



NORTH CAROLINA

Department of Transportation



NCDOT Transportation Performance Management (TPM)

Targets for the 2022-2025 Performance Period

Pavement, Bridge, and System Performance

Targets established December 15, 2022

FHWA Performance Measures

PM1 – Highway Safety

1. Number of fatalities
2. Fatality rate
3. Number of serious injuries
4. Serious injury rate
5. Number of non-motorized fatalities and serious injuries

PM2 – Pavement and Bridge Condition

6. Interstate pavement in Good condition
7. Interstate pavement in Poor condition
8. Non-Interstate NHS pavement in Good condition
9. Non-Interstate NHS pavement in Poor condition
10. NHS bridges in Good condition
11. NHS bridges in Poor condition

PM3 – System Reliability, Freight Reliability, and CMAQ

12. Travel time reliability on the Interstate
13. Travel time reliability on the non-Interstate NHS
14. Truck travel time reliability on the Interstate System
15. Emission reductions from CMAQ projects
16. Annual hours of Peak Hour Excessive Delay per capita (Charlotte Urb Area)
17. Percent Non-SOV Travel (Charlotte Urb Area)



FTA Transit Performance Measures

Transit Asset Management

- Equipment (age)
- Rolling stock (age)
- Infrastructure (condition)
- Facilities (performance restrictions)

Transit Safety

- Number and rate of fatalities
- Number rate of reportable injuries
- Safety events
- System reliability

- Transit providers set these targets annually. MPOs update these targets when they update their LRTP.
- Additional information from FTA is available [here](#) and [here](#).



Target Setting Requirements

For PM2 and PM3, states and MPOs must establish 2-year and 4-year targets every four years

State DOTs shall coordinate with relevant MPOs on the selection of targets



MPOs must then establish targets within 180 days

By June 13, 2023

MPOs shall coordinate with the State DOT on the selection of targets



MPOs establish targets by either:

Agreeing to plan and program projects so that they contribute toward the accomplishment of the State targets; or

Committing to a quantifiable target for the MPA





PM2 – Pavement and Bridge Condition Performance Measures

Pavement:

1. Percent of Interstate pavement in Good condition
2. Percent of Interstate pavement in Poor condition
3. Percent of Non-Interstate NHS pavement in Good condition
4. Percent of Non-Interstate NHS pavement in Poor condition

Bridge:

1. Percent of NHS bridge deck area in Good condition
2. Percent of NHS bridge deck area in Poor condition





PM3 – Reliability and CMAQ Performance Measures

Travel time reliability:

1. Percent of person miles on the Interstate that are reliable
2. Percent of person miles on the non-Interstate NHS that are reliable

Freight Reliability:

1. Interstate truck travel time reliability index

CMAQ:

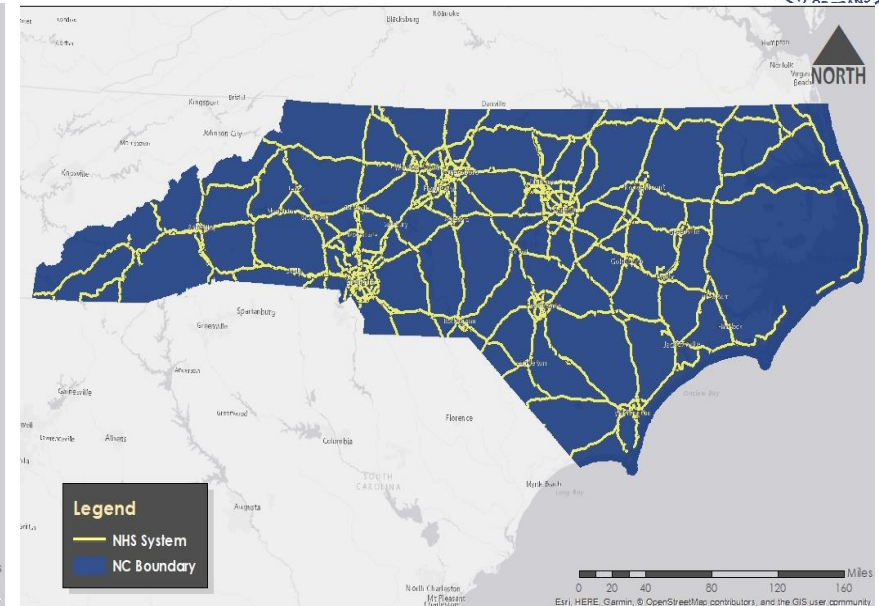
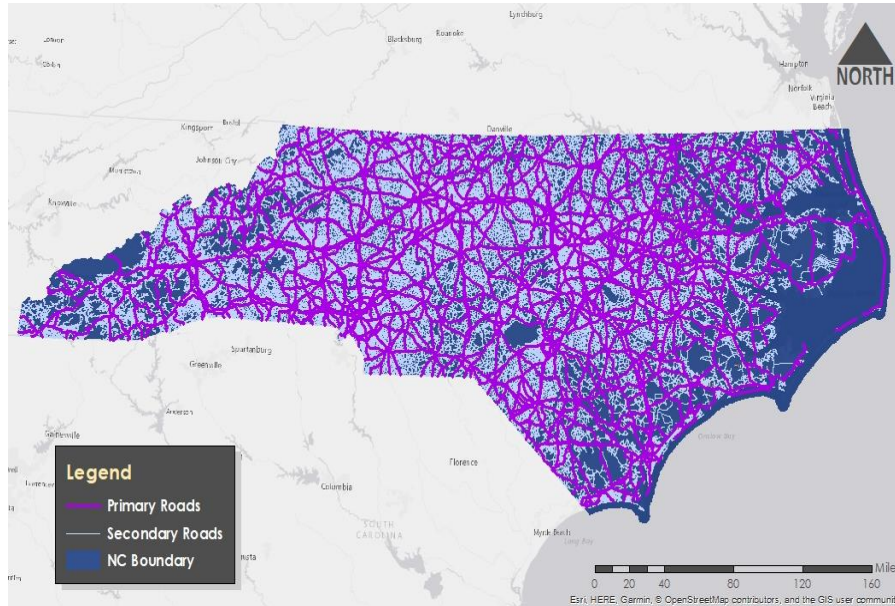
1. Emission reductions from CMAQ projects
2. Annual hours of peak hour excessive delay per capita*
3. Percent non-SOV travel*

*Charlotte, NC-SC Urbanized area and Concord, NC Urbanized area





NC Maintained vs NHS Inventory



Route Class	Total System	NHS Only
	Lane-miles	Lane-miles
Interstate	6,684.1	6,677.0
Primary	35,191.7	14,221.1
Secondary	124,126.3	699.5
Total	166,002.1	21,597.6

Source: NCDOT Draft TAMP, 2022. Table 2-1.

The NHS includes Interstate highways, Interstate business, US, NC and selected secondary routes and ramps connecting to an NHS route.





PM2 – NHS Bridges

The Department maintains 18,438 structures which include 13,647 bridges and 4,791 culverts.

- Of those, 3,839 are on the NHS

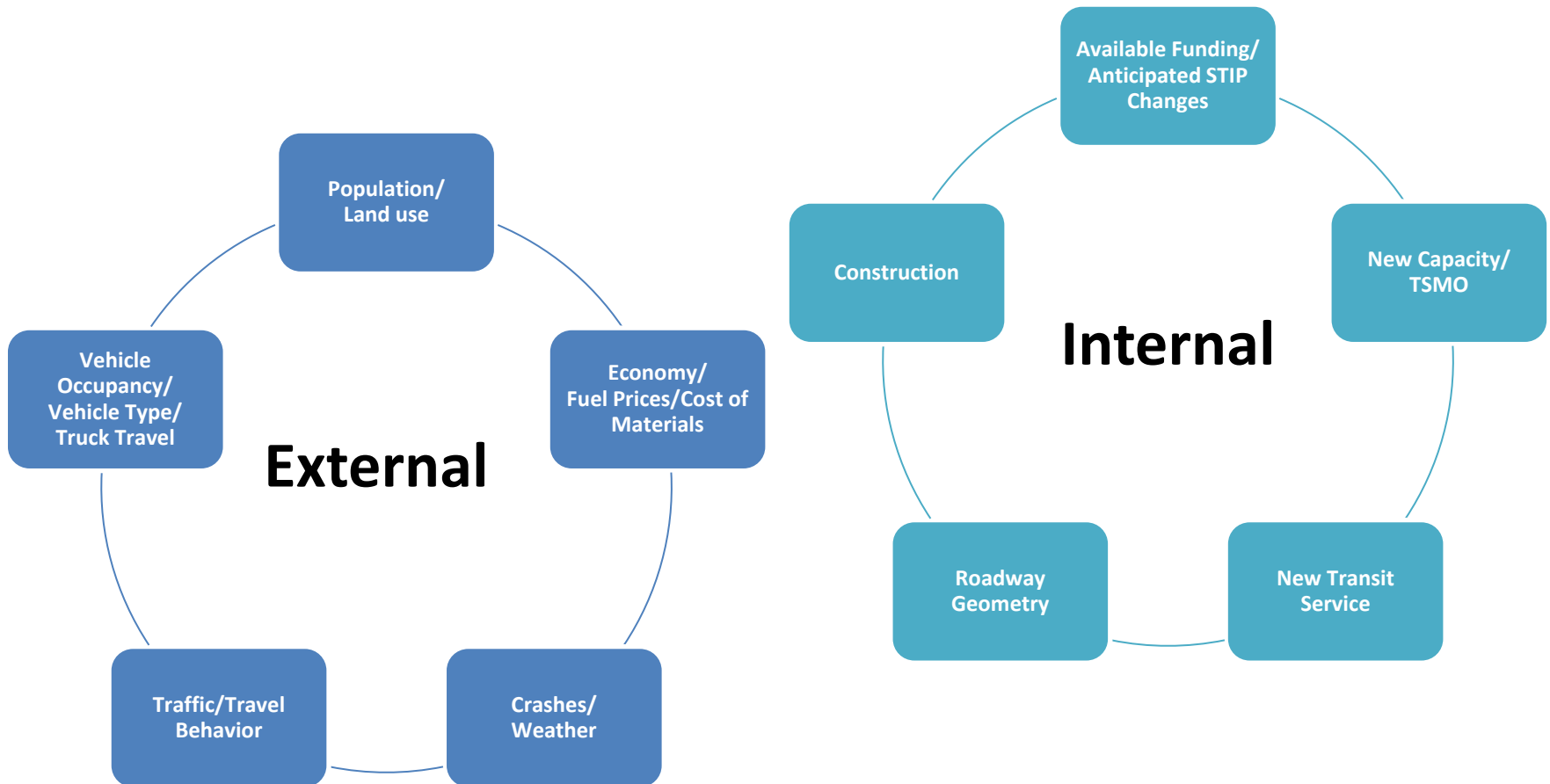
System	# of NHS Bridges & Culverts	Deck Area (Sq. Foot)
Interstate	1,415	21,789,834
Primary	2,291	33,353,612
Secondary	104	1,079,745
Local GOV	29	254,247
Total	3,839	56,477,438

Source: NCDOT Draft TAMP, 2022. Table 2-3.





Factors Influencing Performance





Covid/Post-Covid Target Setting

What will performance look like in 2023 and 2025?

New travel patterns vs. return to pre-2020 equilibrium

Effects of hybrid and remote work

Changes in carpooling and transit use

Economic conditions and fuel prices

Changes to the STIP due to cost increases





Rationale for 2023 and 2025 Targets

Population and VMT
will continue to grow

Project cost
increases/inflation

STIP and TIP projects
unlikely to
significantly change
trends

IIJA funding increases
and opportunities

Maintain conservative
and balanced stance
given unknowns

Opportunity to assess
performance at the
midpoint and adjust
4-year targets

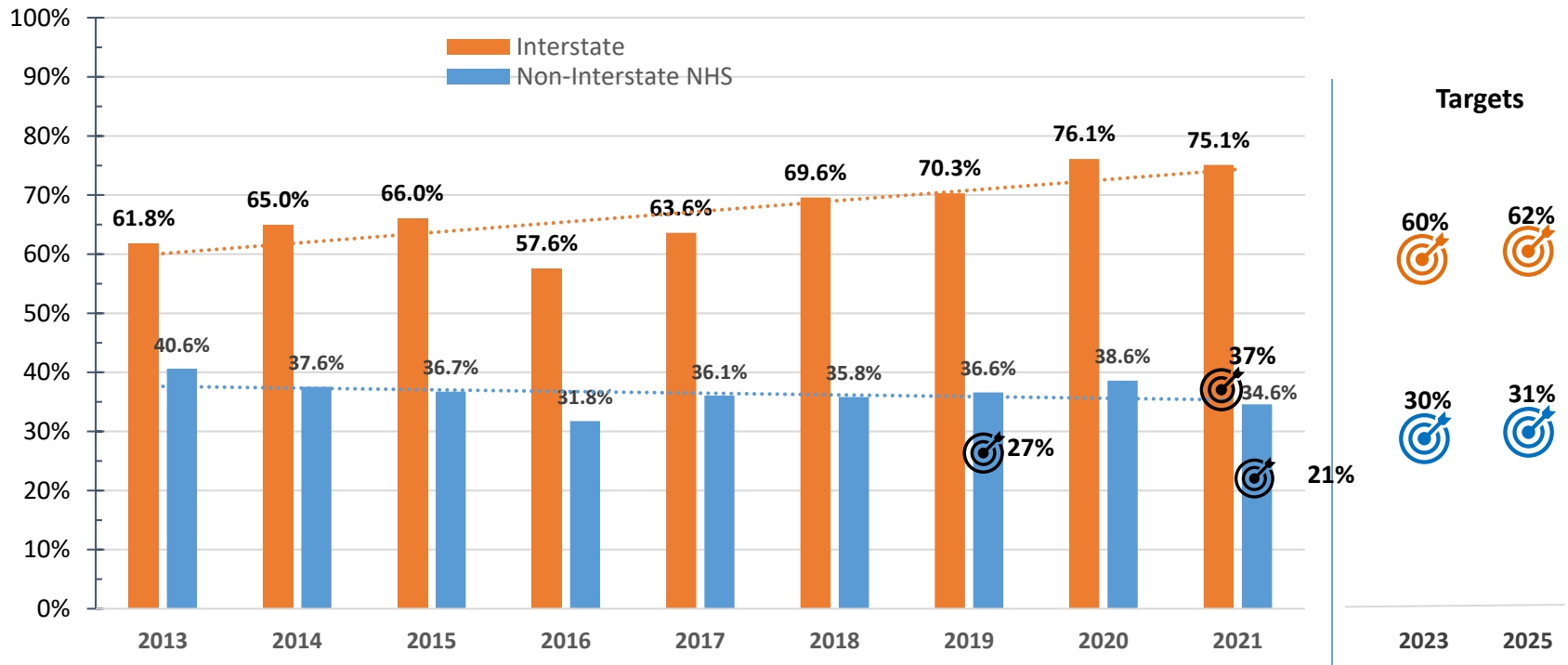




PM2 Pavement in Good Condition

Higher number = better performance

✓ 2019 and 2021 targets were met



Note: 2019 targets not required for Interstate pavement during the 2018-2021 performance period.

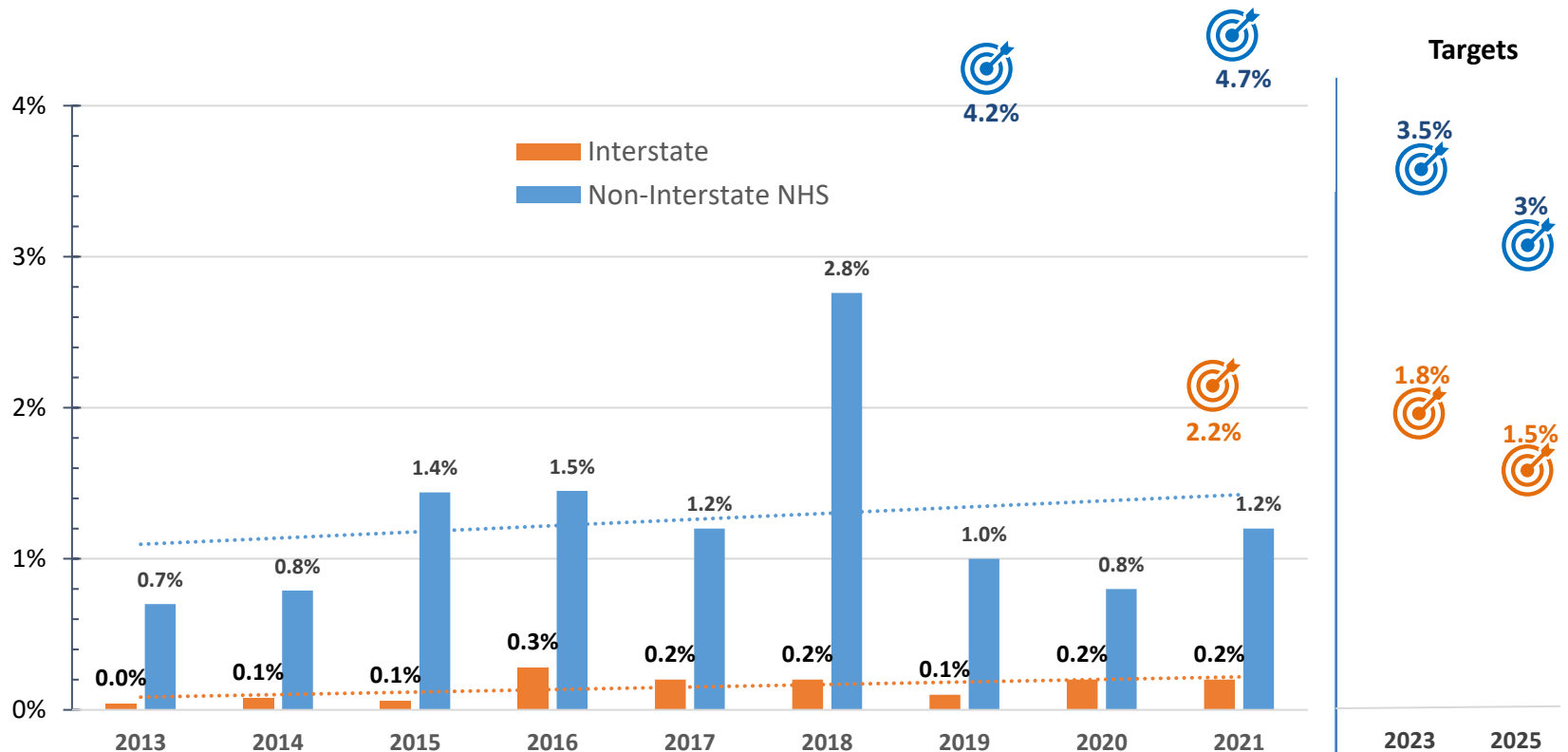




PM2 Pavement in Poor Condition

Lower number = better performance

✓ 2019 and 2021 targets were met



Note: 2019 targets not required for Interstate pavement during the 2018-2021 performance period.

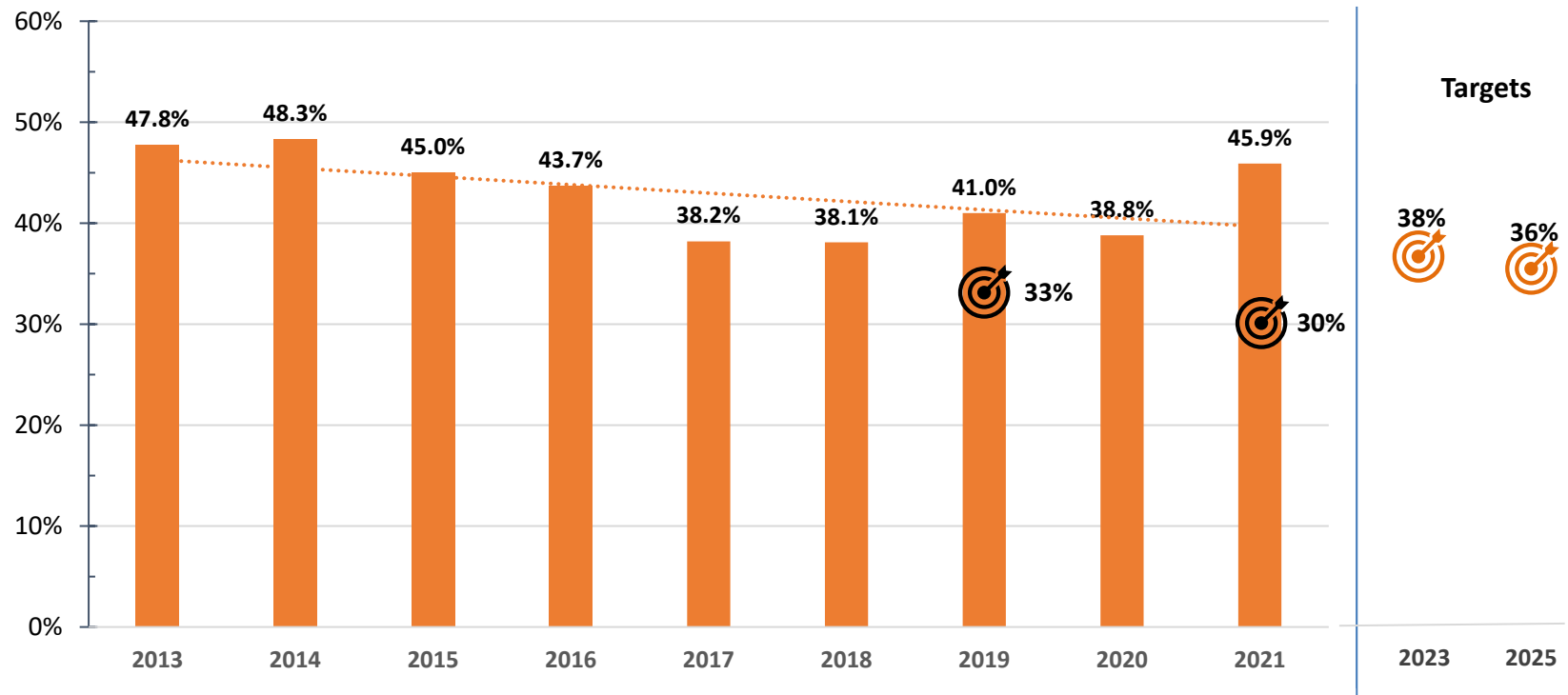




PM2 Bridges – Good Condition

- Percent NHS bridge deck area in good condition
- Higher number = better performance

✓ **2019 and 2021 targets met**

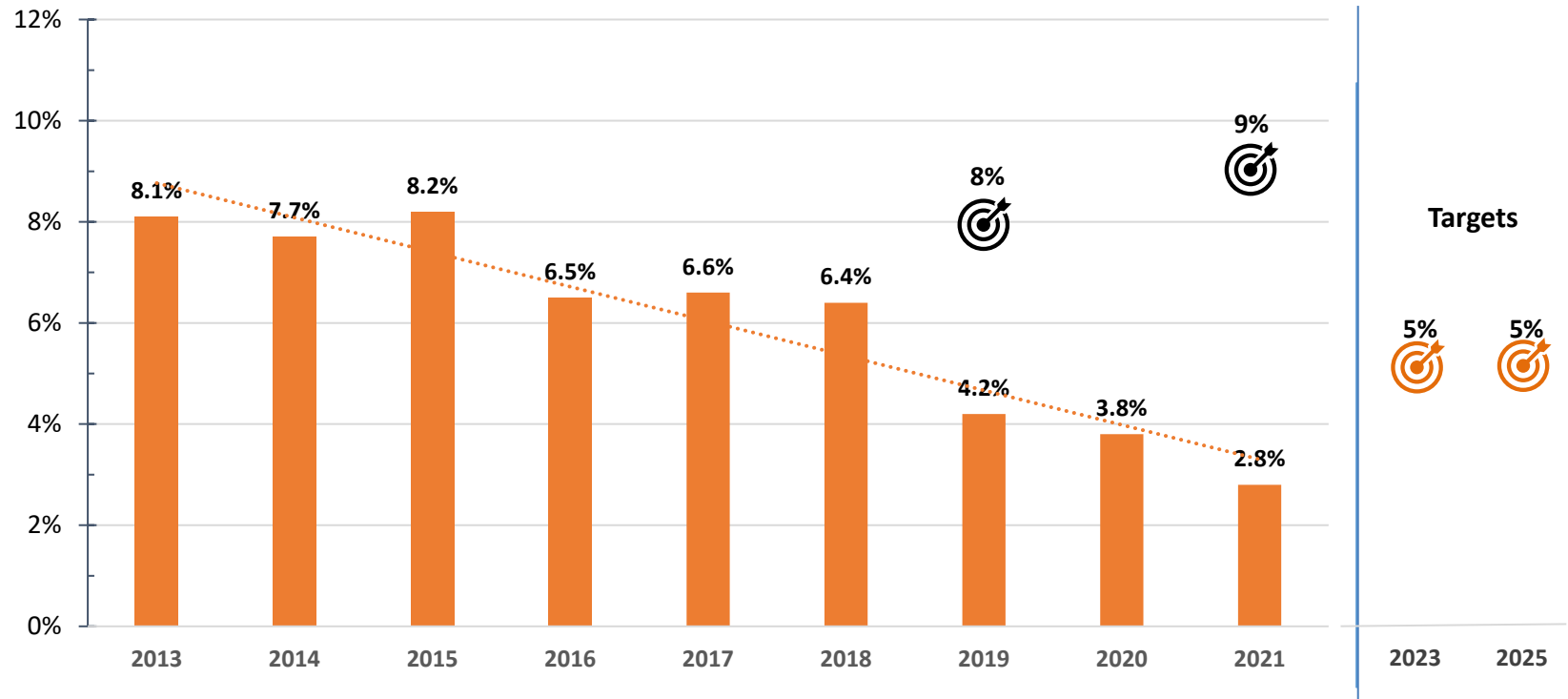




PM2 Bridges – Poor Condition

- Percent NHS bridge deck area in poor condition
- Lower number = better performance

✓ **2019 and 2021 targets met**



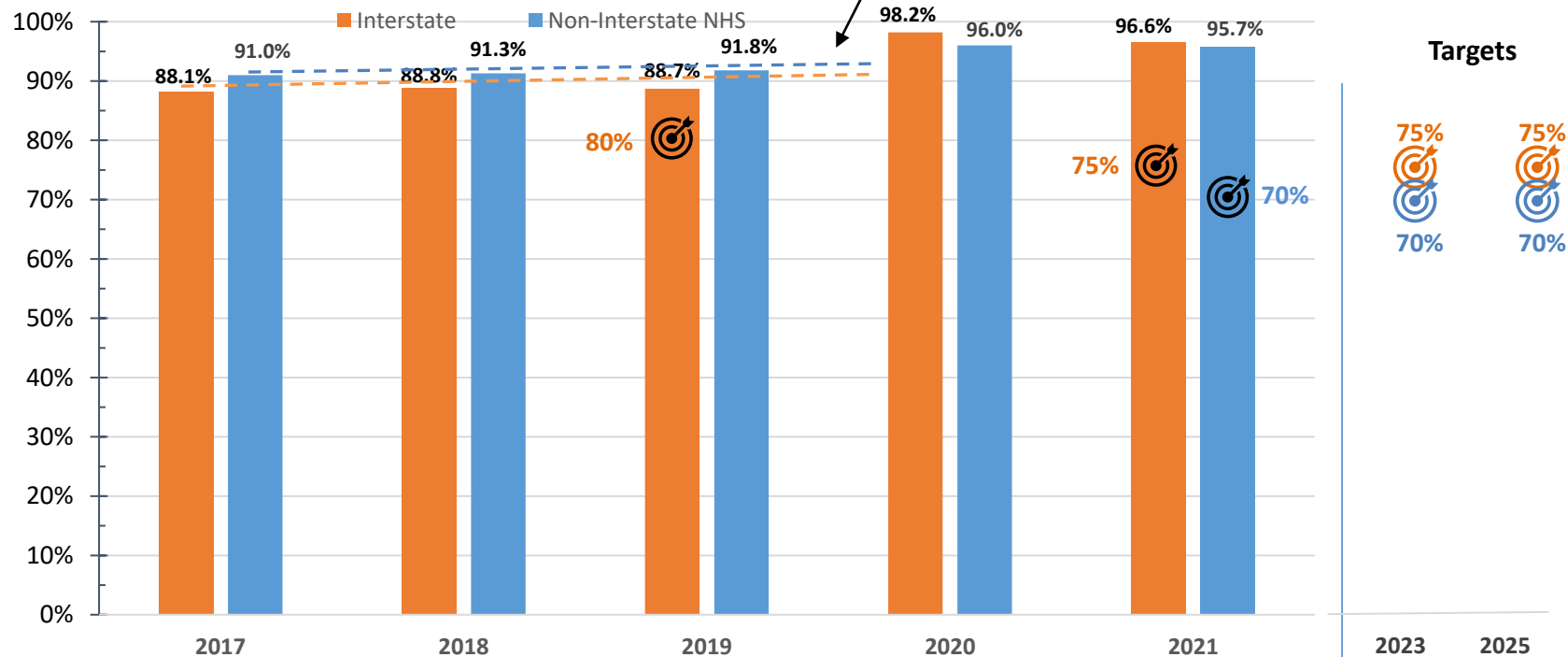


PM3 Travel Time Reliability

- Percent of person-miles traveled on the Interstate that are reliable
- Percent of person-miles traveled on the non-Interstate NHS that are reliable
- Higher number = better performance

✓ **2019 and 2021 targets met**

Pre-pandemic trendlines
(2017-2019)



Note: 2-year targets not required for non-NHS Interstate reliability during the 2018-2021 performance period.

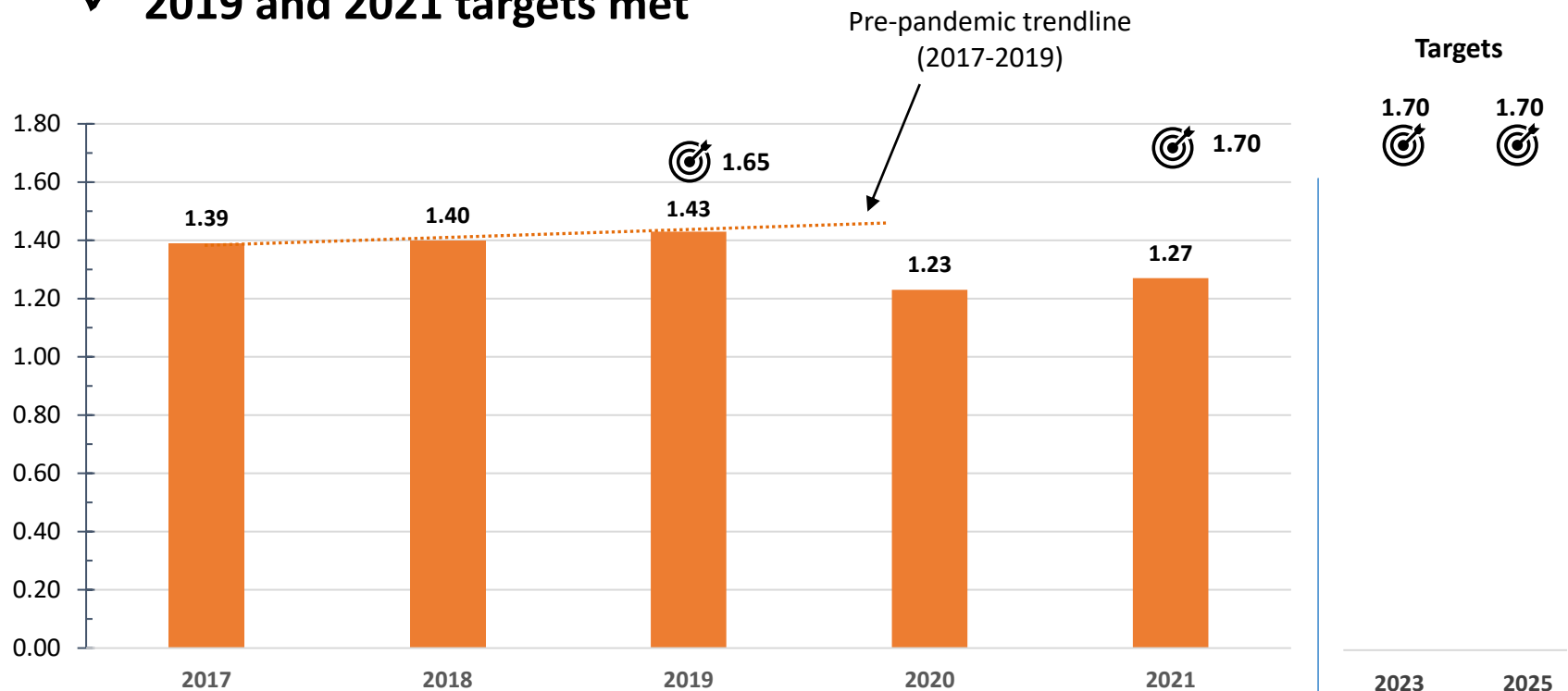




PM3 Truck Travel Time Reliability Index

- Interstate only
- Lower number = better performance

✓ **2019 and 2021 targets met**

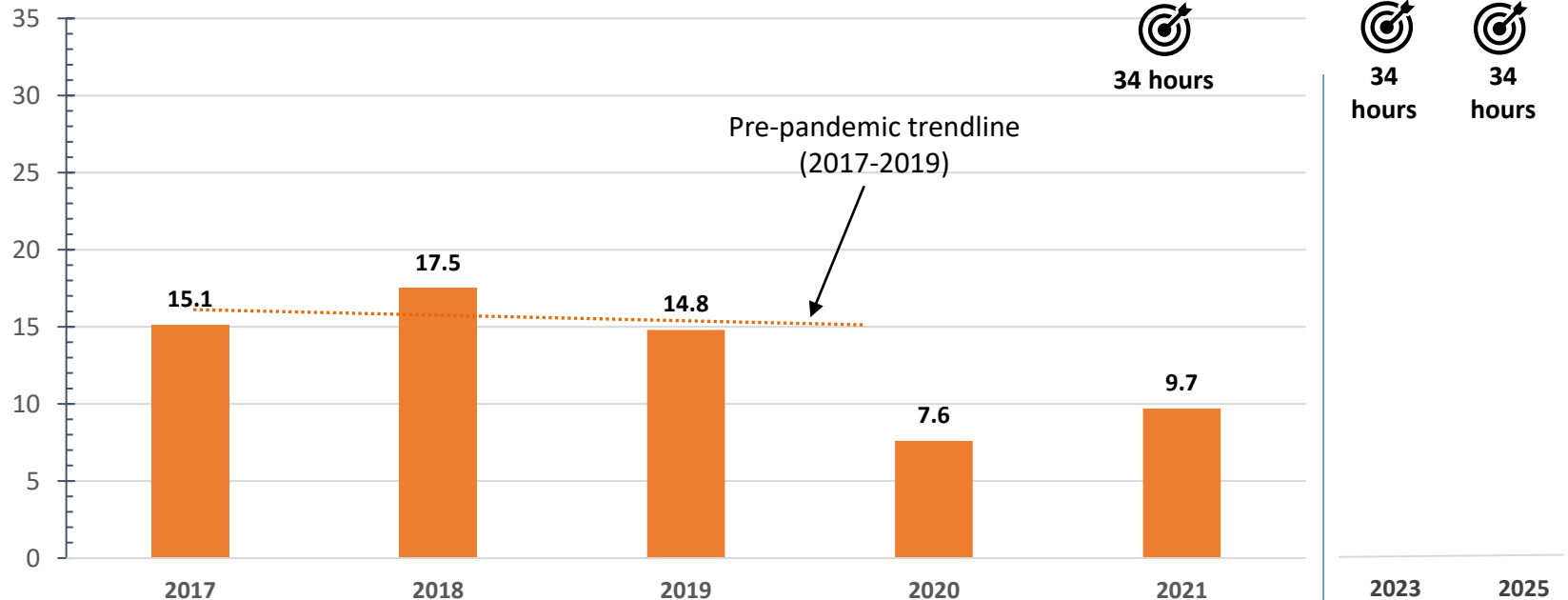




PM3 Peak Hour Excessive Delay (PHED) Charlotte Urbanized Area

- Annual hours of PHED per capita on the NHS

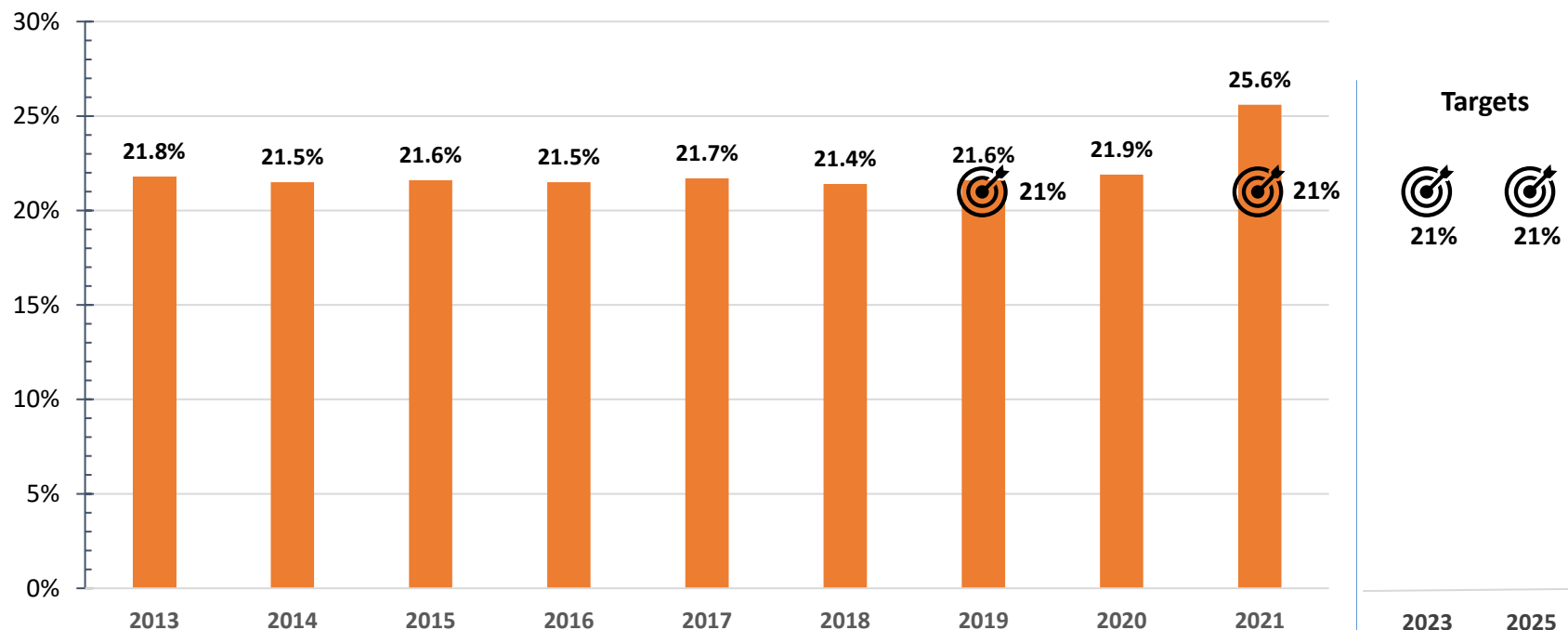
✓ **2021 target met**
(2019 target not required)





PM3 Percent Non-SOV Travel – Charlotte Urbanized Area

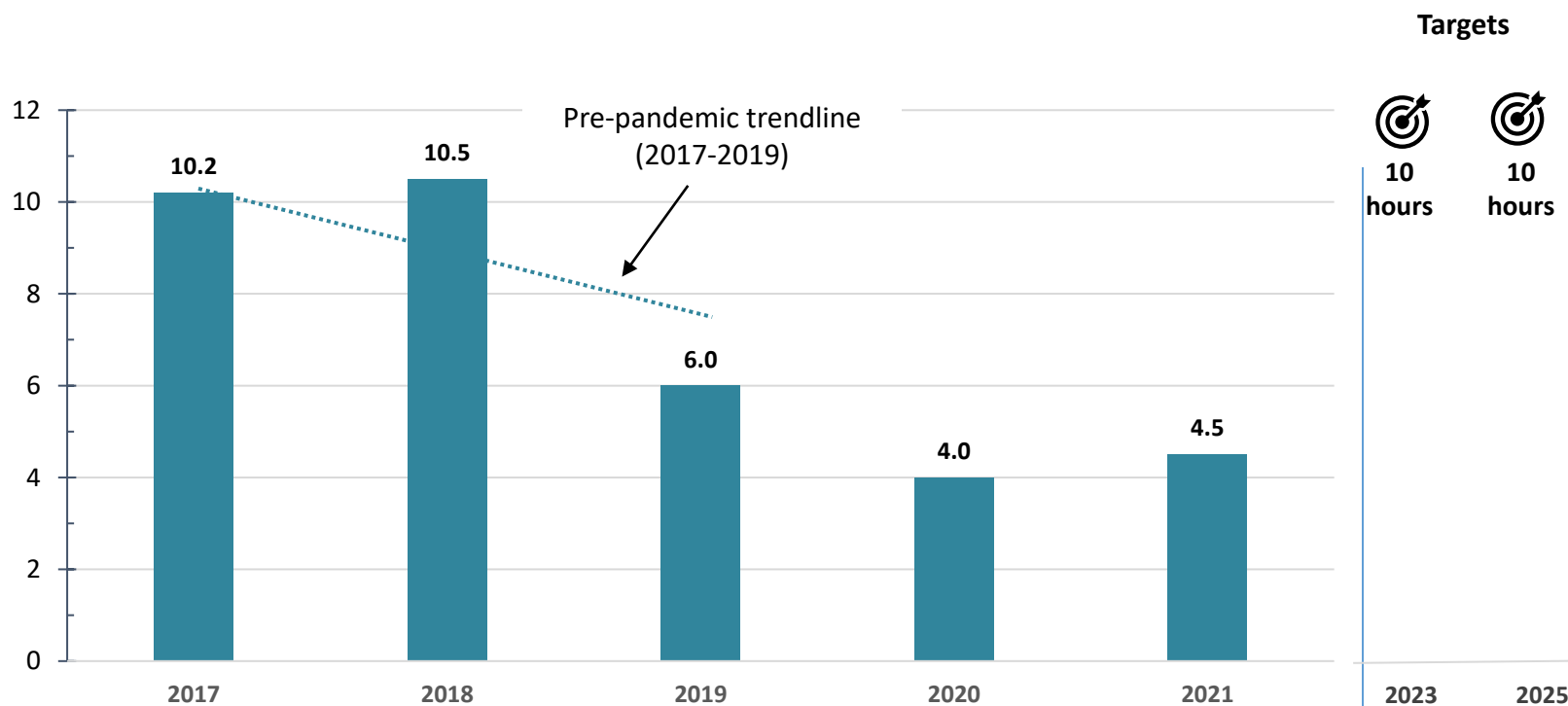
✓ 2019 and 2021 targets met





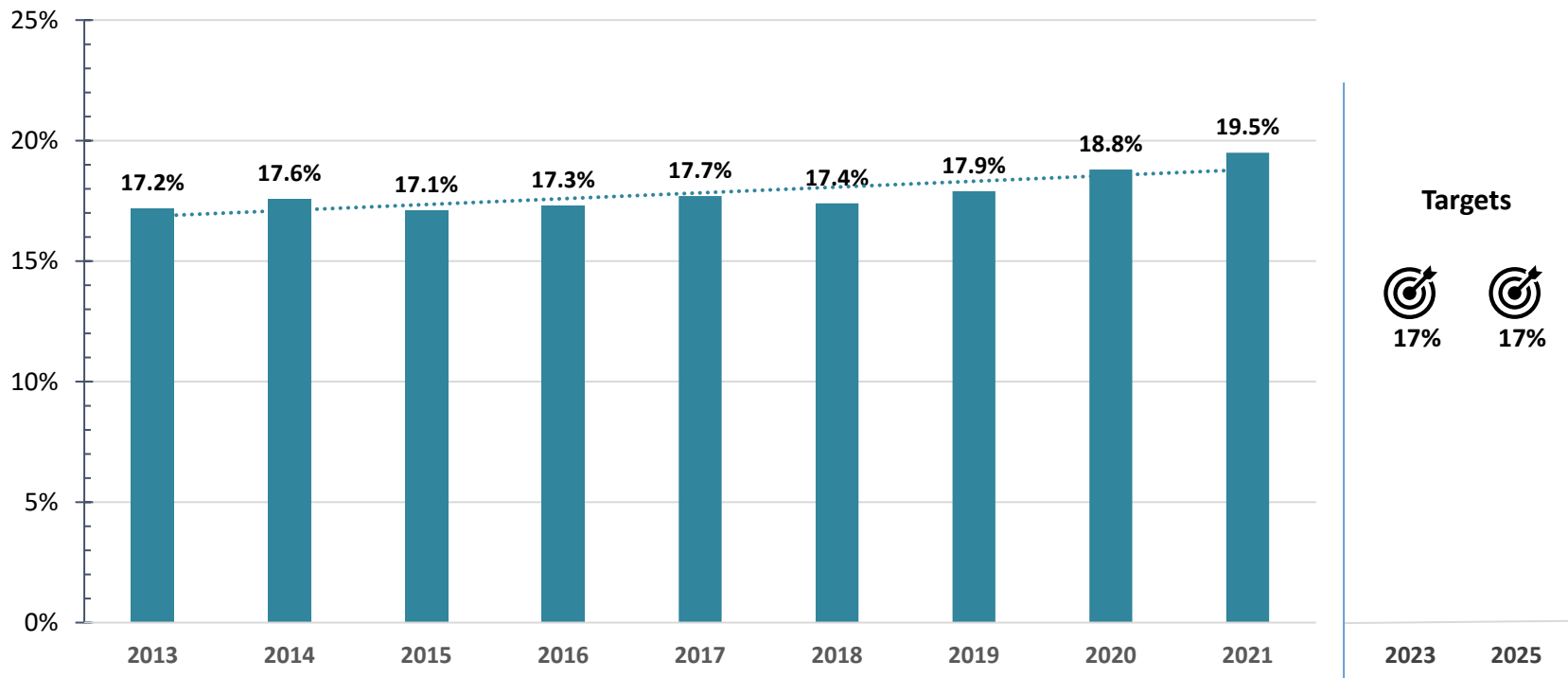
PM3 Peak Hour Excessive Delay (PHED) Concord Urbanized Area

- Annual hours of PHED per capita on the NHS





PM3 Percent Non-SOV Travel Concord Urbanized Area





PM3 CMAQ Emissions Reductions

- Total emissions reductions from CMAQ projects (kg/day)

✓ **2019 and 2021 targets met**

Baseline (2014- 2017)	2018- 2019 Actual	2020- 2021 Actual	2019 Target	2021 Target	2023 Target	2025 Target
VOC 11.135	VOC 133.747	VOC 90.606	VOC ≤ 0.252	VOC ≤ 0.504	VOC ≤ 0.557	VOC ≤ 1.114
NOx 32.907	NOx 429.415	NOx 245.308	NOx ≤ 2.360	NOx ≤ 4.720	NOx ≤ 2.229	NOx ≤ 4.458

All emissions are in kg/day

