PERFORMANCE BASED PLANNING & PROGRAMMING

National Highway System/Freight Movement:
Travel Time Reliability and Truck Travel Time Reliability - Draft Targets

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TPB Technical Committee
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National Capital Region
Transportation Planning Board

Contents of Presentation

- Travel Time Reliability: Interstate and NHS (Non-Interstate)
    - Overview of the Measures
    - Requirements
    - Data Collection
    - Methodology for forecasting targets

- Truck Travel Time Reliability Index: Interstate
    - Overview of the Measure
    - Requirements
    - Data
    - Methodology for forecasting targets

- Next Steps

National Highway System: Travel Time Reliability

	Performance Measures
National Highway System	(1) **Interstate Travel Time Reliability (TTR)** - Percent of person-miles traveled on the Interstate System that are reliable
	(2) **NHS (Non-Interstate) Travel Time Reliability (TTR)** - Percent of person-miles traveled on the non-Interstate NHS that are reliable

Data Collection

- Data was collected using NPRDMS and MAP-21 widgets created by RITIS for the TPB metropolitan planning area

- A set of Dashboard widgets to help set targets, understand baseline conditions, and assess progress toward achieving the goals associated with the measures

- Available currently:

  - **Interstate Travel time reliability (TTR)**

  - **Non-interstate NHS TTR**

  - **Truck TTR Index**

  - Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita

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NPMRDS: RITIS MAP-21 Widget

Travel Time Reliability (TTR) Measures

- Measurement of travel time reliability on the Interstate and Non-Interstate National Highway System (NHS)

  - State DOTs must establish two and four-year targets (2019 and 2021 respectively) for the Interstate, but only a four-year target for the Non-Interstate NHS, by May 20, 2018

- All TTR targets will be reported in the State's baseline performance period report due by October 1, 2018

- MPOs must either support the State targets or establish their own quantifiable four-year targets within 180 days of the State target establishment

Summary of TTR Data for Interstate and Non-Interstate NHS

TTR Performance	2014	2015	2016	2017
Interstate Percent of person-miles traveled on the Interstate System that are reliable	50.2	53.1	55.9	56.7
Non-Interstate NHS Percent of person-miles traveled on the non-Interstate NHS that are reliable	59.5	55.5	56.0	76.7

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Targets developed using Method 3: Averaging Extrapolated Trends and TDM Indicator
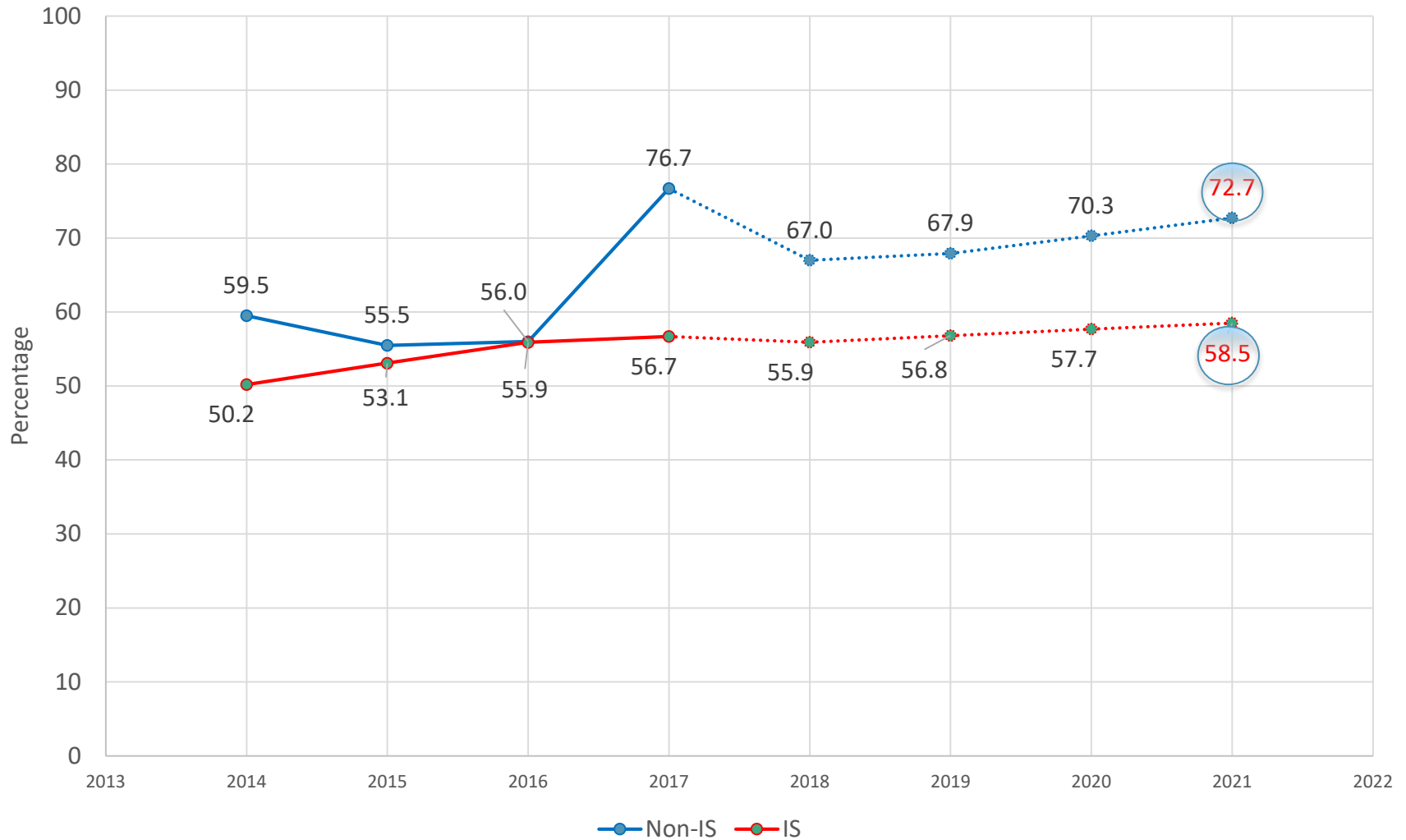
TPB Target Setting: TTR - DRAFT

	CY 2018 – 2021 Four Year Target
TTR – Interstate Percent of person-miles traveled on the Interstate System that are reliable	**58.5%**
TTR - Non-Interstate NHS Percent of person-miles traveled on the non-Interstate NHS that are reliable	**72.7%**

Freight Movement: Truck Travel Time Reliability

	Performance Measures
Freight Movement	(4) **Freight Reliability (TTTR)** Measurement of travel time reliability on the Interstate System using Truck Travel Time Reliability (TTTR) Index.

Freight Movement: Truck Travel Time Reliability Index Measure

- Measurement to assess freight movement on the Interstate System: Truck Travel Time Reliability (TTTR) Index.

  - State DOTs must establish two and four-year targets by May 20, 2018

- All TTTR targets will be reported in the State's baseline performance period report due by October 1, 2018.

- MPOs must either support the State targets or establish their own quantifiable 4-year targets within 180 days of the State target establishment.

Summary Data: TTTR Index

- The freight reliability measure

  - TTTR: the ratio of the longer travel times (95th percentile) to a "normal" travel time (50th percentile) for each of the five time periods.

  - The maximum TTTR of the five time periods of a Interstate System reporting segment is the key factor in the TTTR Index calculation.

Freight Movement	2014	2015	2016	2017
TTTR Index	4.29	3.51	3.39	2.64

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Target developed using Method 3: Averaging Extrapolated Trends and TDM Indicator
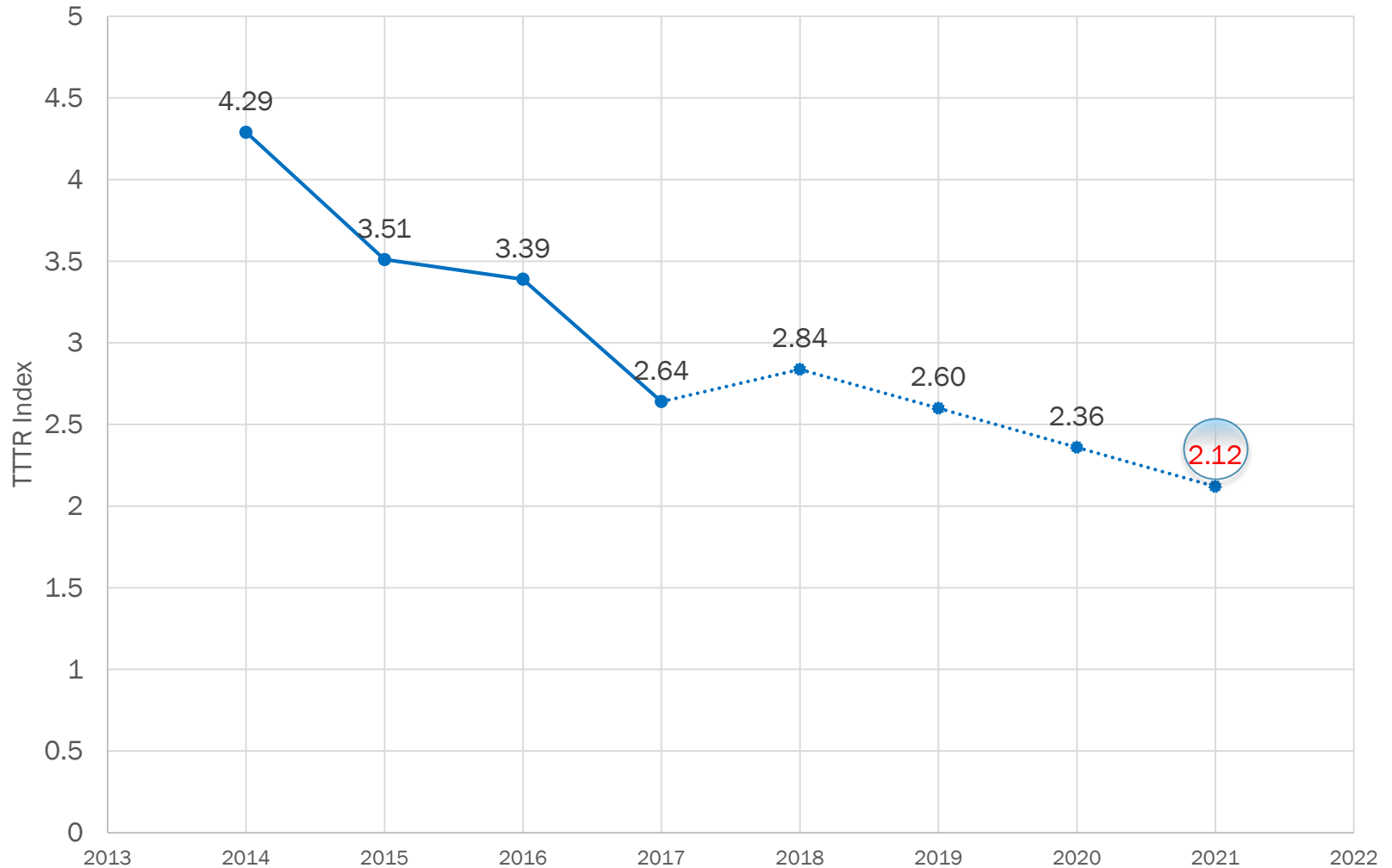
TPB Target Setting: TTTR - DRAFT

Interstate System	CY 2018 – 2021 Four Year Target
TTTR Index Ratio of the Interstate System Mileage providing for Reliable Truck Travel Times	**2.12**

Next Steps

- Brief Tech and TPB on draft targets in June
- TPB adopts targets at July meeting
  - Include in Visualize 2045 and System Performance Report
- States submit System/Freight Performance targets to FHWA in Baseline Performance Period Report by October 1, 2018

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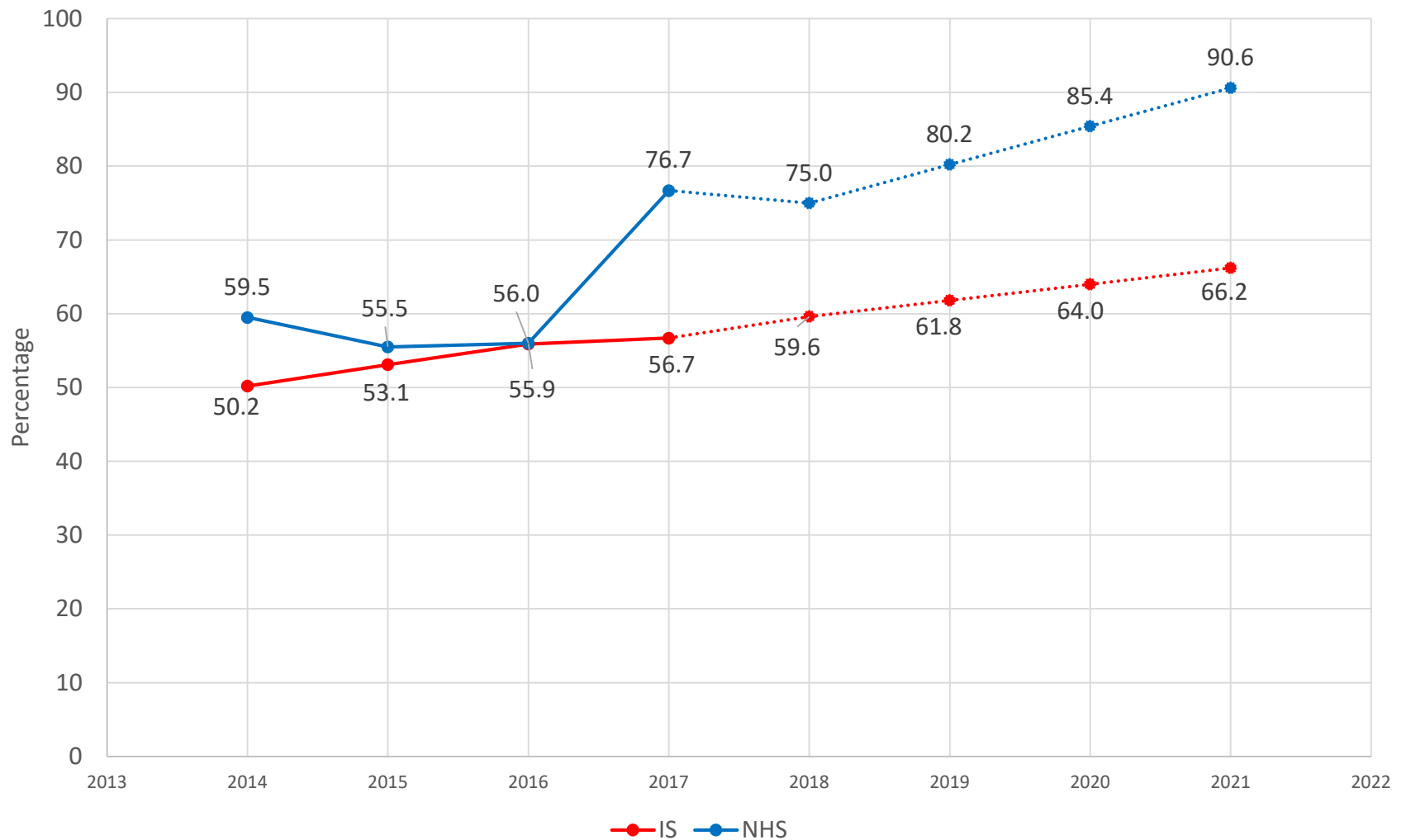777 North Capitol Street NE, Suite 300

Washington, DC 20002

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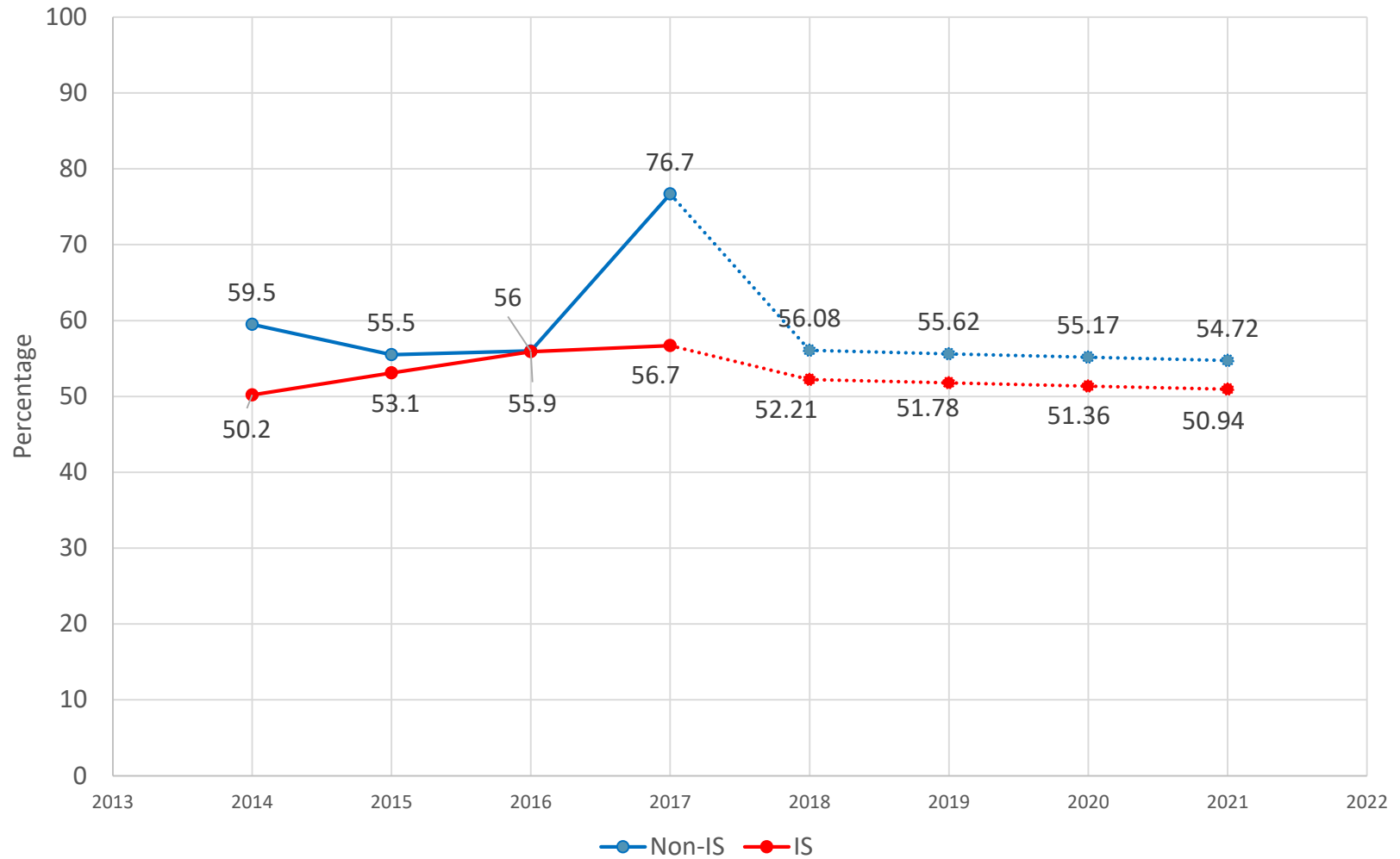# Methodology for Forecasting for TTR and TTTR

- Staff have identified two basic methods that can be used for forecasting future performance
  1. **Extrapolation** of current data
     - Use a trend line (straight or best fit curve) and extend into the future.
     - Captures existing trends of actual performance.
  2. **TDM Outputs** - Use outputs from the TPB Travel Demand Model to forecast future performance
     - Use a similar or related indicator to forecast, including effects of population and employment growth and completion of projects and programs.
  3. **Averaging** – Taking the average of Extrapolation and TDM

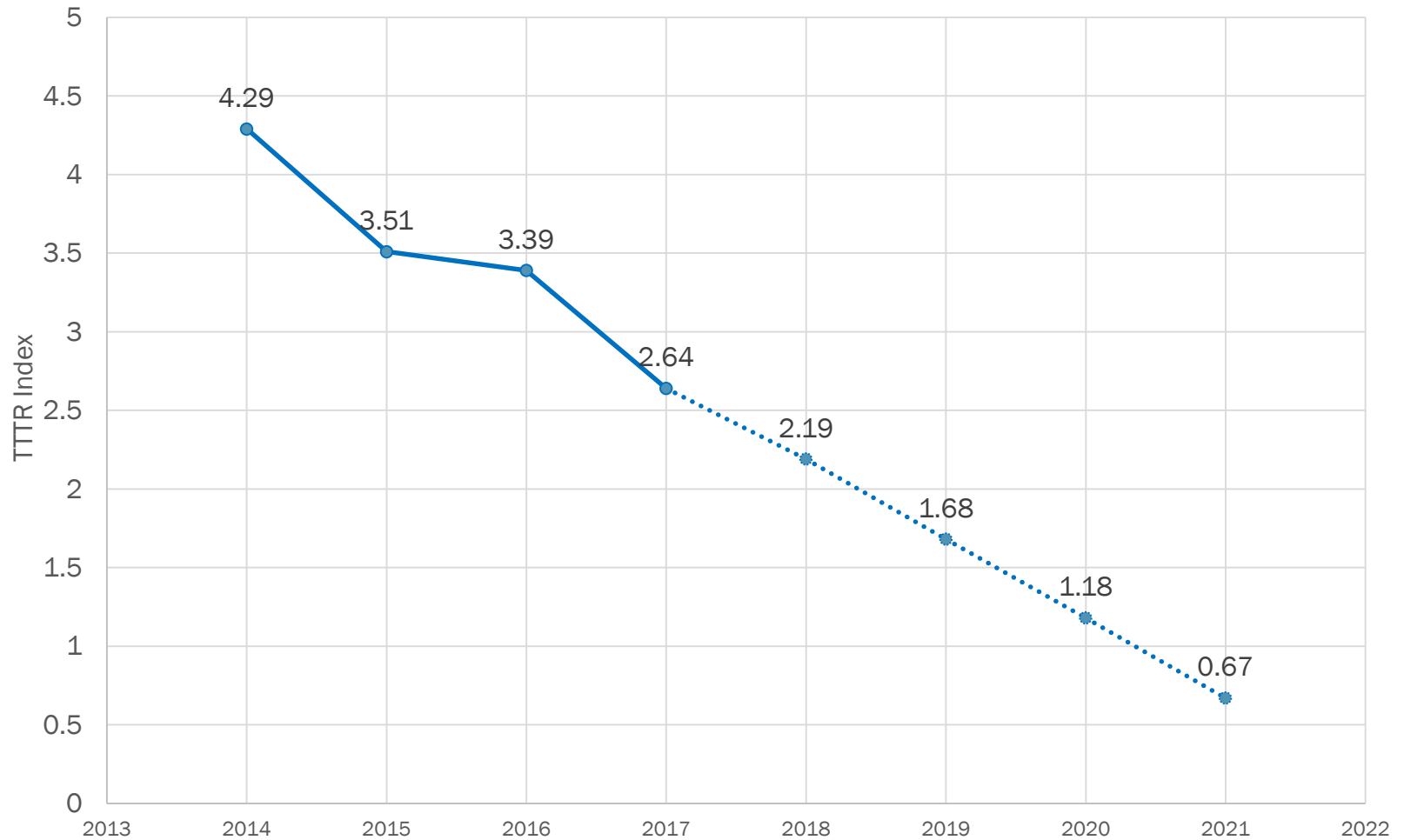- Staff anticipates using Method #3 – Averaging for near-term performance forecasts and proposed targets.

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Method 1: Extrapolation (Linear)

Method 2: Travel Demand Model

Method 1: Extrapolation (Linear)

Method 2: Travel Demand Model