Updated 11/18/16

FTA

FEDERAL TRANSIT ADMINISTRATION

Transit Asset Management (TAM)

Final Rule-Small Systems Focus

August 2016

Presenter: Mshadoni Smith

U.S. Department of Transportation

Federal Transit Administration

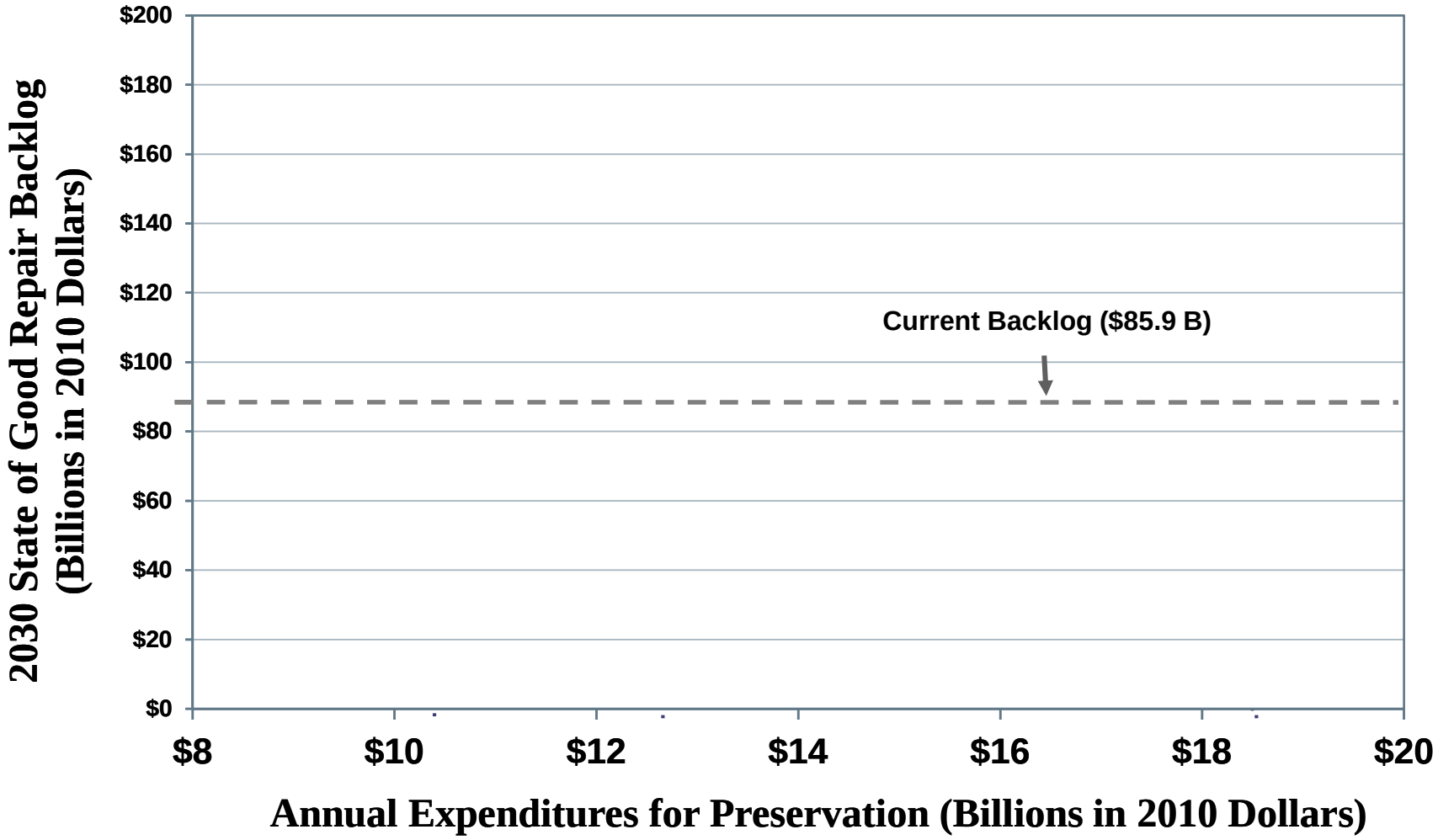
Today's Presentation

- Transit Asset Management Background
- Final Rule Provisions for Small Providers
- Implementation
- Technical Assistance

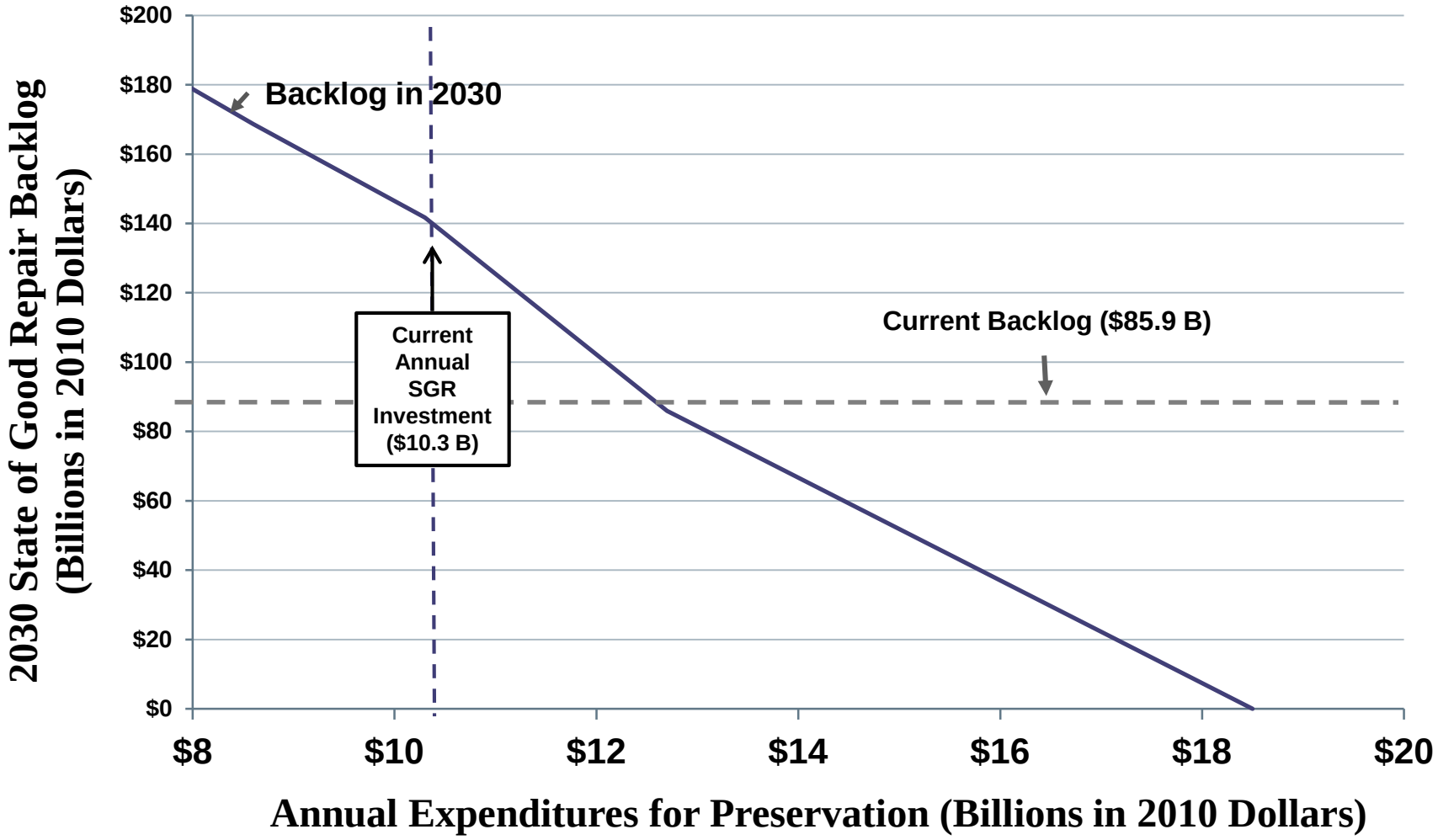
What is Transit Asset Management?

Transit Asset Management (TAM) is a business model that uses the condition of assets to guide the optimal prioritization of funding at transit properties in order to keep our transit networks in a State of Good Repair (SGR).

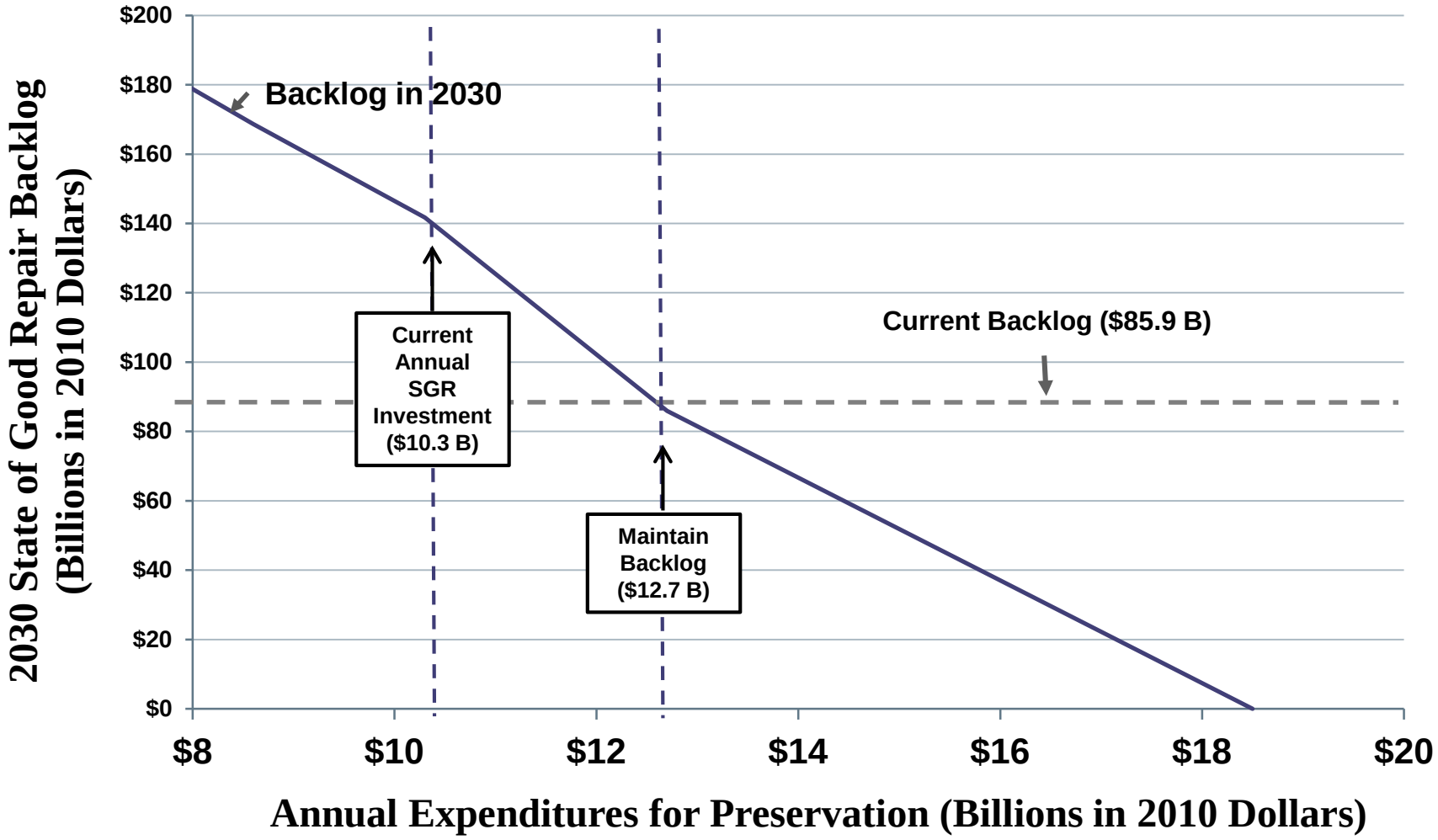
Transit Asset Management: *Background*



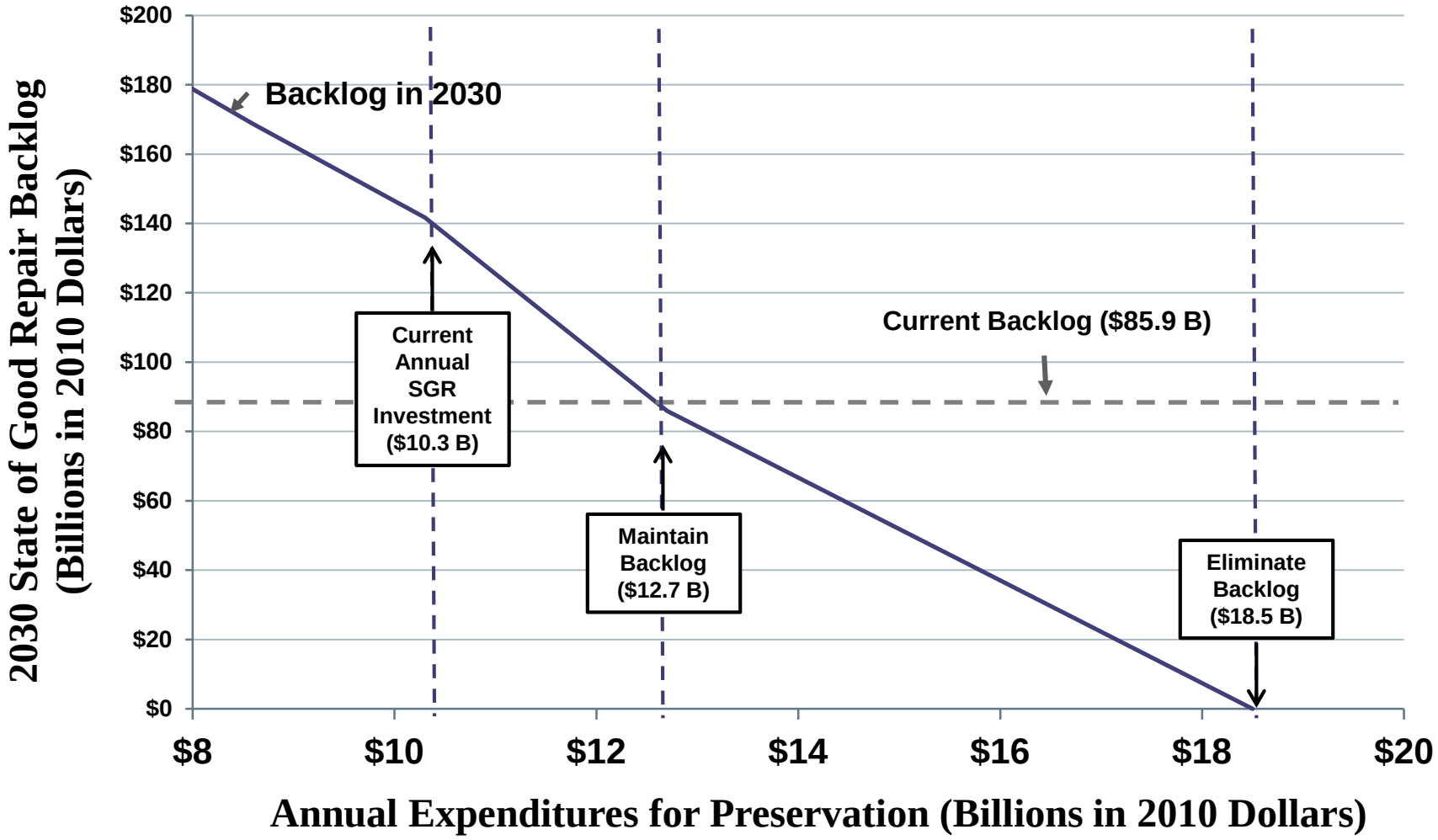
Transit Asset Management: *Background*



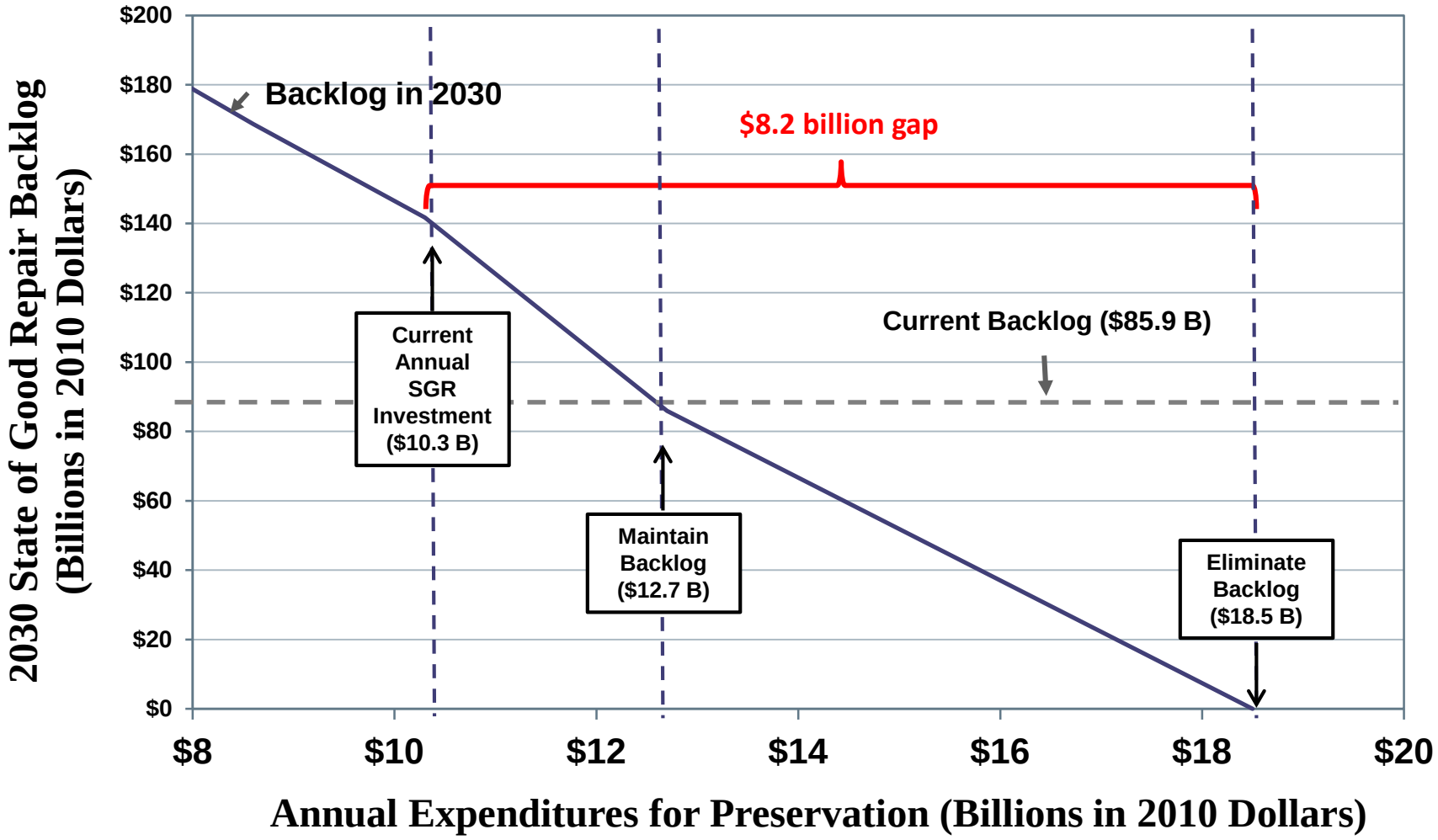
Transit Asset Management: *Background*



Transit Asset Management: *Background*



Transit Asset Management: *Background*



Anticipated Benefits of TAM

1. Improved transparency and accountability
2. Optimized capital investment and maintenance decisions
3. More data-driven maintenance decisions
4. Potential safety benefits

MAP-21 Performance Management Framework

FTA

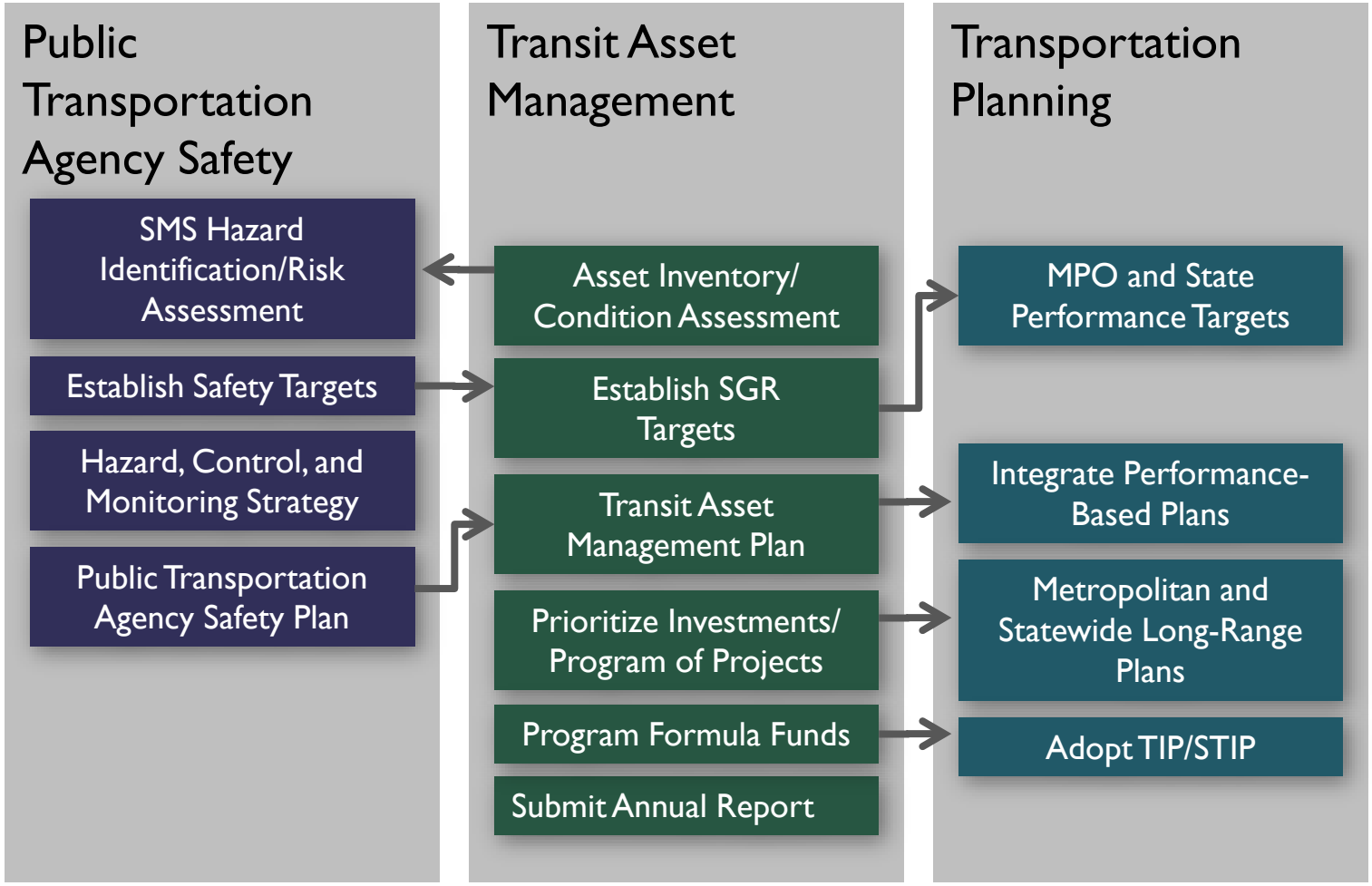
- National Public Transit Safety Plan
- Public Transportation Agency Safety Plan
- Transit Asset Management

FHWA

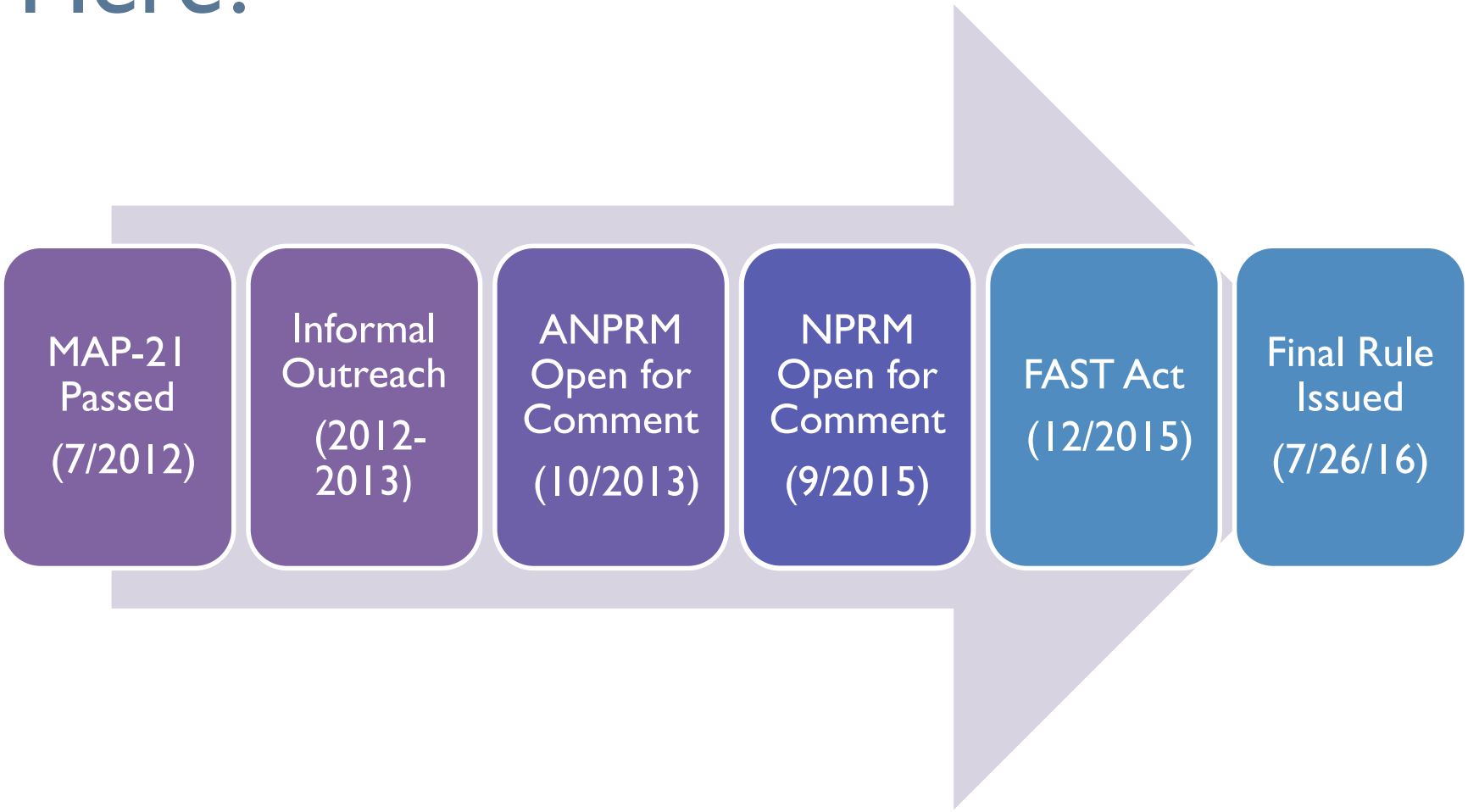
- Safety Performance
- Pavement and Bridge Condition
- System Performance & CMAQ
- Highway Safety Improvement Program
- Highway Asset Management Plan

- Statewide and Metropolitan Planning

Linking Proposed Regulations



What Process Did We Take to Get Here?



CFR Part 625
Transit Asset Management Final Rule

A. General Provisions

B. National Transit Asset Management System

C. Transit Asset Management Plans

D. Performance Management

E. Recordkeeping and Reporting Requirements

Changes from NPRM to Final Rule

Δ

- Definitions
  - Tier II Provider
- Asset Inventory scale
  - Equipment
  - Third party assets
- 5310 Applicability
- Group Plans
  - Sponsor is not the Accountable Executive for its Group TAM Plan participants
  - Small urban providers (5307) are not required to participate in or be offered Group Plans

A. General Provisions

A. General Provisions

- Purpose
  - To help achieve and maintain a state of good repair for the nation's public transportation systems
- Applicability
  - All recipients or subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 that own, operate, or manage capital assets used in the provision of public transportation
- Definitions

Definition of 'Public Transportation'

The term "public transportation" is defined at 49 U.S.C. 5302 and means regular, continuing shared-ride surface transportation services that are open to the general public or open to a segment of the general public defined by age, disability, or low income.

B. National Transit Asset Management System

National Transit Asset Management System

Define *state of good repair*

Require *TAM Plans for all recipients and sub-recipients*

Establish *SGR perfor-mance measures*

Report *data to the NTD*

Receive *Technical assistance from FTA*

State of Good Repair

The condition in which a capital asset is able to operate at a **full level of performance**. This means the asset:

1. Is able to perform its designed function,
2. Does not pose a known unacceptable safety risk, and
3. Its lifecycle investments have been met or recovered.

TAM and State of Good Repair

- The purpose of the National TAM System is to keep our Nation's assets in a State of Good Repair (SGR)
- Consequences of <u>not</u> being in a SGR include:
  - Safety risks
  - Decreased system reliability
  - Higher maintenance costs, and
  - Lower system performance

C. Transit Asset Management Plans

Applicability – Tier I or Tier II

Tier I

Operates Rail

OR

≥ 101 vehicles across **all fixed route** modes

OR

≥ 101 vehicles in **one non-fixed route** mode

Tier II

Sub-recipient of 5311 Funds

OR

American Indian Tribe

OR

≤ 100 vehicles across **all fixed route** modes

OR

≤ 100 vehicles in **one non-fixed route** mode

Responsibility for TAM Plan Development

Δ

- Each transit provider must designate an Accountable Executive
- Plan Coordination
  - A Tier II provider may participate in a Group Plan or opt out and develop its own TAM Plan
  - A Group Plan participant must collaborate with the sponsor in the development of the plan
- Eligible activity under § 5337, § 5307 & § 5311

Group Plans

- Group Plans compiled by a sponsor
  - Generally the State DOT or Designated/Direct Recipient
  - Small urban operators (5307 Recipients) are not required to be offered a group plan but CAN be based on mutual agreement between sponsor and operator.
- Tier II providers may participate in a single Group Plan or may choose to opt out and develop their own TAM Plans

TAM Plan Elements

1. Inventory of Capital Assets
2. Condition Assessment
3. Decision Support Tools
4. Investment Prioritization

All Providers
(Tier I & II)

I II

5. TAM and SGR Policy
6. Implementation Strategy
7. List of Key Annual Activities
8. Identification of Resources
9. Evaluation Plan

Tier I only

I

1. Inventory of Capital Assets

- A listing of all capital assets:
  - Owned by the transit provider
    - Equipment: Non service vehicles & equipment > $50,000
  - Include third-party exclusive-use non-equipment
  - Level of detail is same as in Capital Program of Projects
- May use existing inventories already collected
  - E.g., existing rolling stock and equipment reports
- Include assets acquired without FTA funds

Examples of Asset Categories and Classes

Category	Class	
Equipment	▪ Construction ▪ Service Vehicles	▪ Maintenance
Rolling Stock	▪ Railcars ▪ Buses ▪ Other Passenger Vehicles	▪ Ferries
Infrastructure	▪ Fixed Guideway ▪ Signal Systems ▪ Structures	▪ Power
Facilities	▪ Support Facilities ▪ Passenger Facilities	▪ Parking Facilities

2. Condition Assessment

- A rating of the inventoried assets
  - E.g., age; good/fair/poor; percentage of residual life
- Ratings should be sufficiently detailed to monitor performance and plan capital investment
- Condition assessments may be collected at the individual or asset class level
- Condition assessments may include vulnerabilities to natural/climate hazards
- Condition assessments are only required for assets with direct capital responsibility

Assessing Condition by Asset Class

Category	Asset Inventory	Assessing Condition
Equipment	▪ **All** non-revenue service vehicles and equipment > $50K used in the provision of public transit, except 3rd-party equipment assets	▪ Only equipment with **direct** capital responsibility, no third party assets
Rolling Stock	▪ **All** revenue vehicles used in the provision of public transit	▪ Only revenue vehicles with **direct** capital responsibility
Infrastructure	▪ **All** infrastructure used in the provision of public transit	▪ Only infrastructure with **direct** capital responsibility
Facilities	▪ **All** facilities used in the provision of public transit (excluding bus structures)	▪ Only facilities with **direct** capital responsibility (excluding bus structures)

3. Decision Support Tools

- List analytical process(es) used to make investment prioritization
  - To estimate capital investment needs over time
  - To assist in prioritization
- The tool does <u>not</u> have to be specialized software

4. Investment Prioritization

- A ranked listing of proposed projects and programs ordered by year of planned implementation
- Prioritization locally determined based on policy and need
- Must adequately consider
  - Identified unacceptable safety risks
  - Accessibility requirements
- Fiscally constrained based on estimated funding levels

TAM Plan Timeframes

- Plans would be updated in their entirety at least every 4 years
  - Coincide with relevant (Statewide) Transportation Improvement Program
  - Cover at least 4 years
  - Should be amended during the horizon period when there is a significant change
- Initial TAM Plans completed no later than 2 years after effective date (October 2018)

D. Performance Management

Analyzing Assets

Category	Assessing Condition	Performance Targets	Measure
Equipment	▪ Only equipment with direct capital responsibility, no third party assets	▪ Only non-revenue service vehicles	ULB
Rolling Stock	▪ All revenue vehicles used in the provision of public transit	▪ Only revenue vehicles by vehicle class/mode	ULB
Infrastructure	▪ Only infrastructure with direct capital responsibility	▪ Only fixed rail guideway with direct capital responsibility	%
Facilities	▪ Only facilities with direct capital responsibility (not bus structures)	▪ Maintenance and Administrative and Passenger Stations and Parking Facilities with direct capital responsibility	TERM

Targets for Performance Measures

- Set targets annually for each asset class
- Supported by data
  - Most recent condition data
  - Reasonable financial projections
- Targets for Group Plans apply to the group as a whole
- Reported annually to National Transit Database (NTD)
  - https://www.transit.dot.gov/ntd/ntd-asset-inventory-modules-and-information

Useful Life Benchmark (ULB)

- ULB ≠ Useful life for FTA grant programs
- Useful Life Benchmark is defined as the expected lifecycle of a capital asset for a particular Transit Provider's operating environment, or the acceptable period of use in service for a particular Transit Provider's operating environment.
- ULB takes into account a provider's unique operating environment (i.e. geography, service frequency, etc.)
- There are default ULB values, but agencies are welcome to develop their own

Sample Default ULBs

Revenue Vehicle Type	Default Useful Life Benchmark	Useful Life in Grant Programs
Automated Guideway Vehicle (AG)	31	12
Bus (BU)	14	12
Cutaway Bus (CU)	10	10
Ferryboat (FB)	42	25
Heavy Rail Passenger Car (HR)	31	30
Light Rail Vehicle (LR)	31	25
Commuter Rail Locomotive (RL)	39	30
Trolleybus (TB)	14	12
Van (VN)	8	7

Performance Measures

- Equipment **Age**
  - Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)
- Rolling Stock **Age**
  - Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB
- Infrastructure **Performance**
  - Percentage of track segments with performance restrictions by class
- Facilities **Condition**
  - Percentage of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale *(1=Poor to 5=Excellent)*

E. Recordkeeping and Reporting Requirements

Including the role of the National Transit Database

Annual Reporting Requirements

- Submit to NTD

1. Data Reports
   - Projected performance targets for next fiscal year
   - System Condition and Performance Reports
2. Narrative Report
   - Change in condition
   - Progress toward targets

- Group Plan Sponsors submit consolidated reports on behalf of their participants
- A TAM-NTD Crosswalk can be found on the TAM website

National Transit Database Webpage

ps://www.transit.dot.gov/ntd/ntd-asset-inventory-modules-and-information

United States Department of Transportation | About DOT | Our Activities | Areas of Focus

Federal Transit Administration

About | Funding | Regulations & Guidance

Home » National Transit Database

- National Transit Database
- About the NTD
- NTD Data
- Reference Materials
- Manuals
- Asset Inventory Module
- Trainings and Conferences
- Reporting Forms
- Presentations and Webinars
- Rules and Regulations
- NTD Glossary
- Reporting Login

NTD Asset Inventory Modules and Information

The Asset Inventory Modules for the National Transit Database

- Asset Reporting Manual
- Asset Module Reporting Template (Excel)
- Asset Inventory Expansion Federal Register Notice
- Asset Inventory Expansion Overview Webinar
- Asset Inventory Expansion Webinar Presentation (PDF)
- Webinar Q&A Transcript - 12/16/15 (PDF)
- Webinar Q&A Transcript - 12/18/15 (PDF)

Updated: Wednesday, March 9, 2016

Related Links

- NTD Internet Reporting System Forms
- Manuals
- Federal Register Notices, Rules & Regulations
- Census Updates
- Presentations and Webinars

Accessibility Contact

National Transit Database
1200 New Jersey Avenue, SE
Federal Transit Authority
Washington, DC 20590
United States
NTDhelp@dot.gov

Asset Module Reporting Template

https://www.transit.dot.gov/ntd/ntd-asset-inventory-modules-and-information

Recordkeeping Requirements

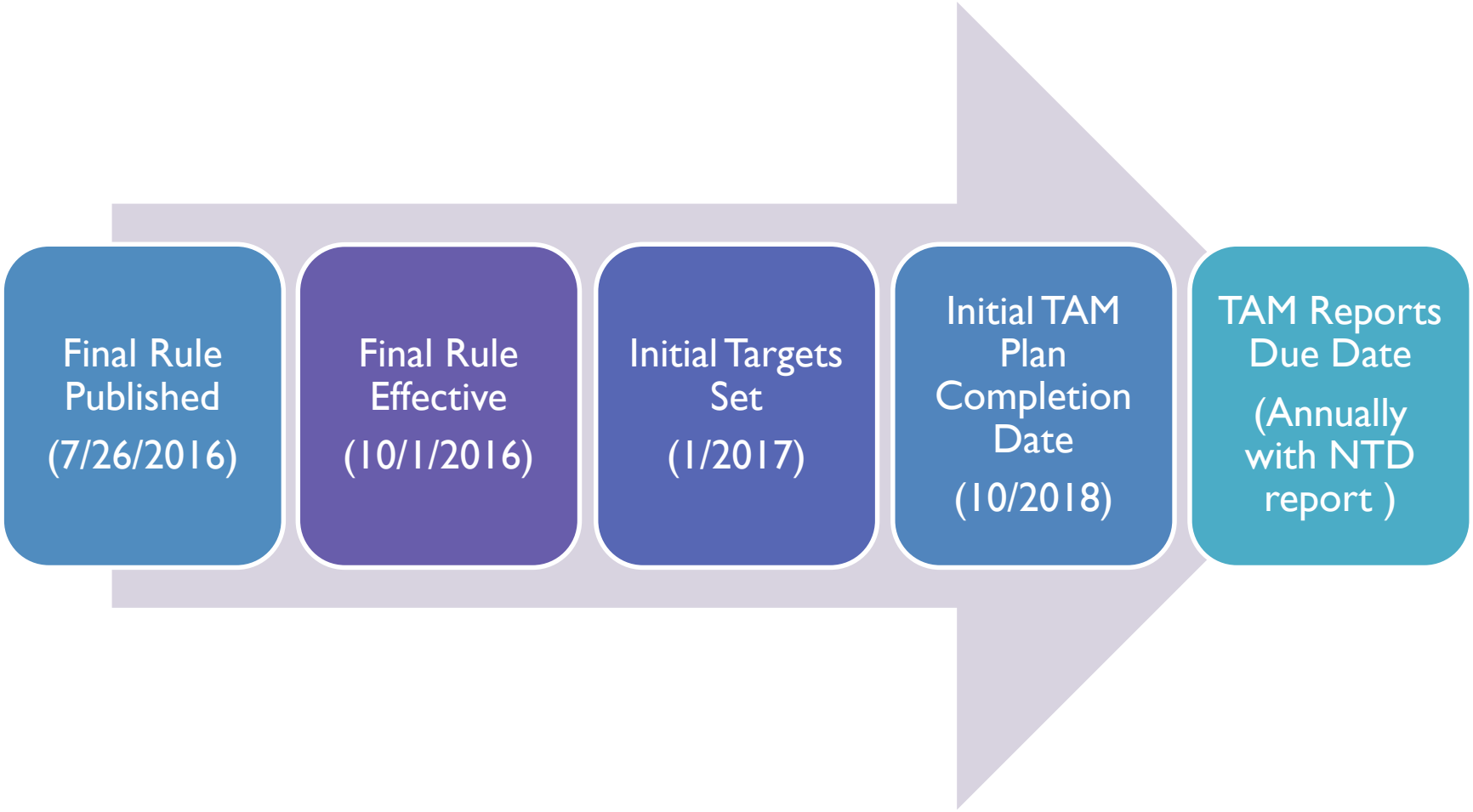
- Maintain records supporting TAM Plan
- Share with State and metropolitan planning organization (MPO) planning agencies
  - TAM Plan
  - Performance targets
  - Investment strategies
  - Annual condition assessments

Certification

- TAM Plans are Self-Certified by the Accountable Executive
- FTA will update Certifications and Assurances to reflect TAM Plan requirements
- FTA will review Plans and Progress during Triennial and State Management Reviews, as well as during MPO Certification Reviews

Implementation

Where do we go from here?



TAM Timelines

Items in blue Submitted to NTD

Activity	Initial Due Date	Ongoing Submittal Frequency
Final Rule Effective Date	October 1, 2016	n/a
SGR Targets	Set by January 2017 (Do not need to be reported to NTD)	*Annually within 4 months of end of provider's FY as part of NTD Report*
TAM Plan	October 1, 2018	Every 4 years
Asset Inventory and Condition Reporting	*Within 4 months of end of provider's FY 2018*	*As part of NTD Report*
Narrative Report	*Within 4 months of end of provider's FY 2019*	*Annually within 4 months of end of provider's FY*

TAM Plan Example

What type of TAM plan do I need to develop?

1. Is this rule applicable to me?
2. Am I Tier I or Tier II?
3. Can I participate in a Group Plan?

TAM Plan Example

1. Inventory Capital Assets

Agency A:

- Owns Four 30-foot low-floor buses

Agency B:

- Owns Two 30-foot low-floor buses

Group Plan inventory would include six 30-foot low-floor buses

TAM Plan Example

2. Assess Condition

Criteria	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5	Bus 6
Poses safety risk (0-5)	5	0	1	2	4	0
Age (years)	17	15	15	7	7	2
Poor reliability (0-5)	2	3	3	4	2	1
Poor appearance (0-5)	1	3	2	4	2	1

TAM Plan Example

3. Decision Support Tools

Criteria	Weight	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5	Bus 6
Poses safety risk (0-5)	8	5	0	1	2	4	0
Age (years)	.5	17	15	15	7	7	2
Poor reliability (0-5)	5	2	3	3	4	2	1
Poor appearance (0-5)	1	1	3	2	4	2	1
Totals		59.5	25.5	32.5	43.5	47.5	7

4. Investment Prioritization

Score ≥ 50…… Replace this year
30 ≤ Score < 50… Replace in year 3
Score < 30…… No immediate remedial action

Reporting Requirements

Performance Measures and Targets

a) Calculate condition information

b) Set targets for next fiscal year

35% of 30-foot buses will exceed the 12-year ULB.

	ULB	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5	Bus 6	Exceed ULB
Year 1	*12*	17	15	15	7	7	2	50%
Year 2	*12*	retired	16	16	8	8	3	33%

Report Annually to NTD (group plan sponsor):

- Data Report
  - Condition information
  - Performance targets for next FY
- Narrative report
  - Describing changes
- Sponsors submit consolidated report for the group

Technical Assistance from FTA

- TERM-Lite
- Transit Asset Management Guide
- TCRP Products
- TAM News & Noteworthy Practices
- Small Provider Guide and Template
- Asset Inventory Development & Integration Guide
- Training & Webinars
- Facility Condition & Rail Guideway Guidebooks

https://www.transit.dot.gov/TAM

Asset Management Guide for Small Providers

- Explains/provides:
  - Who, What, & Why TAM
  - TAM plan requirements for small providers
  - Other TAM plan considerations (e.g., reporting, monitoring)
  - TAM plan template

https://www.transit.dot.gov/research-innovation/asset-management-guide-small-providers-report-no-0092

Guide for Small Providers, Inside

Table 2-1 & 2-2, FTA Asset Management Guide for Small Providers

Transit Agency Business Benefits	Asset Management Approach
Improved customer service	• Improves on-time performance, service operations, and vehicle and facility cleanliness. • Reduces missed trips, slow orders, and station shutdowns. • Focuses investments around customer-centered goals and metrics.
Improved productivity, reduced safety risks, and reduced costs	• Maintains assets more effectively, using condition-based approaches and predictive and preventive maintenance strategies to reduce costs while improving service delivery. • Reduces chances of maintenance-related safety hazards due to improved asset condition.
Data for decision-making	• Better aligns spending with an age the greatest return from limited f • Incorporates lifecycle cost, risk, a operations and capital programmi • Improves visibility for budgeting n understanding other costs or fina and/or other replacement needs. • Provides better understanding of investments and outcomes (condi lead to more accurate estimates c condition.
Better data for improved stakeholder communications	• Improves transparency and accou relationships with stakeholders. • Provides more accurate and timel oversight boards and customers.

Requirement Reference	Requirement	Part I Guide Reference
49 U.S.C. 5326(b)(2) 5326(a)(2)(A)	Develop TAM Plan that includes capital asset inventories.	Section 3.1.2
49 U.S.C. 5326(b)(2) and 5326(a)(2)(A)	Develop TAM Plan that includes condition assessments.	Section 3.1.4
49 U.S.C. 5326(b)(2) and 5326(a)(2)(A)	Develop TAM Plan that references use of decision support tools.	Section 3.1.5
49 U.S.C. 5326(b)(2) and 5326(a)(2)(A)	Develop TAM Plan that includes investment prioritization.	Section 3.1.6
49 U.S.C. 5326(b)(3)	Report on condition of system.	Sections 3.1.3 and 3.2
49 U.S.C. 5326(b)(3)	Provide description of any change in condition since last report.	Sections 3.1.3 and 3.2
49 U.S.C. 5326(c)(2)	Provide performance targets in relation to SGR performance measures.	Sections 3.1.1 and 3.2
49 U.S.C. 5326(c)(3)(A)	Report on progress toward meeting performance target.	Sections 3.1.1 and 3.2
49 U.S.C. 5326(c)(3)(B)	Provide subsequent fiscal year performance targets.	Sections 3.1.1 and 3.2

TAM Template for Small Providers

ASSET MANAGEMENT GUIDE
FOR SMALL PROVIDERS

Focusing on the Management of Our Transit Investments

March 2016

Asset Condition: **What condition are your assets in to run the services required? How does the actual condition compare to the target set for the assets? The tables to the right are automatically populated based on your inventory on the previous sheet. There is one table for each asset category (three total). Scroll to the right to view all tables.**

Complete the tables by filling in the input cells with the Useful Life Benchmark for each asset. Refer to Section 3.1.1 of Part I for an explanation of the Useful Life Benchmark.

Asset Condition Summary: **Click the "Summarize" button to update the summary table to calculate the percent of assets past their Useful Life Benchmark.**

Summarize

Asset Category	Count	Avg Age	Avg TERM Condition	Avg Value	% At or Past ULB
Equipment	0	-	N/A	-	-
Facilities	0	-	-	-	-
Rolling Stock	0	-	N/A	-	-

BACK SAVE CONTINUE

Cover Page | Instructions | Getting Started | Chp 1 - Introduction | Chp 2 - Asset Portfolio | Chp 3 - Condit

https://www.transit.dot.gov/research-innovation/asset-management-guide-small-providers-fta-report-no0092

Next Steps

- Guides are open for comment
  - Webinar: August 11
- If you have questions, where do you go?
  - Website: www.transit.dot.gov/TAM
  - Regional Staff
  - Mshadoni Smith

    Mshadoni.Smith@dot.gov