



FEDERAL TRANSIT ADMINISTRATION

Transit Asset Management (TAM)

Final Rule

July/August 2016

Presenter: Mshadoni Smith



U.S. Department of Transportation
Federal Transit Administration

Today's Presentation

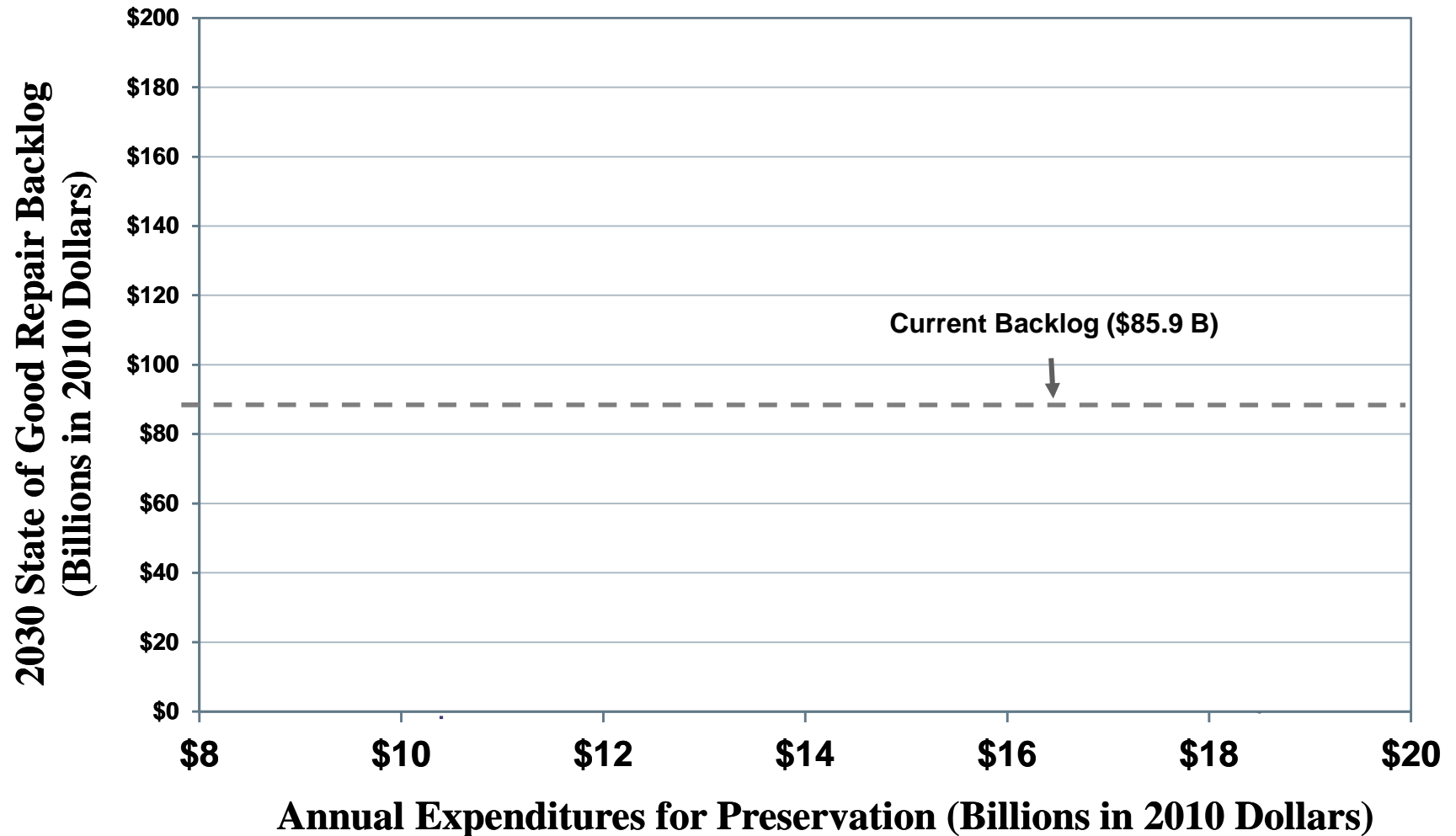
- Transit Asset Management Background
- Final Rule Provisions
- Implementation
- Technical Assistance



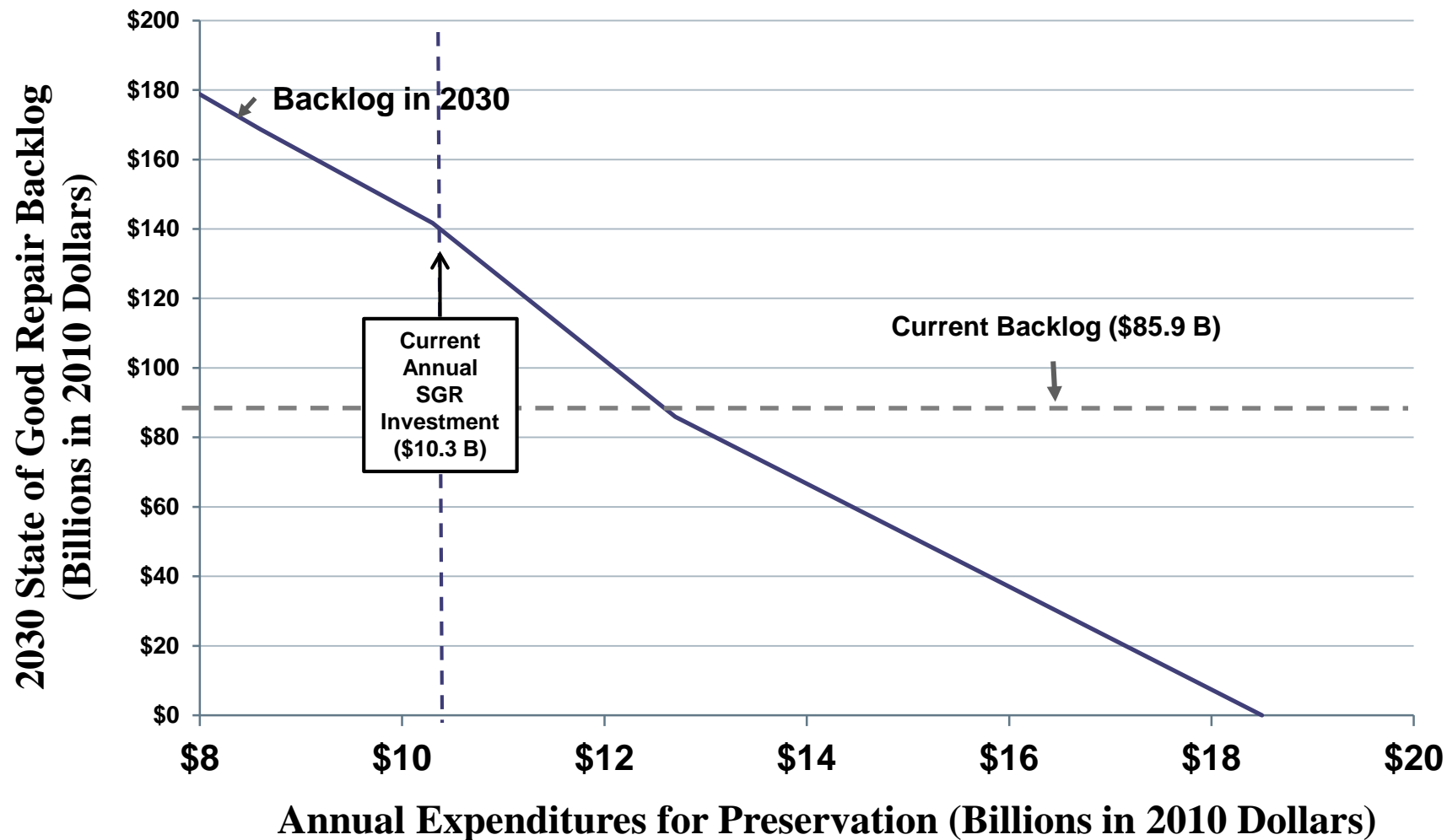
What is Transit Asset Management?

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)**.

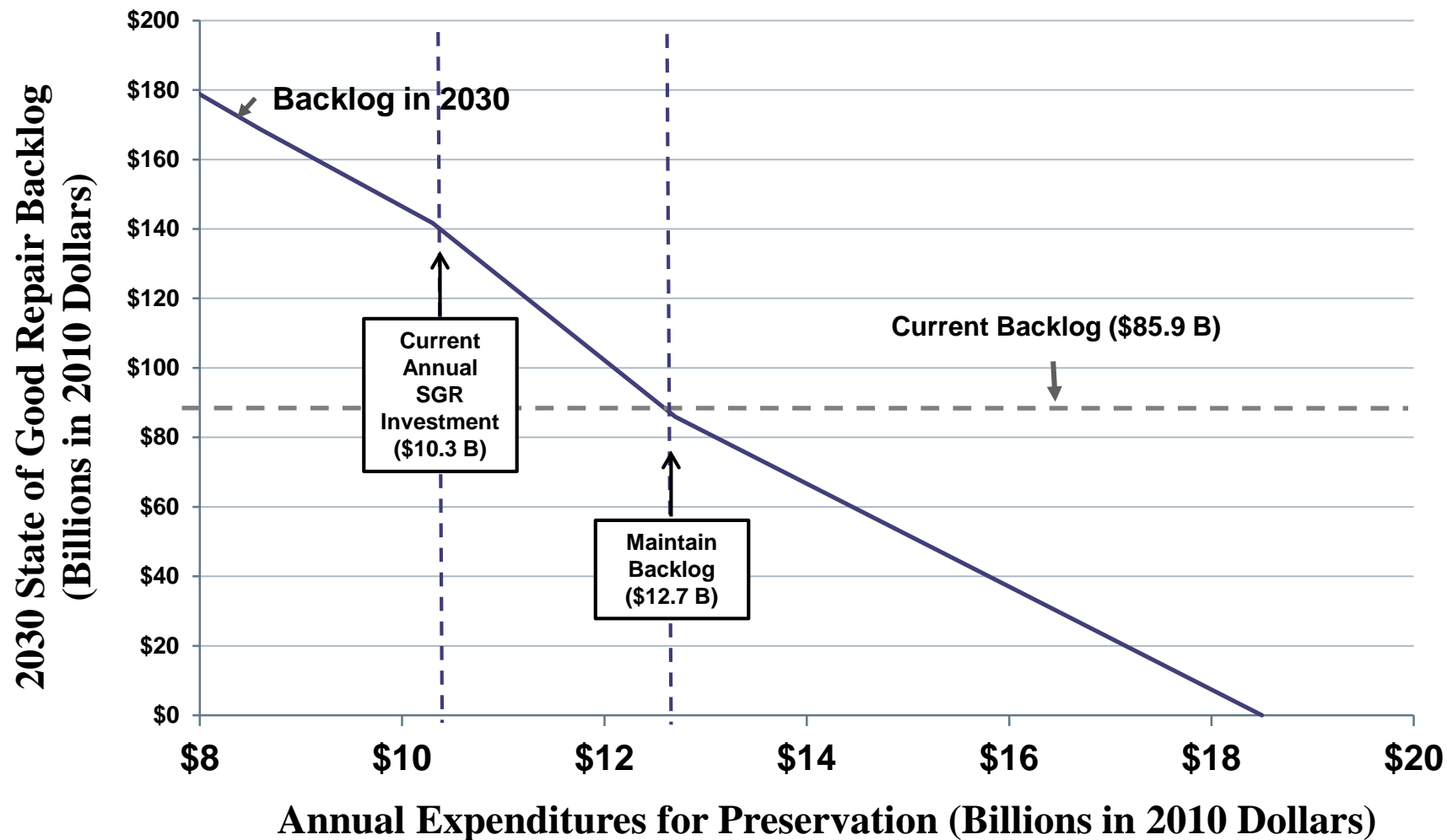
Transit Asset Management: *Background*



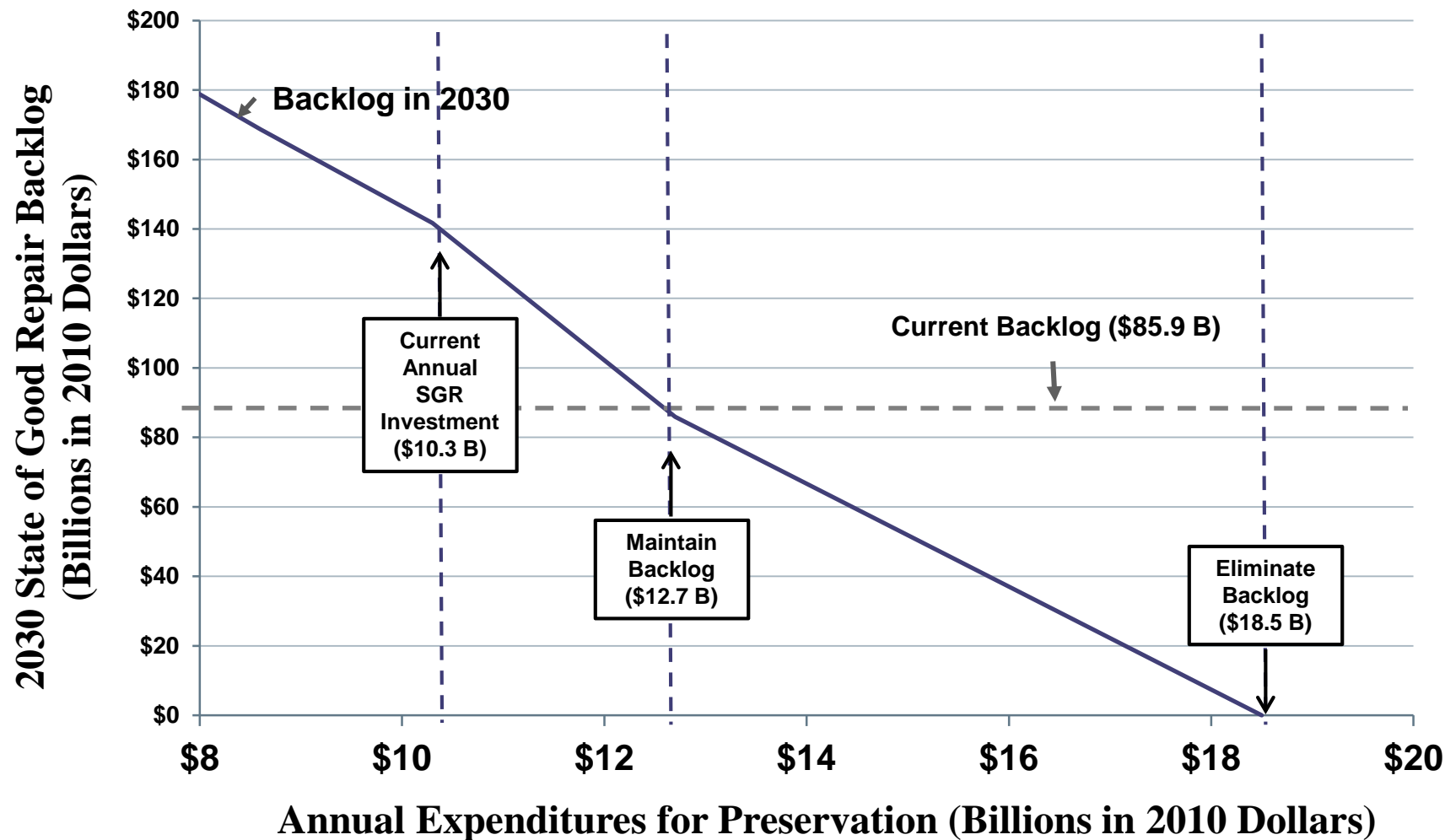
Transit Asset Management: *Background*



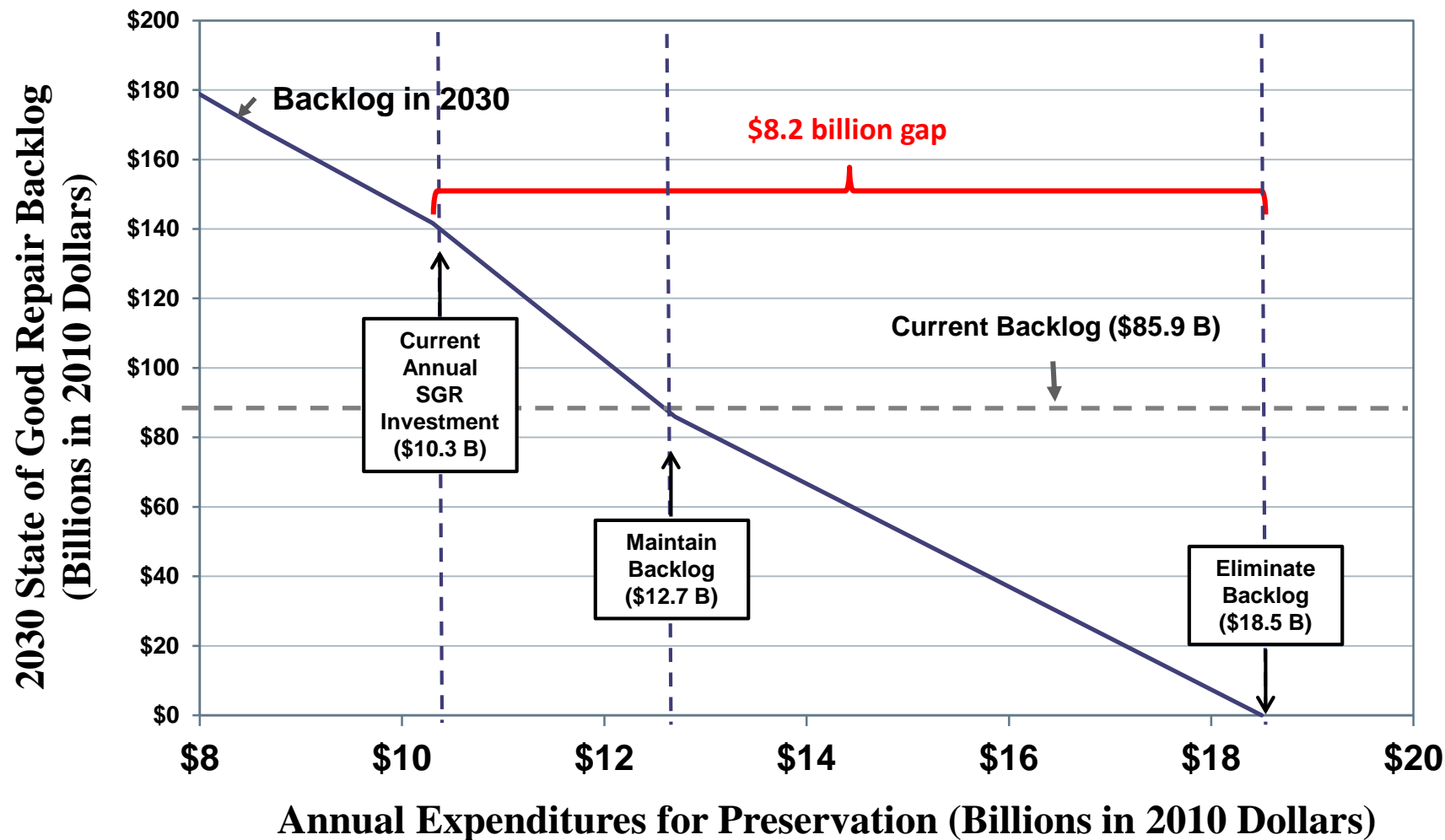
Transit Asset Management: *Background*



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

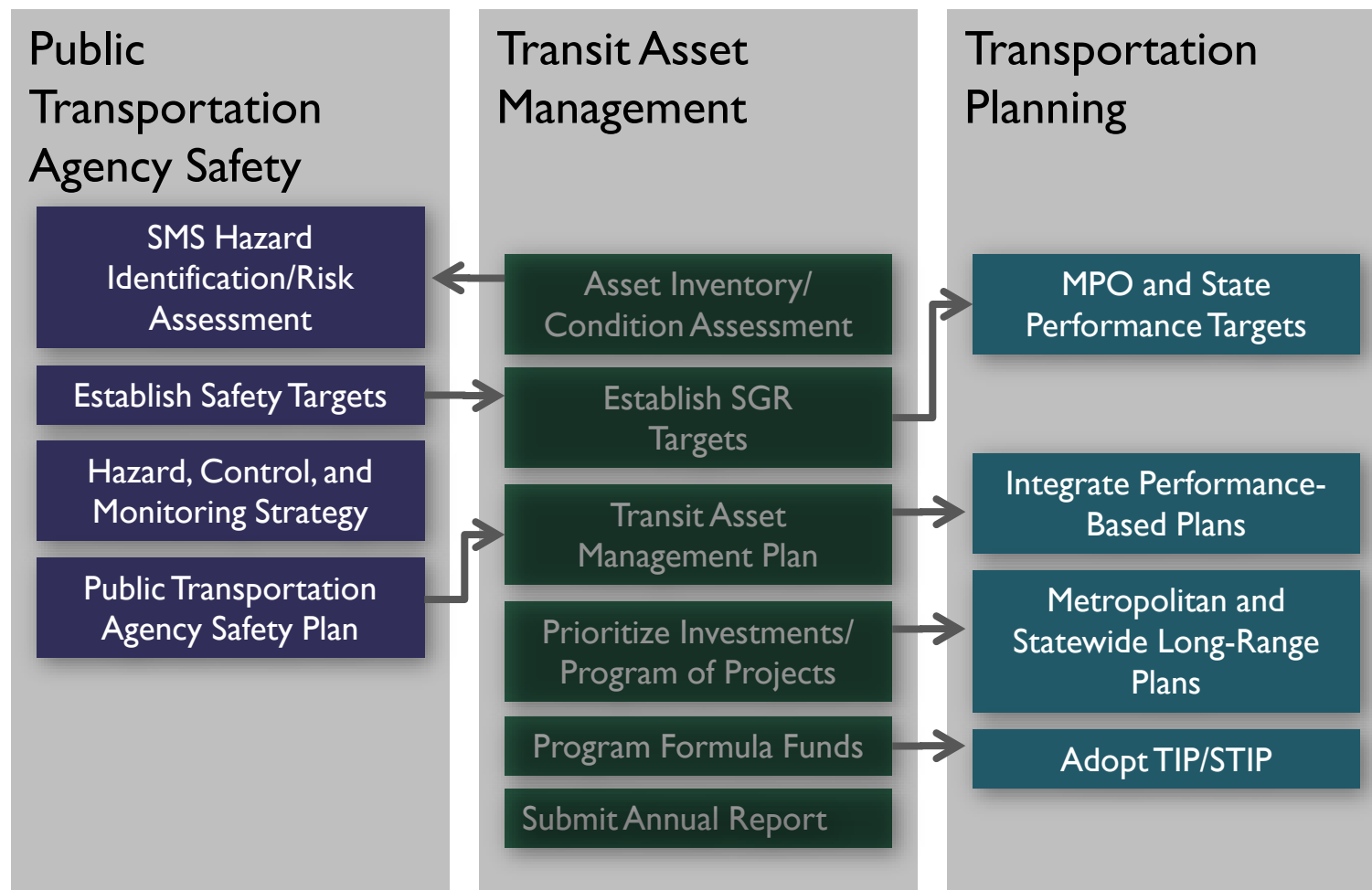
FTA

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

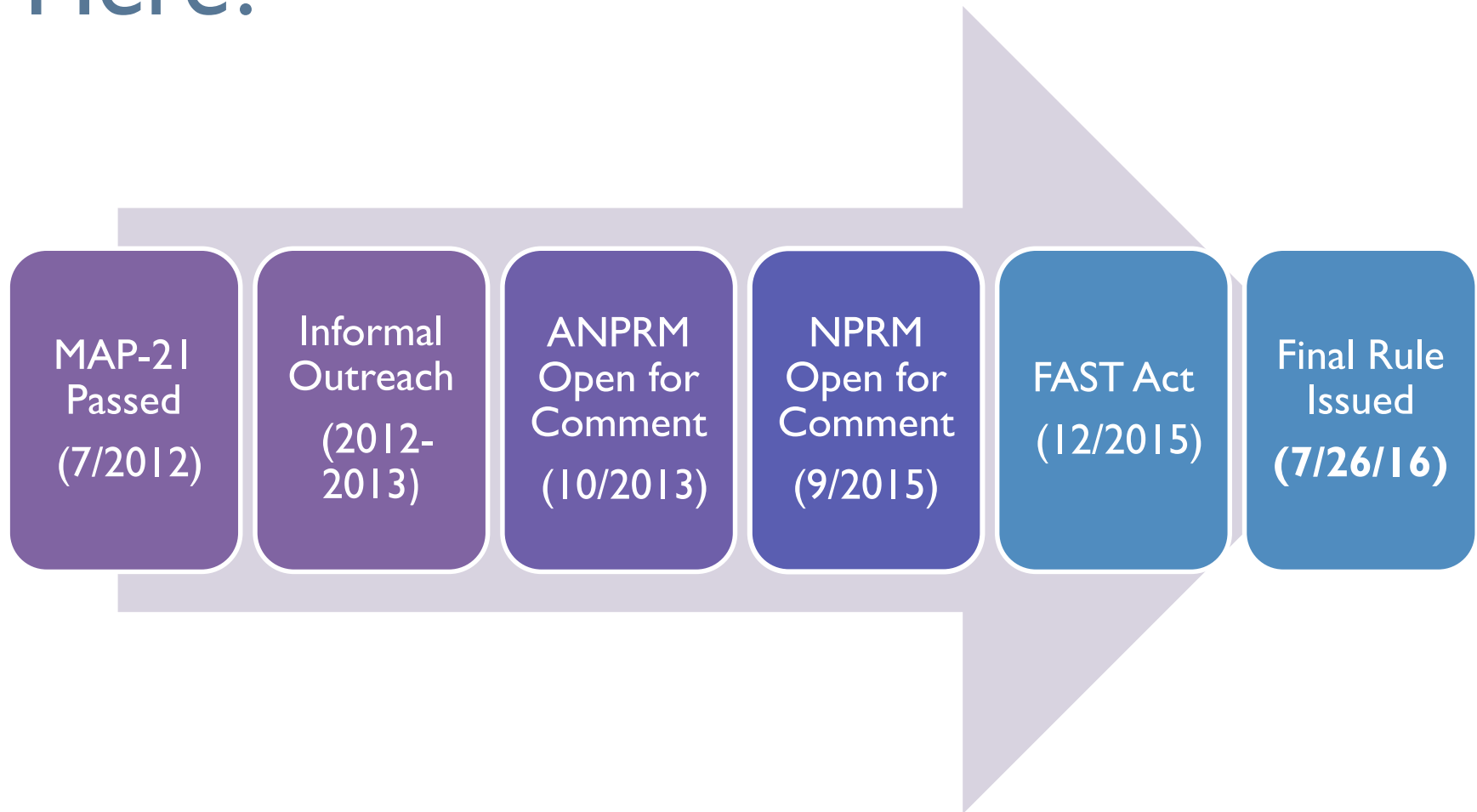
FHWA

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

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 Tracking
 - Equipment
 - Third party assets
- 5310 Applicability
- Group Plans
- Performance Targets

FTA
FEDERAL TRANSIT ADMINISTRATION



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'

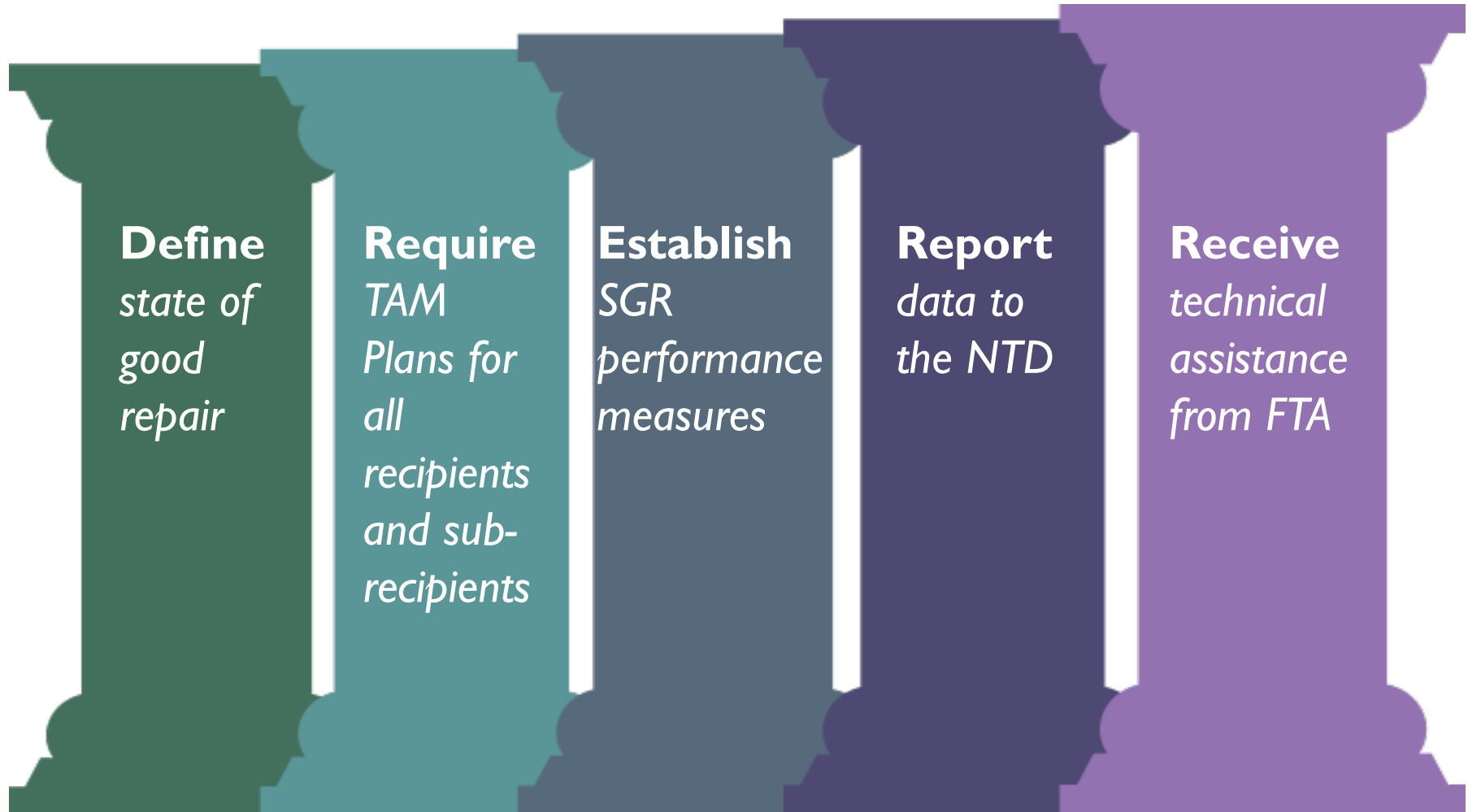


The term "public transportation" is defined at 49 U.S.C. 5302 and means regular, continuing shared-ride surface transportation services that are open to the general public or open to a segment of the general public defined by age, disability, or low income.

B. National Transit Asset Management System



National Transit Asset Management System



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 not 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 I provider must develop its own TAM Plan
 - A Tier II provider may participate in a single 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
 - Sponsor is not the Accountable Executive for its Group TAM Plan participants
 - 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.

TAM Plan Elements

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

All Providers (Tier I & II)

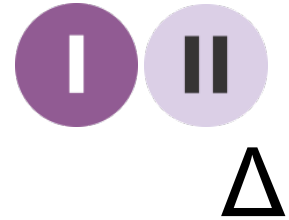


5. TAM and SGR Policy
6. Implementation Strategy
7. List of Key Annual Activities
8. Identification of Resources
9. Evaluation Plan

Tier I only



I. 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

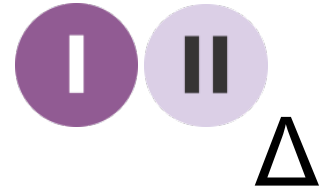
Infrastructure

- 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 shelters)	▪ Only facilities with direct capital responsibility (excluding bus shelters)

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 not 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

5.TAM and SGR Policy



- Transit provider's vision
- Executive-level direction to support the goals of the TAM program
- Documented commitment to achieving SGR
- Defined TAM objectives
- Defined and assigned roles and responsibilities

Specific
Measurable
Attainable
Relevant
Temporally
constrained

6. Implementation Strategy



- Operational level process for implementing TAM Plan

7. List of Key Annual Activities



- Description of actions needed to implement TAM Plan for each year of the plan's horizon
 - E.g., software development, coordination between maintenance and finance offices

8. Identification of Resources



- E.g., staff time, technology requirements, funding, etc.

9. Evaluation Plan



- How TAM activities will be monitored, evaluated, and updated to ensure the continuous improvement of TAM practices

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	▪ Age based	▪ Only <u>non-revenue service vehicles</u>	%
Rolling Stock	▪ Age based	▪ Only revenue vehicles <u>by vehicle class/mode</u>	%
Infrastructure	▪ Only infrastructure with direct capital responsibility	▪ Only <u>fixed rail guideway, track, signals, and systems</u>	%
Facilities	▪ Only facilities with direct capital responsibility (not bus shelters)	▪ <u>Maintenance and Administrative and Passenger Stations and Parking Facilities</u>	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)
 - www.transit.dot.gov/ntd/ntd-asset-inventory-modules-and-information

Useful Life Benchmark (ULB)

- ULB \neq 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



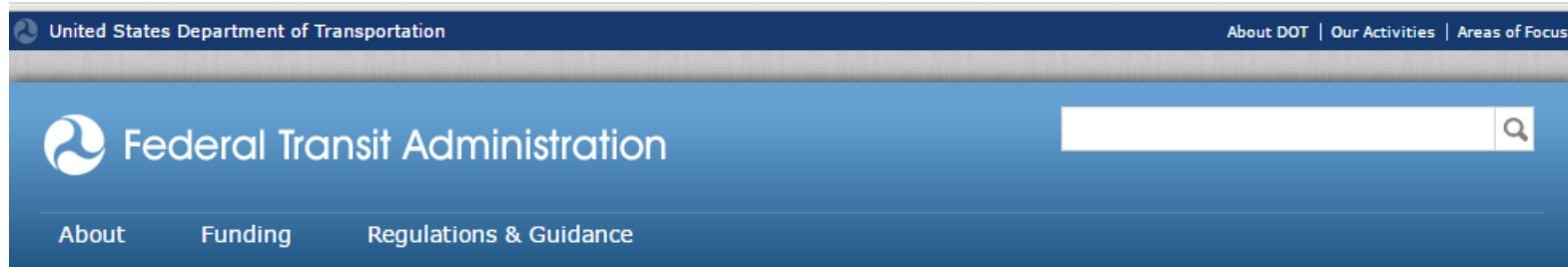
Annual Reporting Requirements

- Submit to NTD
 1. Data Reports
 - Projected performance targets for next fiscal year
 - System Condition and Performance Report
 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



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](#)

Asset Module Reporting Template

Accessibility Contact

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

<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

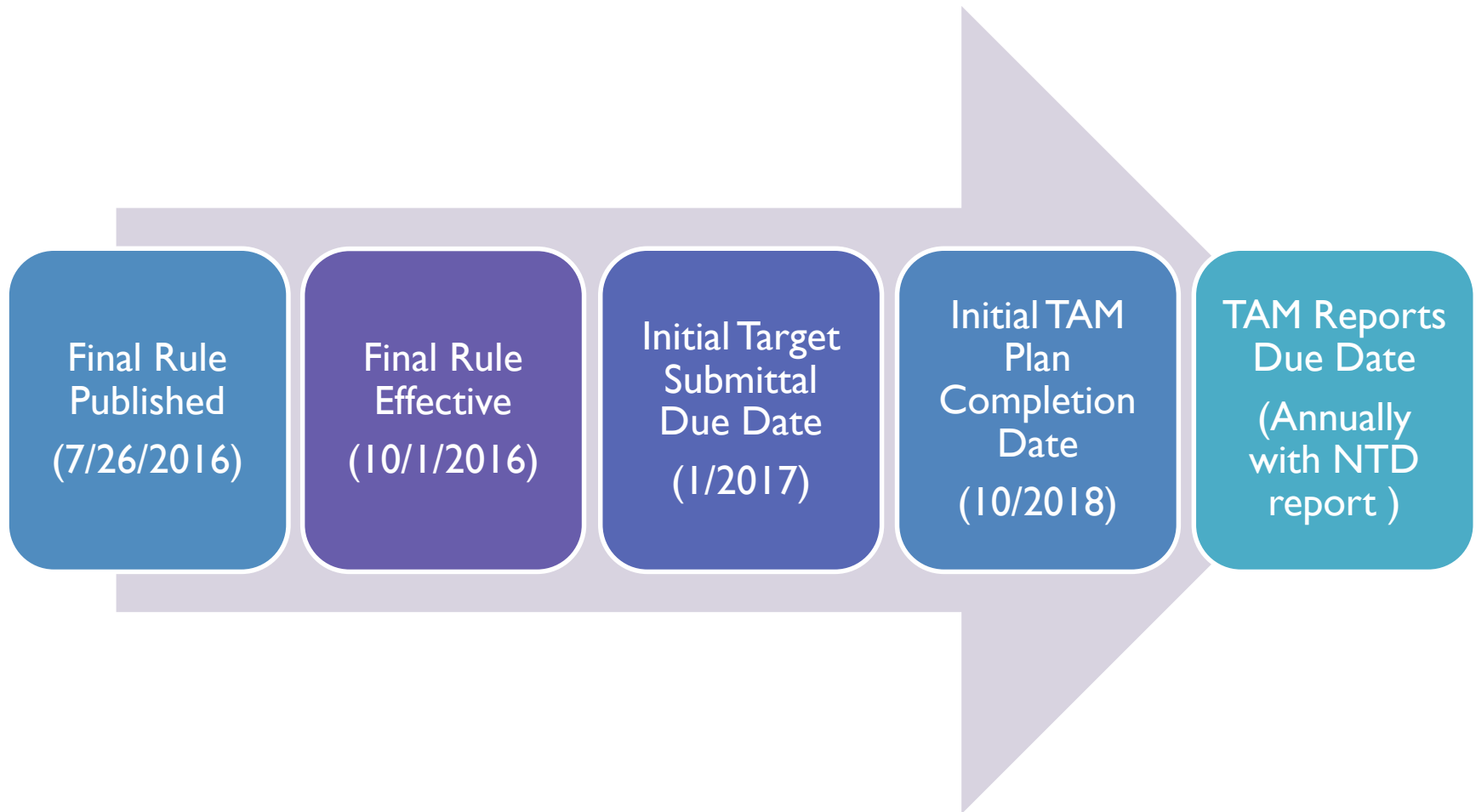
Certification

- 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	<i>Set by 1/1/17 Report to NTD by 1/31/17</i>	<i>Annually within 4 months of end of provider's FY as part of NTD Report</i>
TAM Plan	October 1, 2018	Every 4 years
Asset Inventory and Condition Reporting*	<i>Within 4 months of end of provider's FY 2018</i>	<i>As part of NTD Report</i>
Narrative Report	<i>Within 4 months of end of provider's FY 2019</i>	<i>Annually within 4 months of end of provider's FY</i>

** Only 1/3 of facilities condition assessments are due in NTD report year 2018*

What type of TAM plan do I need to develop?

- FTA**
FEDERAL TRANSIT ADMINISTRATION

TAM Plan Example

1. Inventory Capital Assets



Six 30-foot buses

2. Assess Condition

- Age/ULB:

Bus	Bus 1	Bus 2	Bus 3	Bus 4	Bus 5	Bus 6	ULB
Age	17	15	15	7	7	2	12

- 3 of 6 buses are below the useful life benchmark

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

$30 \leq \text{Score} < 50$...

Score < 30

Replace this year

Replace in year 3

No immediate remedial action

TAM Plan Example

5. TAM and SGR Policy

“We have 2 objectives:

- To ensure all vehicles are no more than 6 months behind in deferred maintenance
- Zero transit deaths

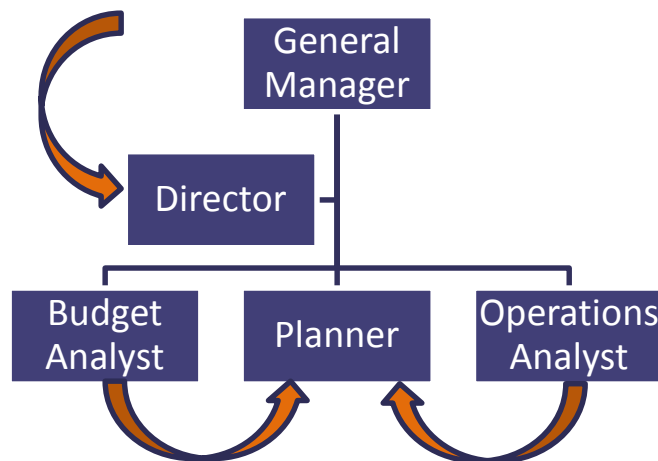
Roles & Responsibilities:

- Chief of Maintenance – keeps asset condition inventory up to date
- Chief Financial Officer – provides cost estimates for ...

I, the accountable executive, am committed to achieving a state of good repair. Our agency's goal is ...

TAM Plan Example

6. Implementation Strategy



7. Key TAM Activities

1. Link asset inventory to decision support tool (Due: May)
2. Improve coordination between maintenance and finance staff (meet quarterly)

2016											
January				February				March			
Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri
28	29	30	31	1	2	3	1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26
25	26	27	28	29	30	31	29	1	2	3	4
1	2	3	4	5	6	7	7	8	9	10	11
April				May				June			
Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri
28	29	30	31	1	2	3	25	26	27	28	29
4	5	6	7	8	9	10	2	3	4	5	6
11	12	13	14	15	16	17	9	10	11	12	13
18	19	20	21	22	23	24	16	17	18	19	20
25	26	27	28	29	30	1	23	24	25	26	27
2	3	4	5	6	7	8	30	31	1	2	3
July				August				September			
Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri
27	28	29	30	1	2	3	1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26
25	26	27	28	29	30	31	29	30	31	1	2
1	2	3	4	5	6	7	5	6	7	8	9
October				November				December			
Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri
26	27	28	29	30	1	2	31	1	2	3	4
3	4	5	6	7	8	9	7	8	9	10	11
10	11	12	13	14	15	16	14	15	16	17	18
17	18	19	20	21	22	23	21	22	23	24	25
24	25	26	27	28	29	30	28	29	30	31	1
31	1	2	3	4	5	6	5	6	7	8	9

8. Identify Resources

Total = \$60K

The diagram illustrates the components of an Evaluation Plan. At the center is the text "Evaluation Plan". Surrounding it are five key elements, each connected to the center by a curved arrow pointing towards it:

- Timelines** (top left)
- Goals** (top right)
- Tracking** (bottom right)
- Challenge Mitigation** (bottom center)
- Milestones** (bottom left)

The arrows indicate a clockwise flow from Timelines to Goals, then to Tracking, Challenge Mitigation, Milestones, and back to Timelines.

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.

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

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>

Next Steps

- Draft condition guidebooks available and open for comment
- Next webinars: **Guidebooks Aug. 11th** and **NTD Asset Inventory Aug. 16th 2pm EDT**
- If you have questions, where do you go?
 - Website: www.transit.dot.gov/TAM
 - Regional Staff
 - Mshadoni Smith
Mshadoni.Smith@dot.gov