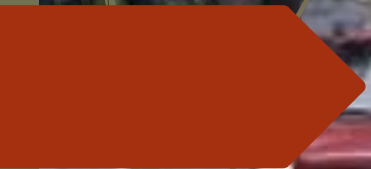


METRO LITE SYSTEM

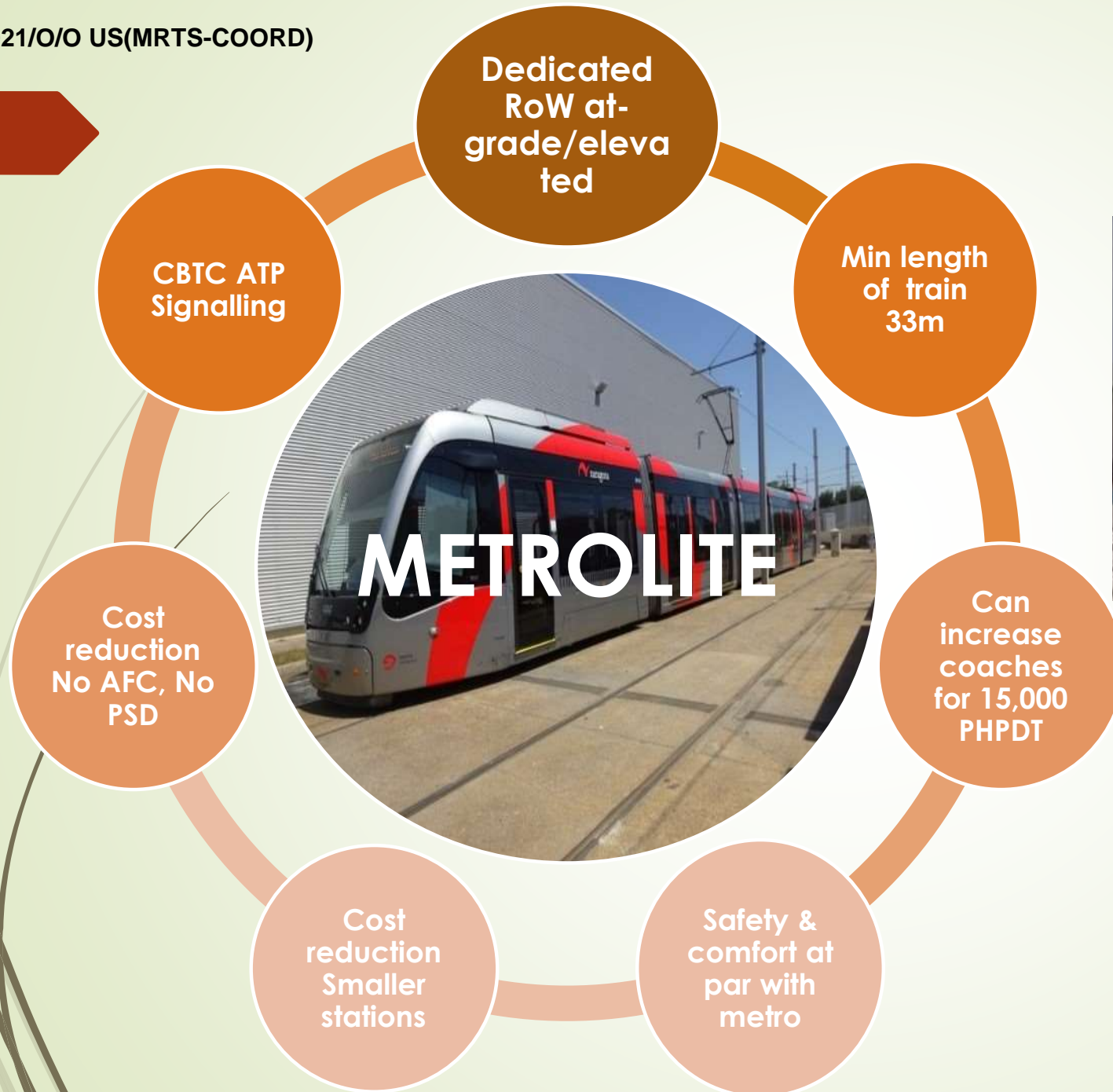
MINISTRY OF HOUSING AND URBAN AFFAIRS
GOVERNMENT OF INDIA



WHY METROLITE?

- Requirement of cost effective MRTS for tier 2/3 cities – with PHPDT upto 15,000
- Bus transit system cater upto 5,000 PHPDT which is insufficient
- Heavy metro is economical for PHPDT greater than 15,000.
- Rail based light metro system with PHPDT upto 15,000 operating successfully worldwide.
- MoHUA has issued standard specifications in July 2019 for rail based light metro system named Metrolite for use in tier 2/3 Indian cities.

FEATURES OF METROLITE



BROAD METROLITE SPECIFICATIONS

- **RoW of 7.6m, standard gauge track**
- **Platform width of 1.12m, side evacuation between tracks.**
- **Low floor rolling stock, max 12T axle load with PHPDT upto 15,000**
- **Upto 300 pax capacity at AW3 loading, max operation speed is 60kmph**
- **750VDC traction power supply**
- **CBTC based signalling (GOA1) integrated with road signals, CCTV surveillance in stations.**

Above standards ensure the quality, safety, punctuality and comfort levels at par with heavy metro

1702416/2021/0/0-UB(MRTS-CORP) **Cost aspects of Metrolite (Thane DPR @ 2019 level) compared to Nagpur Metro actual costs**⁵⁹⁶

SN	Sub-system	Description	Metro lite (Rs.Cr/KM)	Heavy Metro (Rs.Cr/KM)
1	Viaduct	Smaller viaduct	33.5	36
2	Stations	Concourse eliminated, platforms height is reduced	23	55
3	Track	Ballast less embedded track at grade systems	6.5	9
4	Traction & PSI	Lesser power requirement	10	11
5	Rolling Stock	Smaller rolling stock	27	26
6	Signalling	CBTC based signalling	5	10
7	Depot	Less depot area	2	5.5
8	Misc. Utilities		1	4
9	Telecom & Security	Smaller stations with optimal telecom services	2	5
10	Ticket vending (AFC)	No AFC gates	0.1	3
Taxes, design charges, Contingencies etc.,			30.5	57.5
Gross Total including GST in INR			140	222

***Metrolite costs Rs.140Cr/KM (Thane Metrolite DPR @ 2019 level) whereas heavy metro costs Rs. 222 Cr/KM (As per Nagpur Metro actual costs)**

BUDAPEST (HUNGARY)

- ▶ 158KM, 600 Rolling stock
- ▶ ROW shared with roadside traffic
- ▶ 750VDC OHE
- ▶ Rolling stock with 5 car and 9 car variants.
- ▶ 200 pax in 33m train (5 car) catering upto 6,000PHPDT
- ▶ 350 pax in 56m train (9 car) catering upto 10,000PHPDT



VIENNA (AUSTRIA)

- 176KM, 525 Rolling stock
- ROW shared with roadside traffic
- 600VDC OHE
- Rolling stock with 5 car
- 224 pax in 32m train (5 car) catering upto 6,800PHPDT



MELBOURNE

- 250KM, 493 Rolling stock
- ROW shared with roadside traffic
- 600VDC OHE
- Rolling stock with 3car, 5 car, 7 car of various makes
- Average 300pax catering upto 8,000PHPDT



SAN DIEGO (USA)

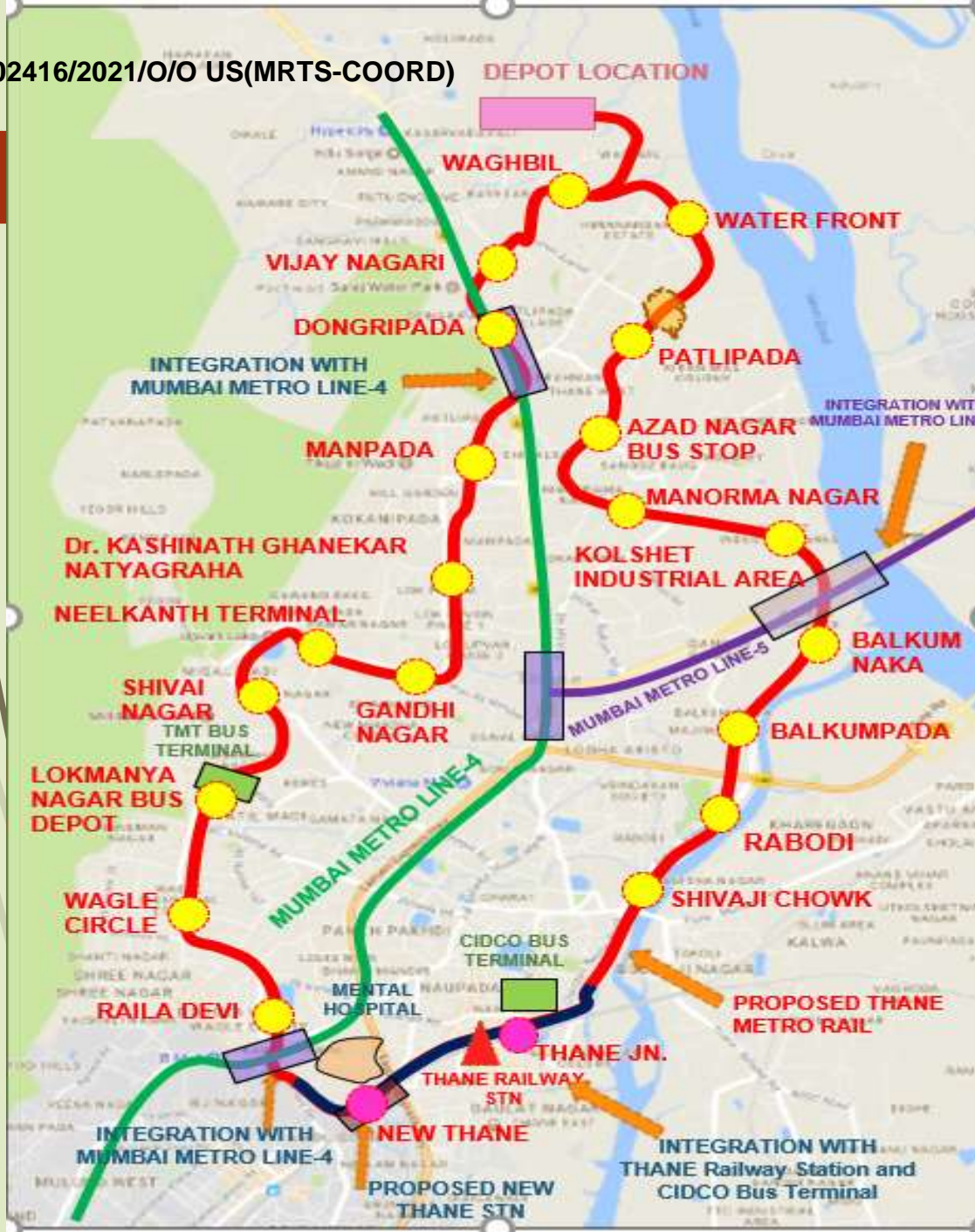
- 86KM, 128 Rolling stock
- ROW shared with roadside traffic
- 600VDC OHE
- Rolling stock with 3car caoches
- 25m long 3 car train carries 225 pax catering upto 6,800 PHPDT



COPENHAGEN (DENMARK)

- 43KM network UG & elevated
- Working on dedicated RoW
- 790VDC 3rd Rail
- Rolling stock with 3car coaches
- 38m long 3 car train carries 441 pax catering upto 13,000 PHPDT





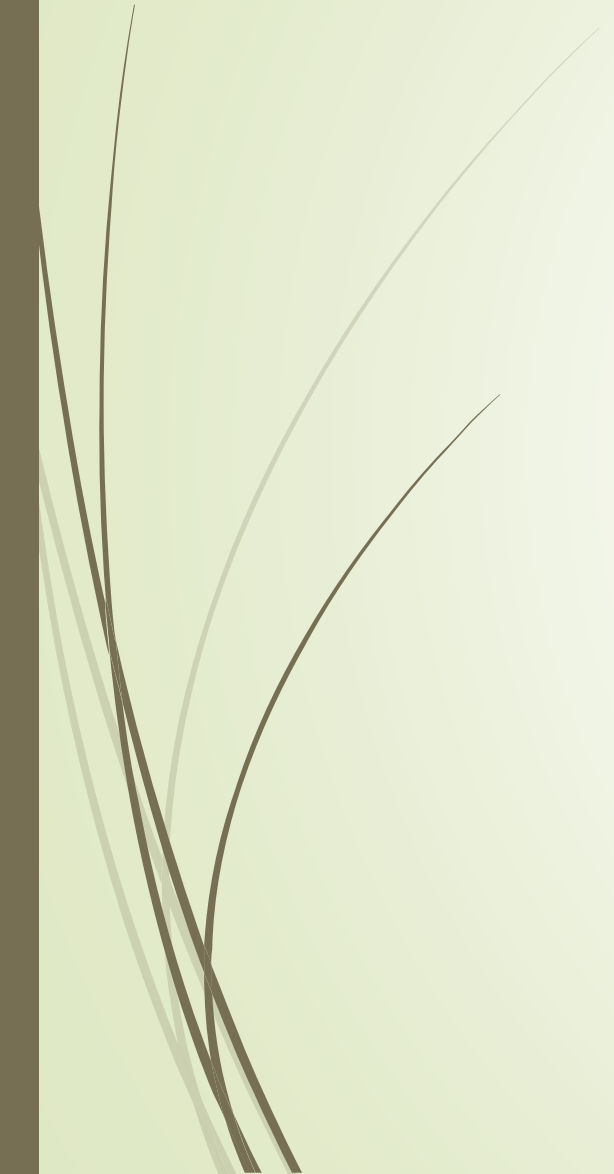
THANE METROLITE PROJECT KEY FEATURES

- Ring corridor of total length 28.8KM
- Elevated section - 26KM, UG section - 3KM
Number of stations -22; Number of depots - 1.
- Total Project Cost (DPR)- Rs.6279 Cr
- DPR for Thane Metrolite for 32KM cleared by Thane Municipal Corporation & submitted to GoM

WAY FORWARD

- DPR for Thane Metrolite for 32KM cleared by TMC & submitted to GoM for submission to Gol.
- Presently the cities under consideration for implementing metrolite are
 - Gorakhpur (Uttar Pradesh)
 - Jammu & Srinagar (J&K)
 - Rithala to Narela line in Delhi
 - Coimbatore
 - Hyderabad Metro Phase II

THANK YOU



Parameters	Metro lite	Metro Neo
RoW	Dedicated RoW with fencing/parapet wall	Dedicated RoW with fencing/parapet wall
RoW/viaduct width	7.6m	8m
Min Platform width	1.12m	1.12m, island PF width = 4m,
Track	Standard Guage	No track, kerb/centre rail guidance
Items minimized	AFC gates, DFMD, separate concourse	AFC gates, DFMD, separate concourse
Axle load & PHPDT	12T axle load, PHPDT upto 15,000	Around 10T axle load, PHPDT = 8,000 extendable to 10,000
length x width of rolling stock	33m x 2.65m	18m or 24m x 2.55m
low floor height	300-350mm	300-350mm
Pax capacity @ AW3	300 pax in 3 car train	200 pax for 18m coach, 250 pax for 24m coach
Traction	750VDC OHE or embedded 3rd rail	750VDC OHE, can run upto 25KM with battery supply where OHE is not present
Signalling & Telecom	CBTC ATP GOA1, CCTV surveillance & TETRA radio	ATP only with anti collision features CCTV surveillance, radio and OFC based network

Metro Neo costs Rs.71Cr/KM (Nashik MetroNeo DPR @ 2019 level), Metrolite costs Rs.140Cr/KM (Thane Metrolite DPR @ 2019 level) whereas heavy metro costs Rs. 222 Cr/KM (As per Nagpur Metro actual costs)