

National Dissemination Workshop on

Electrification of Public Transport and Intermediate Public Transport in Indian Cities

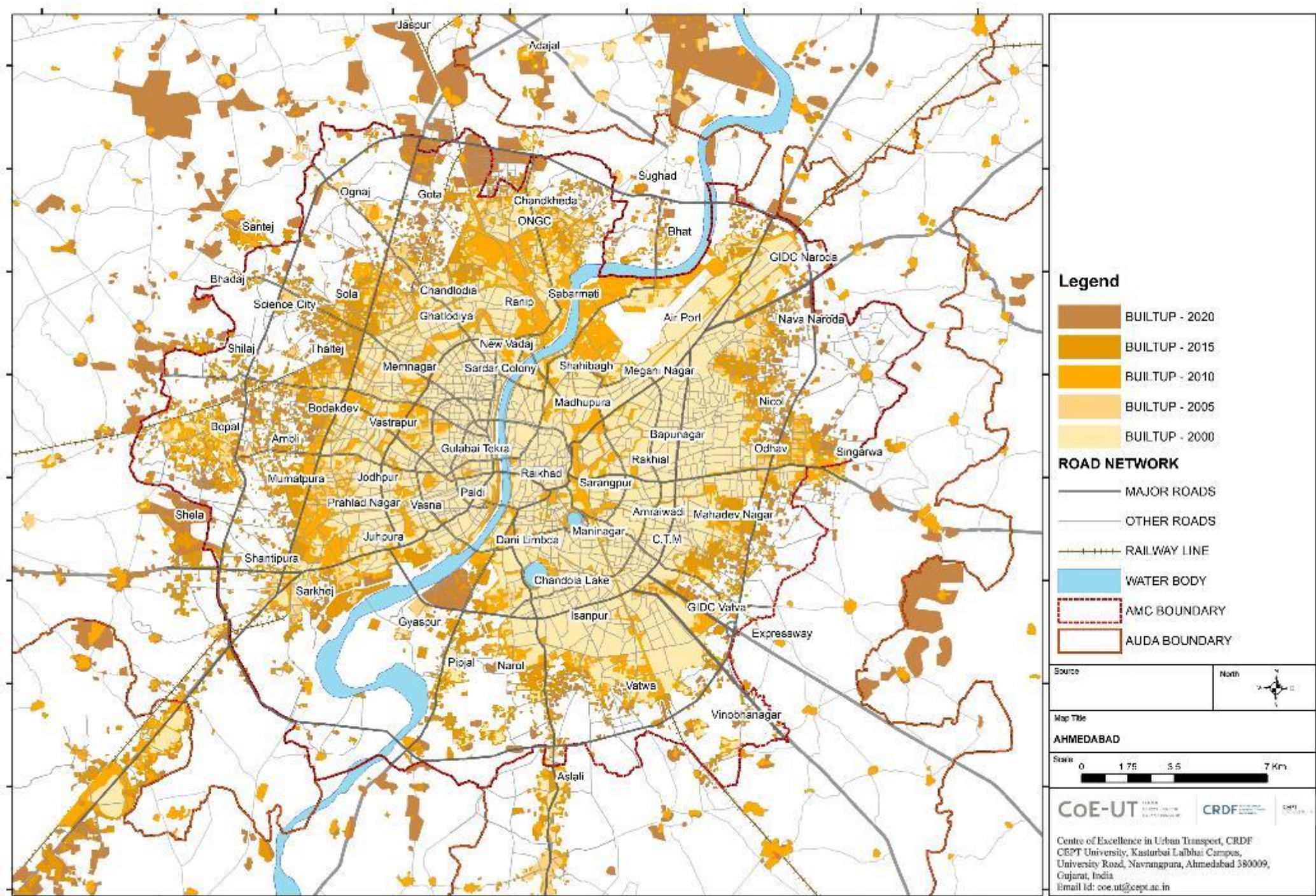
26th April, 2022

Session 1: PT Electrification Strategy for Ahmedabad

Public Transport Overview and Electrification

Shri Arjav Shah
Deputy Commissioner, AMC

Context of Ahmedabad



- Ahmedabad, 7th largest city in India with 7.3 million population in year 2021.
- Rapid population growth – 2.4% annually
- Rapid urbanisation – 37% developed area added in last one decade.

Detail	2001 Census	2011 Census	2021* (Estimates)
Population (in million)	4.50	5.67	7.31
Annual Growth Rate (CAGR)	-	2.2%	2.4%
AMC, Area (sq. km)	191	466	489
Developed Area (sq. km)	146	171	271

Developed area – incremental growth from year 2000-2020

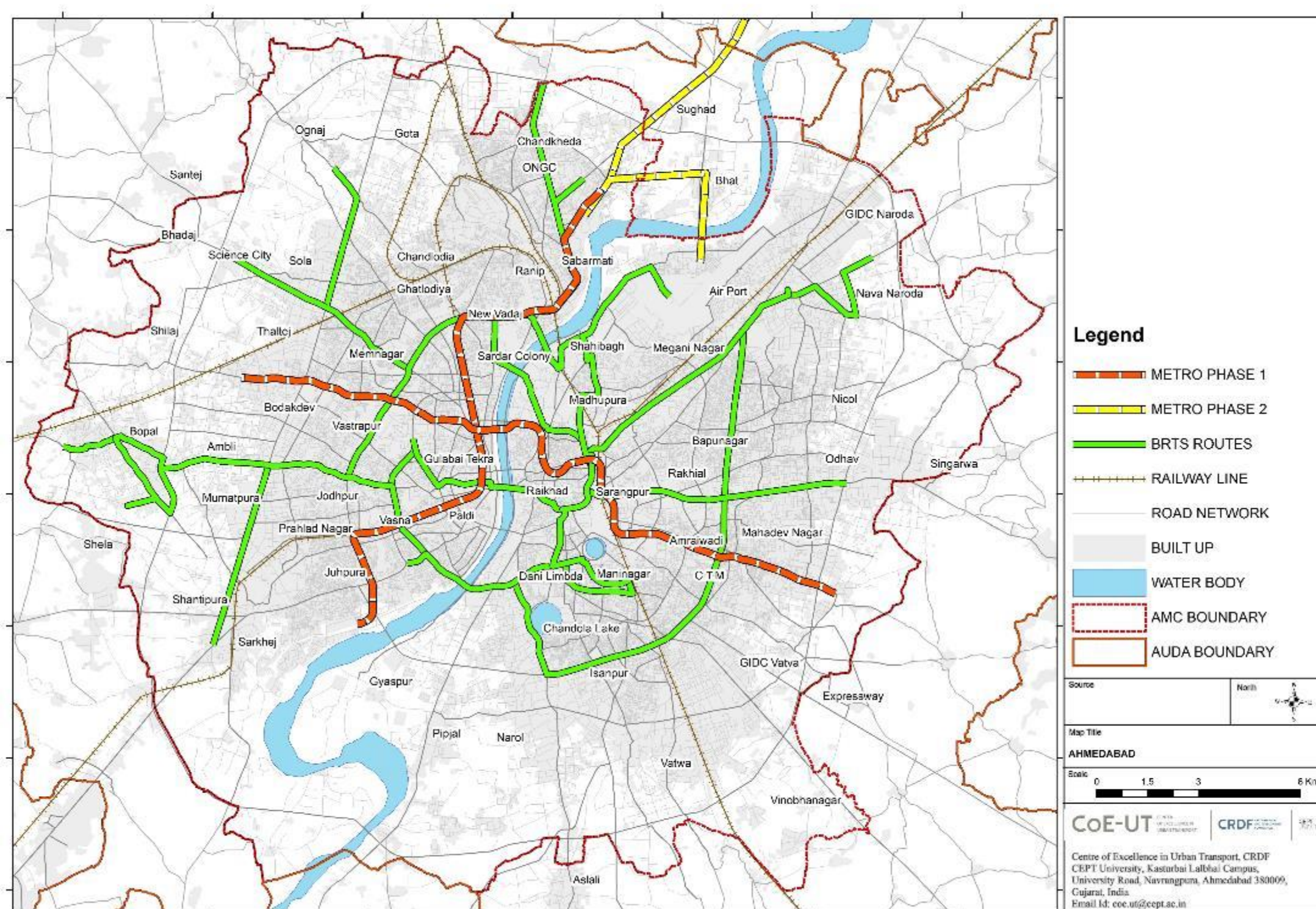


Public Transport – Ahmedabad

City is served currently by around 1000 buses (conventional fuel and electric)

- Introduced BRT system in 2009, extensive network of 130km – best practice case for other Indian cities
- One of the largest successfully implemented BRT system in India by Ahmedabad JanMarg Ltd (AJL), a special agency established by AMC.
- Pioneer in operating E-Buses in India, currently operates about 200 electric buses of total 385 buses.
- Municipal body Ahmedabad Municipal Transport Services (AMTS) is responsible for city bus operations since 1947, currently operating about 687 buses in the city.

Public Transport – Ahmedabad



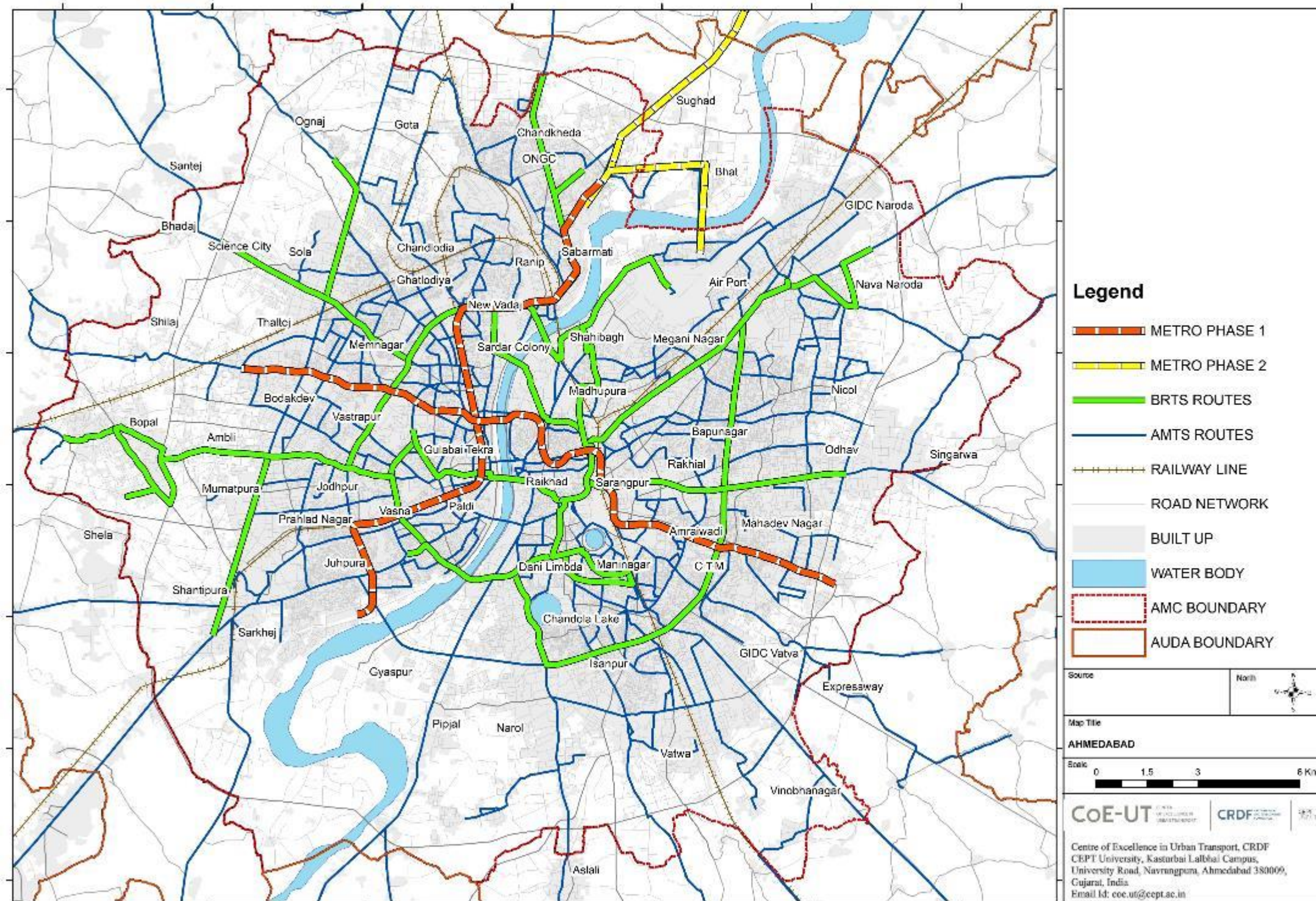
❑ Ahmedabad – Gandhinagar Metro, GMRCL

- Phase I (N-S and E-W) – 38km
- Phase II (Gandhinagar connection) – 34km
- Currently under construction

❑ BRTS Network, AIL

- Total network – 130 km (89km segregated and 41 km in mixed traffic)
- Total no of routes – 18
- BRTS stations – 179
- Total fleet size – 385 (183 ICE and 202 E-Buses)
- Average daily ridership – 0.17 mn (March'22)

Public Transport – Ahmedabad



AMTS – City Bus Services

- Total network – 676 km
- Developed area coverage – 95%
- Total no of routes – 149
- AMTS stops – 2170

Currently predominantly paper based ticketing (non-integrated),

Recently JanMitra (Smart card) has been introduced – An initiative towards single ticket (integrated fare) journey.

Electrification of buses

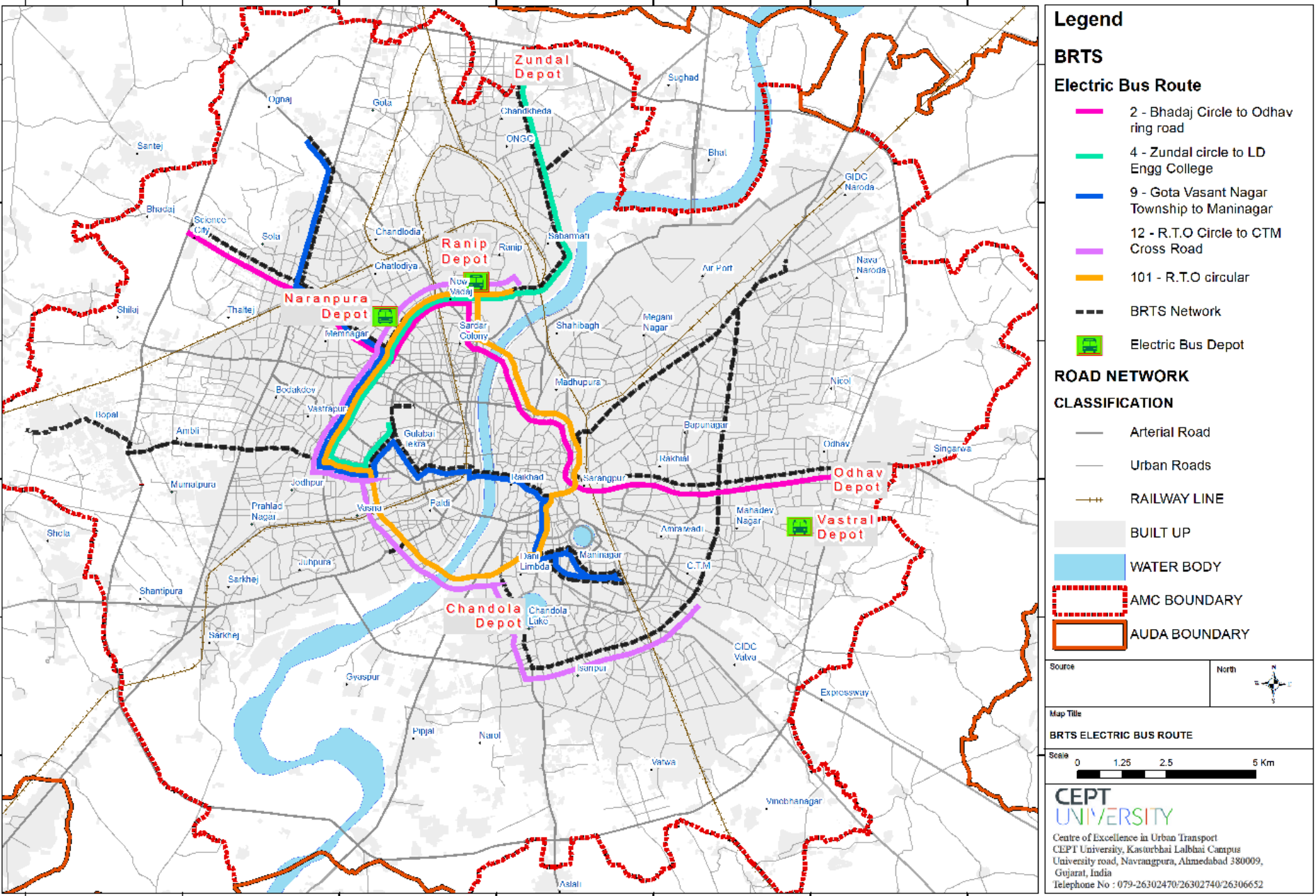
Ahmedabad is pioneer in E-Bus operations in India.



E-buses in BRTS corridors of Ahmedabad

Procurement Year	2019		2021	2021/22
No. of buses	32	17	90	60
Depot	Naranpura	Ranip	Vastral	Naranpura
Battery Capacity	345 kWh	129 kWh	196 kWh	176 kWh
Range	240 km	70 km	130-150 km	120-140 km
Contract Type	GCC		GCC	GCC
Funding	AMC		AMC + FAME 2	AMC + FAME 2

Total 202 E-Buses in operations.



Electric Bus Routes BRTS, 2021

Varying battery sizes and range

Depot based charging – Overnight + Opportunity

Deployment on BRTS routes on a Gross Cost Contract

Future Plans – Electric buses



"The government intends to have EV sales penetration of 30% for private cars, 70% for commercial vehicles, **40% for buses**, and 80% for two and three-wheelers by 2030"

- Shri Nitin Gadkari, Minister of Road Transport and Highways, Gol 31 August 2021

- ❑ Currently, 20% of total bus fleet is Electric in Ahmedabad.
- ❑ Additional 150 E-Bus procurement is under process,
 - 100 buses will be operated by AJL on BRTS routes
 - 50 buses will be operated by AMTS to start E-Bus operations in city bus operations.
- ❑ UKPACT study and city's experience would help to formulate long term strategy for upscaling E-Bus operations.

Thank You..



Ahmedabad Municipal Corporation



Ahmedabad Janmarg Ltd.



Ahmedabad Municipal Transport Service