-10Kms)	9.00	14.00	+5.00	9.00
6(10-12Kms)	10.00	15.00	+5.00	10.00

3. Integration of City &Sub Urban services in City limit

Route selected for pilot – Super Market- Kotnoor

City bus route 6 buses, 60 Trips with headway 14Min

Suburban bus route 6 buses, 48 Trips with headway 30Min



SM-Super Market **KT**-Ktnoor **ITG**- Itaga

FT-Farathabad **PNG**- Panegaon

STRATAGEIES TO INCREASE RIDERSHIP

4. IDENTICAL TYPE OF BUSES FOR BOTH CITY AND SUBURBAN SERVICES

Present city bus

Present suburban bus

Present city bus terminus N

Present suburban bus terminus

Proposed city/ suburban buses & bus terminus

RESULTS OF PILOT ROUTE

EXPECTED RESULTS AFTER INTEGRATION OF CITY &SUBURBAN SERVICES OF PILOTED ROUTE

S N	PERTICULAR	BEFORE	AFTER
1	No of Buses	6	6+6
2	Trips	60	60+48
3	Frequency	15Min	8Min
4	Total ridership	4668	5868
5	Ridership per bus	778	978
6	Rev per bus (In Rs)	6029.00	7029.00
7	Occupancy Ratio(%)	85%	97%
8	EPKM (In Rs)	33.13	38.62
9	CPKM (In Rs)	45.89	45.89
10	MPKM (In Rs)	-12.77	-7.27

Suburban Bus service performance will also improve

Occupancy ratio from 55% to 70%

EPKM from Rs 21.62 to Rs 24.86

STRATAGY TO INCREASE RIDERSHIP

5. After Success of this pilot, the same will be replicated on other sectors of city like

- SM TO Greenfield Airport (8+6) *
- SM TO Central university (6+8)*
- SM TO Chinchansur (4+10)*
- SM TO Aurad (8+10)*

6. These sector wise services will be operate from common plot form from Upcoming City Bus Terminal @ Super Market

7.“BUS DAY “ Once In Month will be organised to attract more commuters by involving public representatives, Local Authorities and Citizens.

8. Proposed for construction of 20 additional city bus shelters.

LONG TERM STRATAGY

1. Augmentation of 25 city services in Kalaburagi.
2. Modern City Bus Terminus with all amenities.
3. Introduction of smartcard passes.
4. Implementation of VTMS and PIS system.
5. Integrated multi modal operation-Railway(Avg about 32000 Passengers footfall @ railway station on every day)

* City +Sub urban Buses

1.Reduction in traffic congestion.

2. Reduction in emission/Carbon footprint.

3. Improve public safety.

4. Reduction in infrastructure requirement.

5. To increase public transport share @ 40%.

6. Improvement in quality of urban life.

7. Social sustainability to all walks of life.

8. Increase the ridership of public transport.

9. Expect a high level of modal share from other modes.

A city is smart if it uses its resources efficiently and reduces waste – not by investing more only to continue its waste

THANKING YOU

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