



FEDERAL TRANSIT ADMINISTRATION

CalACT Expo
Transit Asset Management (TAM)
Plan Workshop
49 CFR 625
April 24, 2017



U.S. Department of Transportation
Federal Transit Administration



TRANSIT ASSET MANAGEMENT

www.transit.dot.gov/TAM

Today's Presentation Agenda

- Transit Asset Management Context and Background
- Final Rule Provisions
 - ✓ Reduced burden for small providers
 - ✓ Performance Management
- Technical Assistance



What is Transit Asset Management?

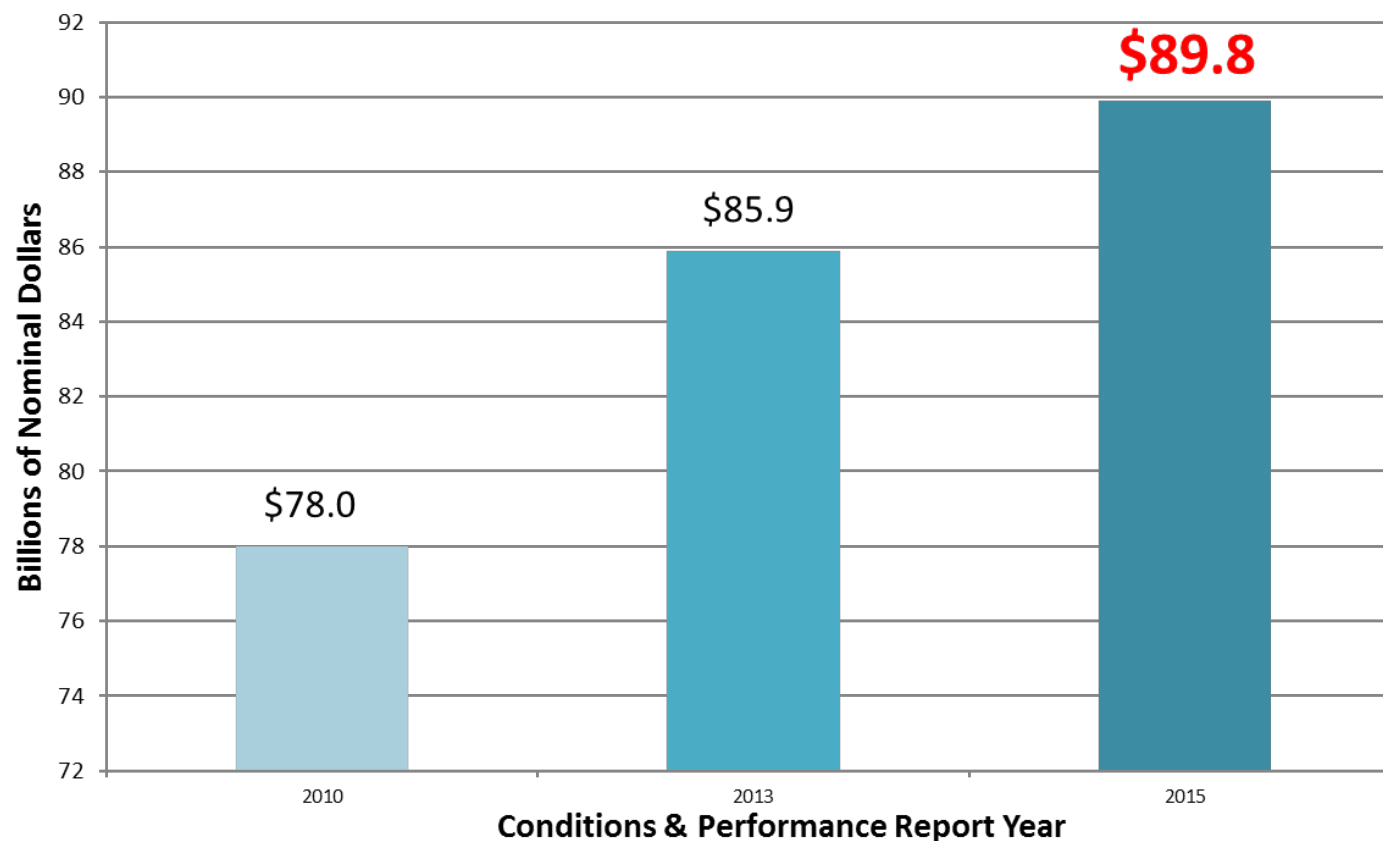
Transit Asset Management (TAM) is a business model that uses the condition of assets to guide the optimal prioritization of funding at transit properties in order to keep our transit networks in a State of Good Repair (SGR).

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

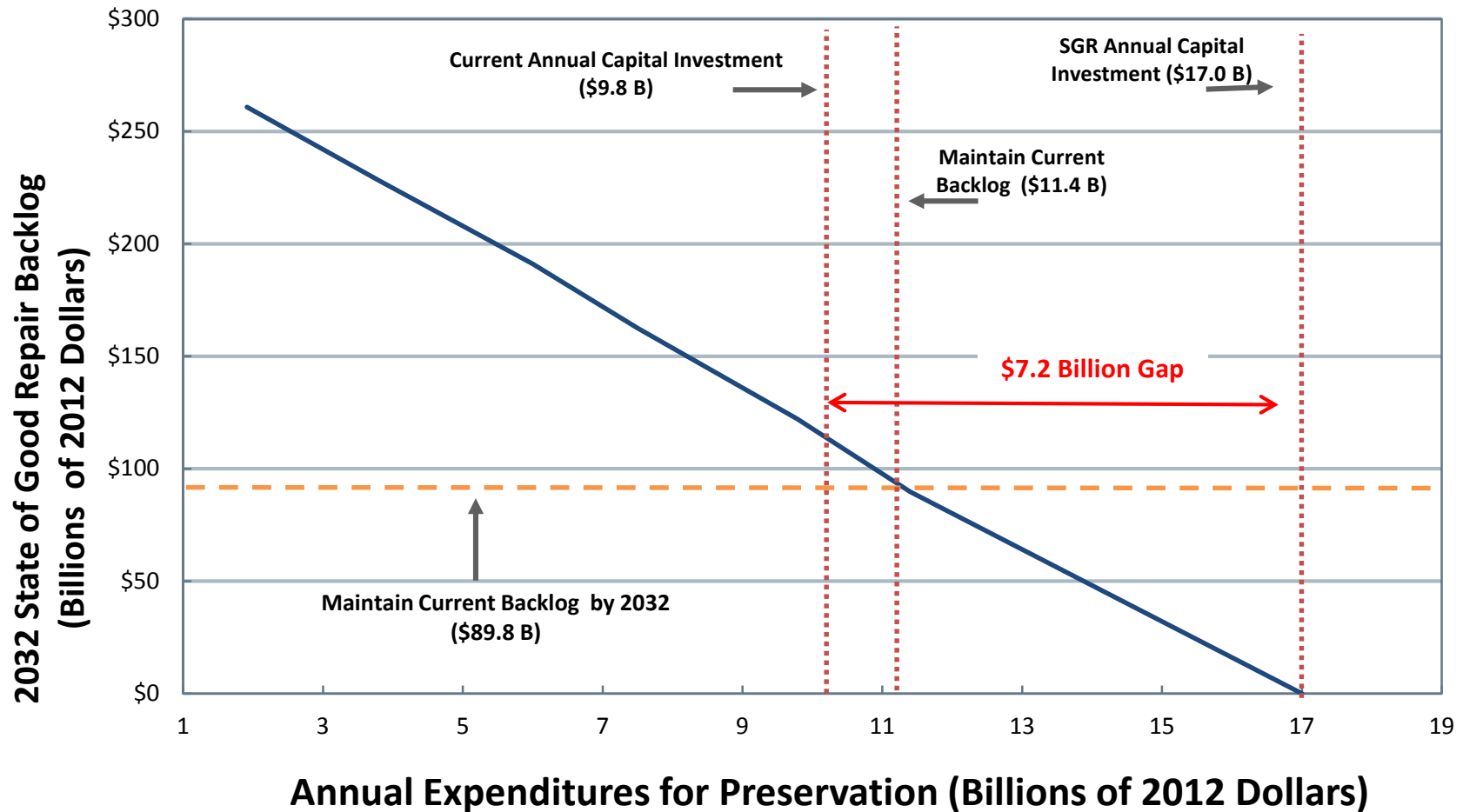
FTA Backlog Estimates Since 2010

State of Good Repair Backlog Estimates



SGR Backlog: Funding Gap

Impact of Preservation Investment on 2032 Transit SGR Backlog in All Areas



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

MAP-21 Performance Management Framework

FTA

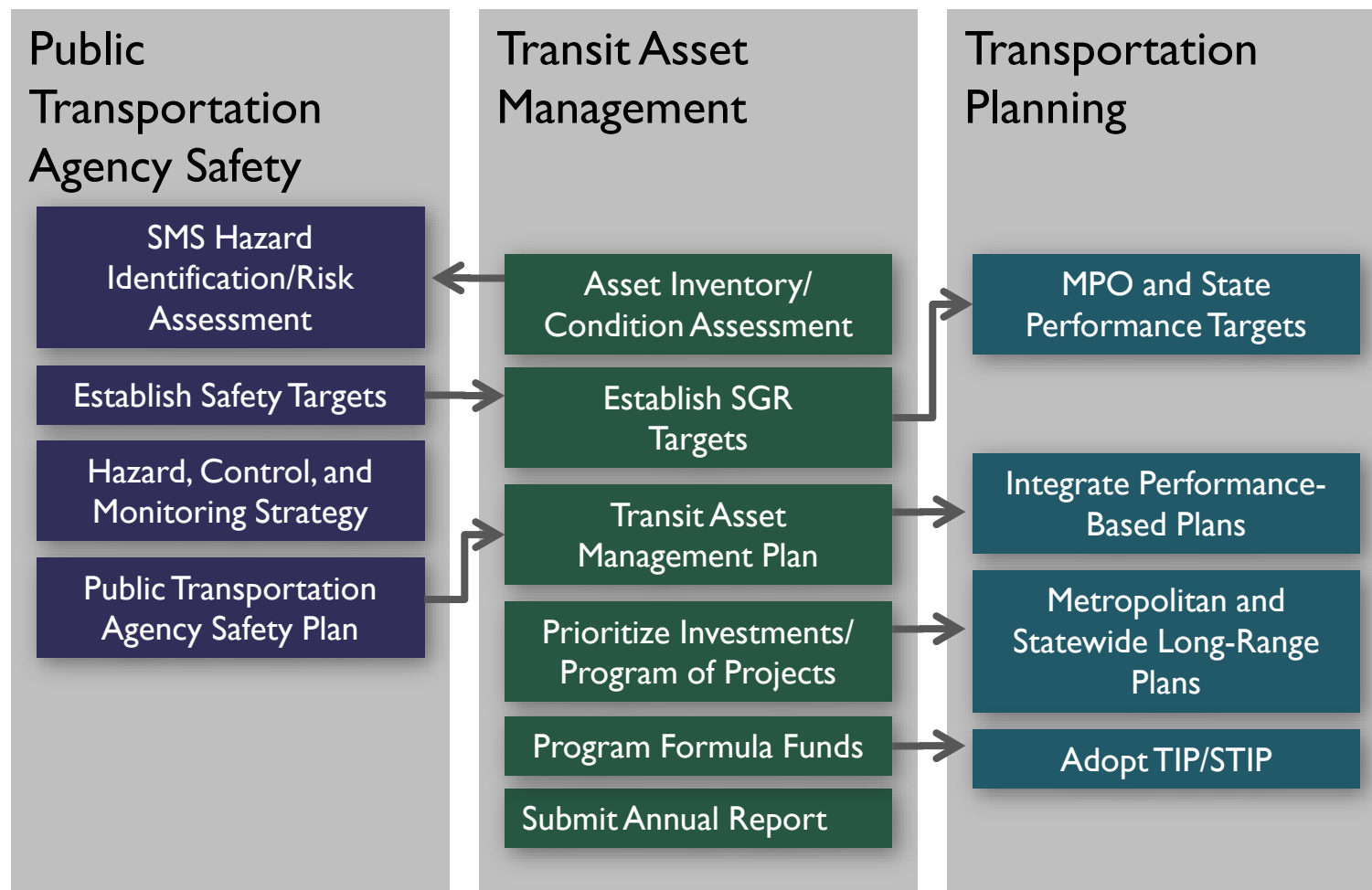
- [Transit Asset Management](#)
- [National Public Transit Safety Plan](#)
- [Public Transportation Agency Safety Plan](#)

FHWA

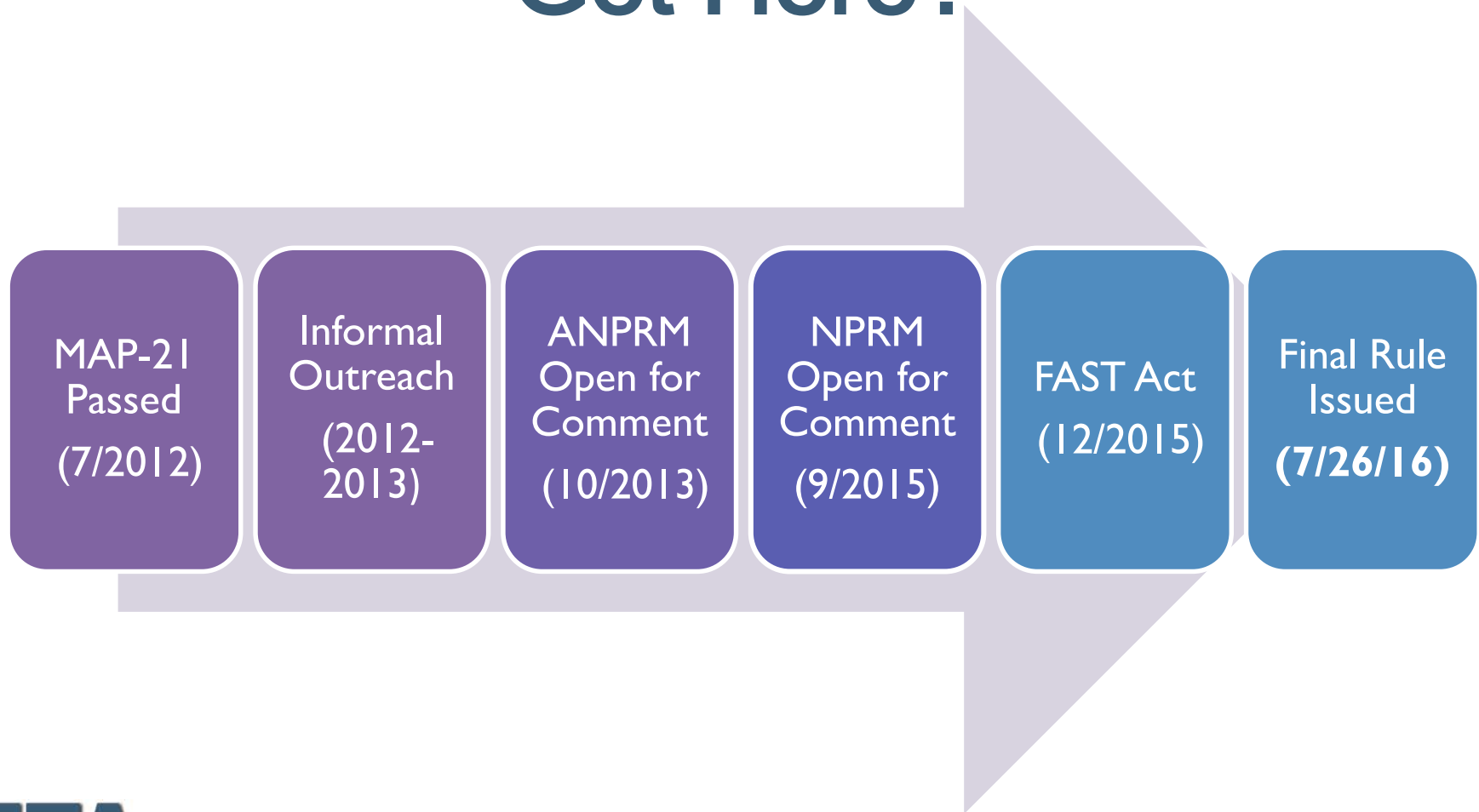
- [Safety Performance](#)
- [Pavement and Bridge Condition](#)
- [System Performance & CMAQ](#)
- [Highway Safety Improvement Program](#)
- [Highway Asset Management Plan](#)

- [Statewide and Metropolitan Planning](#)

Linking Proposed Regulations



What Process Did We Take to Get Here?



Key Features of the TAM rule

- TAM Final Rule provides a foundation for addressing SGR backlog
 - Simple, Scalable, Structured, and Standard
- Focuses on measuring and monitoring performance and condition
- Minimizes burden on smaller transit providers

Break for Questions



National TAM System 49 CFR 625 Provisions



National Transit Asset Management System

Define
*state of
good
repair*

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

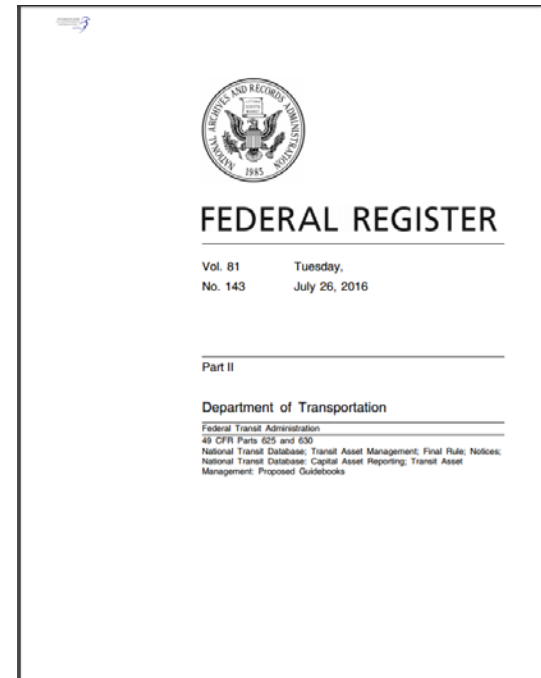
Establish
*SGR
perfor-
mance
measures*

Report
*data to
the NTD*

Receive
*Technical
assistance
from FTA*

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



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.

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.

Two-Tier Approach

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

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



* FTA estimates under 20% of transit providers would do a Tier I plan

Responsibility for TAM Plan Development

- Each transit provider must designate an Accountable Executive
- Plan Coordination
 - A Tier I provider must develop its own TAM Plan
 - An eligible Tier II provider may participate in a single Group Plan or opt out and develop its own TAM Plan
- Eligible for funding under sections 5337, 5307 & 5311

Funds for Development of TAM Plans

- TAM Plan Development Costs Are Eligible for Funding:
 - State of Good Repair Formula Program
 - Urbanized Area Formula Program
 - Rural Formula Program
- Software Costs for a TAM Plan Are Generally an Eligible Capital Cost
- Asset Inventory and Condition Assessment Costs Are Generally Eligible Maintenance Costs

Specific efforts to reduce burden on small providers



Small Provider Considerations

- Two tier approach reduces requirements for smaller providers
- Small rural providers are automatically included in a Group Plan
 - further reduces the burden since Sponsors do administrative and reporting tasks
 - Small provider still have right to opt-out of group plan

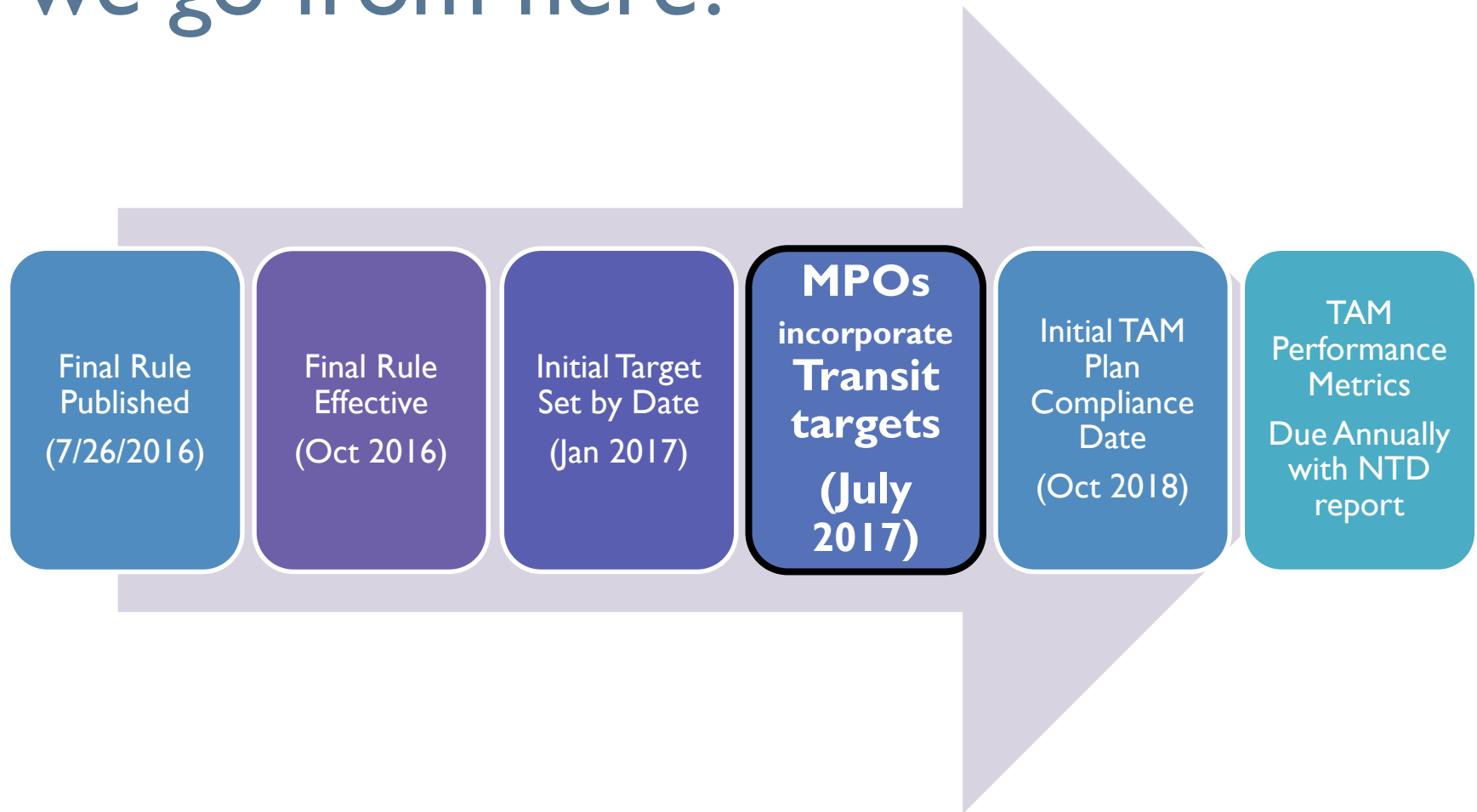
Section 5310 Small Providers (Elderly & Disabled)

- Many 5310 subrecipients will not be subject to the rule for not meeting definition of “Public Transportation” at 49 U.S.C. 5302
 - i.e. a membership-based service, is not public transportation
- Exempts 60% the total number of section 5310 subrecipients subject to TAM

Group TAM Plans

- Group Plans must be compiled by a Sponsor
 - Generally the State DOT or Direct Recipient
 - Sponsor is not the 'Accountable Executive' for its Group TAM Plan participants
- Small urban operators (Section 5307 recipients) must request participation in a Group plan
- Sponsor reports on behalf of group participants

Where are we now and where do we go from here?





TRANSIT ASSET MANAGEMENT

www.transit.dot.gov/TAM

Transit Asset Management Plans



TAM Plan Elements

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

All Providers
(Tier I & II)



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Tier I only



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Relationship to Existing Requirements

- Many elements can be developed from existing FTA requirements for FTA-funded assets
 - Asset ID and location
 - Existing maintenance strategies
- TAM Plan must cover all assets, regardless of funding source
- TAM Plan must include a forward-looking investment prioritization

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

Differences in TAM Plan and NTD Inventory

Assets	TAM Plan Inventory	NTD Inventory	TAM Plan Condition Assessment	SGR Targets
Revenue Vehicles				
Owned	yes	yes	yes	yes
Direct capital responsibility	yes	yes	yes	yes
3rd party owned (direct capital responsibility)	yes	yes	yes	yes
3rd party owned (NO direct capital responsibility)	yes	yes*	no	no

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

What is direct capital responsibility?

- If you own it outright or jointly
- You have financial responsibility for replacing, overhauling or major repairs in your budget.

It is NOT

- IF you use but do not fund
- IF you only do cleaning or minor repairs
- For *infrastructure assets* like track,
 - IF you have a budget line item but no oversight or maintenance responsibility for that project

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

S pecific
M easurable
A ttainable
R elevant
T emporally
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 are 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)

Performance Management



Performance Measures

- **Equipment** *Age*
 - Percentage of non revenue service 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)

Performance Measure Targets

- Targets forecast performance for the next fiscal year
- Targets set 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)

Analyzing Assets

Category	Assessing Condition	Performance Targets	Scale
Equipment	▪ Age based	▪ Only <u>non-revenue service vehicles</u>	ULB
Rolling Stock	▪ Age based	▪ Only revenue vehicles <u>by vehicle class/mode</u>	ULB
Infrastructure	▪ Only infrastructure with direct capital responsibility	▪ Only <u>fixed rail guideway, track, signals, and systems</u>	Slow zone
Facilities	▪ Only facilities with direct capital responsibility (not bus shelters)	▪ <u>Maintenance and Administrative and Passenger Stations and Parking Facilities</u>	TERM

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

Default ULBs



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Default Useful Life Benchmark (ULB) Cheat Sheet

Source: 2017 Asset Inventory Module Reporting Manual, Page 53

Transit Agencies will report the age of all vehicles to the National Transit Database. FTA will track the performance of revenue vehicles (Rolling Stock) and service vehicles (Equipment), by asset class, by calculating the percentage of vehicles that have met or exceeded the useful life benchmark (ULB).

FTA has set a default ULB as the expected service years for each vehicle class in the table below. ULB is the average age-based equivalent of a 2.5 rating on the FTA Transit Economic Requirements Model (TERM) scale. Transit agencies can adjust their Useful Life Benchmarks with approval from FTA.

Revenue Vehicle Type		Default ULB (in years)
AB	Articulated bus	14
AG	Automated guideway vehicle	31
AO	Automobile	8
BR	Over-the-road bus	14
BU	Bus	14
CC	Cable car	112
CU	Cutaway bus	10
DB	Double decked bus	14
FB	Ferryboat	42
HR	Heavy rail passenger car	31
IP	Inclined plane vehicle	56
LR	Light rail vehicle	31
MB	Minibus	10
MO	Monorail vehicle	31
MV	Minivan	8

www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA%20TAM%20ULB%20Cheat%20Sheet%202016-08-30.pdf

Recordkeeping Requirements

- Maintain records supporting current 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 has 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

Final Rule Implementation



Two types of Deliverables

Process

1. Compliant TAM Plan
 - Group
 - Individual Tier I
 - Individual Tier II
2. Recordkeeping & Coordination with Planning
3. Certification

Reports

1. Data Report
 - Performance Targets
 - Performance Status
2. Narrative report

Data Reporting Requirements

- Optional in RY 2017, Mandatory in RY 2018
- Projected performance targets for next fiscal year
- Asset inventory and condition assessments
 - ULBs for Rolling Stock & Equipment (service vehicles)
 - Age is calculated automatically from year of manufacture
 - Condition assessments for facilities
 - Slow zones for infrastructure (rail fixed guideway only)
- Submit to NTD

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

Narrative Report Requirements

- Mandatory beginning in RY 2019 – year after TAM Plan is in place
- Also submitted to NTD
- Change in condition since last report
- Progress toward targets
- A chance to provide context for numerical results

TAM Deliverables Timeline

If your fiscal year ends:	June 30	Sept 30	Dec 31
Share initial targets with planning partners	July 2017		
Report FY17 Asset Inventory Module (AIM) data to NTD Submit targets for FY18 to NTD (optional)	Oct 2017	Jan 2018	Apr 2018
Complete compliant TAM Plan (1st required) Share TAM Plan with planning partners	Oct 2018		
Report FY18 AIM data to NTD (1st required) Submit targets for FY19 to NTD (1st required)	Oct 2018	Jan 2019	Apr 2019
Report FY19 AIM data to NTD Submit targets for FY20 to NTD Submit narrative report to NTD (1st required)	Oct 2019	Jan 2020	Apr 2020
Report FY20 AIM data to NTD Submit targets for FY21 to NTD Submit narrative report to NTD	Oct 2020	Jan 2021	Apr 2021
Complete Updated TAM Plan Share TAM Plan with planning partners	Oct 2022		

Break for Questions



Technical Assistance



Available Technical Assistance



www.transit.dot.gov/TAM

New TAM Training Courses

- Transportation Safety Institute (TSI)
 - Online Performance Measures Training course to teach guidebook methodologies (piloted Jan. 2017)
- National Transit Institute (NTI)
 - TAM 101 update (pilot March/April 2017)
 - Implementing TAM for Tier II and Group Plan Sponsors course (available now)
- In Development
 - TAM 201 Implementation Course (Fall 2018)
 - Executive level TAM Overview Briefing (TBD)

Additional Technical Assistance

- Seventh TAM Roundtable
 - Peer-exchange with hands-on tour and training options
 - 100 transit agencies invited
- TAM Performance Measure Guidebooks **Final**
 - Describes standardized methodology for calculation and reporting of performance metrics to NTD
 - Infrastructure performance restriction
 - Facility condition assessment

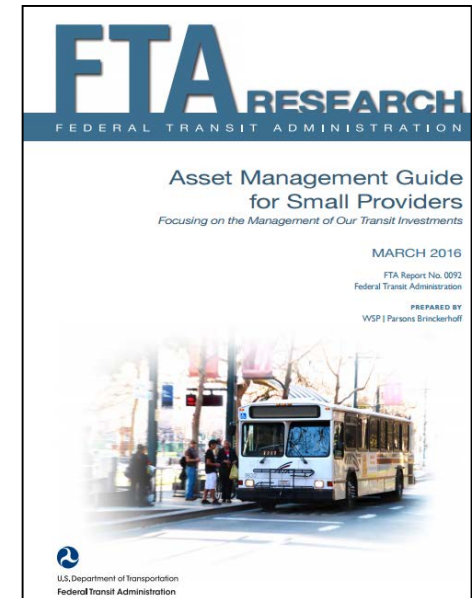
Online Resources

- TAM Compliance Checklists
- Factsheets
 - Final Rule
 - Performance Measures
- FAQs
- Website focused on Implementation
 - TAM Plan
 - Peer Library
 - Resources by topic and type

Tier II and Group Plan Sponsors Guide and Template

- Published May 2016
- Includes Updated template for TAM plan
- Focused on small, bus-only operators and Group Plan Sponsors
- Available online at TAM website

www.transit.dot.gov/TAM



TAM Maturity Matrix Agency Self-Assessment

Enterprise-Level Questions

Note: You must provide a response for each question, unless it is automatically populated. Select your response from the drop-down menus.

Score

1. Policy - For more information about the role of asset management policy, review Section 3.1.1 of the Asset Management Guide.

1.1. An agency-wide asset management policy is in place to support the establishment of asset management vision and goals and implementation of an asset management strategy.

1.2. The agency-wide asset management policy is reviewed and adopted by the executive team or senior management. The asset management policy is regularly evaluated, evolved, and communicated.

1.3. The asset management policy is clearly linked to / explicitly supported by the agency's overall strategy and planning and to key business processes.

2. Strategy - For more detail on the role of asset management strategy, see Section 3.1.2 of the Asset Management Guide.

2.1. An asset management strategy is in place and provides sufficient information, direction, and accountabilities to support the implementation of the asset management policy.

2.2. The asset management strategy is in place and outlines asset-specific outcomes and provides high-level direction and expectations for asset management by asset class and functional managers.

2.3. The asset management strategy is clearly linked to / explicitly supported by the organization's business processes.

2.4. Agency-wide asset management strategy and goals are reviewed and adopted by the executive team or senior management.

3. Business Plan - For more on the role of Asset Management Planning, see Sections 3.1.3 and 5.4 of the Asset Management Guide.

3.1. Detailed asset management activities, roles and responsibilities, resources, and timelines are clearly outlined

Enterprise-Level Questions

Signature page



Thank you for your participation!

Questions?



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