



TRANSIT
ASSET
MANAGEMENT

TAM Plan Self- Assessment

A Tool for Transit Agencies to Assist in
Improving Effectiveness of TAM Plans

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Abbreviations

Acronym	Term
DOT	Department of Transportation
FTA	Federal Transit Administration
NTD	National Transportation Data
SGR	State of Good Repair
TAM	Transit Asset Management
SWOT	Strength, Weakness, Opportunity, Threat
TERM-Lite	Transit Economic Requirements Model Lite
ULB	Useful Life Benchmark

Overview

The purpose of this document is to provide transit operators with tools to review components within each of the required elements in a Transit Asset Management (TAM) Plan, along with establishing a method for assessing quality of their TAM Plans.

This exercise is meant for agencies that have met all FTA TAM plan requirements and are looking to go further to determine and enhance its usefulness and effectiveness. Agencies seeking to use their TAM plan more robustly can use the self-assessment to identify areas of growth, opportunity, and improvement for their TAM plan and TAM program. When considering improvements to make your agency's TAM plan more constructive, focus should be on individual element ratings, rather than the overall rating for the plan.

The TAM Self-Assessment is not guidance. It is a tool that can be used to evaluate your TAM plan.

Rating Guide

Use this document to evaluate and rate the effectiveness of your agency's TAM Plan. Organization and format of TAM plans may vary but the FTA required elements should be standard. Lack of clarity in an element will lower the overall quality rating. It is important to note that usefulness of TAM plans can vary widely and even more advanced TAM plans can be further developed. You should focus on developing appropriate and detailed content that demonstrates understanding of TAM requirements and goals. If written strategically, the plan can be well developed and meaningful without being a lengthy document.

Quality Indicators of an Effective TAM plan:

1. Describes the process or methodology used to create each element.
2. Uses graphs, data tables, and other visuals to support the narrative.
3. Uses quantitative data to draw conclusions.
3. Provides justification of methodologies and decisions made in the plan.
4. Contains concise, well-articulated language.

Ratings are cumulative, meaning an "Expanded" rating includes all the items from the "Compliant" rating. After reviewing the general questions and all plan elements for your agency, tally up the rating scores to provide an overall TAM Plan quality rating. Use the comment section to add any remarks that will clarify the reason for selecting a certain rating for each section and element. Table 1 below describes the three rating categories and point ranges for each. There are separate scoring ranges for Tier I and Tier II plans.

Table 1. Explanation of Rating Levels

Compliant	Expanded	Advanced
Element rating=1 point	Element rating=2 points	Element rating=3 points
Overall Tier I Plan Score = 13-21 Overall Tier II Plan Score = 8-13	Overall Tier 1 Plan Score = 22-35 Overall Tier II Plan Score = 14-22	Overall Tier I Plan Score = 36+ Overall Tier II Plan Score =23+
+ Presents information needed for compliance.	+ Exhibits comprehension of FTA TAM rule with applications of other Asset Management principles.	+Demonstrates understanding of FTA TAM rule through policies and practices of the TAM Plan. + Ties all TAM elements into the organization structure of the document.

Please note that the descriptions of rating levels are relative and agencies may over time go beyond the highest rating of this tool. The intention is not to limit more advanced Asset Management practices but to provide an initial tool for agencies to develop their continuous improvement approaches. FTA may revisit this document in the future to update expectations for each rating as the industry becomes more sophisticated in TAM.

Section I: General

- Add appropriate point values for affirmative answers to second column.
 - Note that affirmative answers for first set of questions are worth 1 point (affirmative answers indicate a compliant TAM plan), affirmative answers for second set are worth 2 points (affirmative answers indicate an expanded TAM plan), and affirmative answers for third set are worth 3 points (affirmative answers indicate an advanced TAM plan).
- Add total point value to rating tally table in section IV.

Table 2. General Questions

Questions	Point Value
Add 1 point for each affirmative response.	
1. Is the plan well structured? (Does it include a table of contents, does it flow, does its organization aid in understanding, and is it arranged in a logical manner.)	
2. Is the plan written clearly? (Is plain language used, are the rule requirements interpreted without copying and pasting them, does the writing exhibit understanding of TAM.)	
3. Is the accountable executive clearly identified?	
4. Are Group Plan participants clearly identified? (if applicable)	
5. Is the agency Operational Context included?	
Add 2 points for each affirmative response.	
1. Is the plan supported by data? (Tables/graphs aid in understanding the TAM approach and context.)	
2. Does the plan stand alone? (All documents referenced are provided with the plan, graphical detail is limited to the appendix, and plan makes sense on its own.)	
Add 3 points for each affirmative response.	
1. Does the plan have elements beyond the minimum? (Tier II agencies include any/all elements 5-9, plan includes other analysis such as risk management, gap analysis, investment scenarios.)	
2. Does the plan list any special procedures or considerations the agency used to develop the plan?	
TOTAL	

Section II: Plan Elements

- Choose rating (compliant/expanded/advanced) that best describes each element based on the information provided for ratings in the tables below. TAM plan does not necessarily need to include all items listed to qualify for a rating but should include a majority of those listed.
- Use the comment section to add any remarks that will clarify the reason for selecting a certain rating for each section and element.
- **For additional context for agencies that are interested in using the TAM Self-Assessment but are unsure of what a compliant, expanded, or advanced element would look like, an example in appendix A includes an excerpt of Element 2 (Condition Assessment) from a Tier II TAM plan, a rating for the example along with an explanation for the rating determination.

Table 3. Element 1. Inventory of Assets (E1)

	Compliant (1)	Expanded (2)	Advanced (3)	Comments
Description	<ul style="list-style-type: none"> ▪ Includes register of Capital Assets. ▪ Organized by Rule Asset Category and Asset Class. ▪ Clearly identifies asset categories (Equipment, Rolling Stock, Infrastructure, and Facilities). 	<ul style="list-style-type: none"> ▪ Identifies NTD Reporting forms (Form A-30, A-35, etc.) to compile information regarding assets. ▪ Defines agency hierarchy of asset classes. ▪ Contains supplemental information about assets. ▪ Includes information regarding past and planned maintenance of assets. 	<ul style="list-style-type: none"> ▪ Demonstrates use of advanced Asset Management concepts that drive the Inventory of Assets. ▪ Incorporates a contingency for future purchases or procurements. ▪ Contains a schedule for replacement of assets. 	
Rating				

Table 4. Element 2. Condition Assessment (E2)

	Compliant (1)	Expanded (2)	Advanced (3)	Comments
Description	<ul style="list-style-type: none"> + Mentions assets in E1 assessed (with no methodology identified). 	<ul style="list-style-type: none"> + References TERM Scale to rate assets. + Uses qualitative data for basis of the ranking process. + References impact on performance targets. 	<ul style="list-style-type: none"> + Uses quantitative data for basis of the rankings. + Establishes that narrative informs the Decision Support Tool and Investment Prioritization. + Discusses how it relates to ULB. + Describes how E2 informs Performance Targets. 	
Rating				

** Elements 3 and 4 are rated together because they are interdependent.*

Table 5. Element 3. Decision Support Tool (E3) & Element 4. Prioritized List of Investments (E4)

	Compliant (1)	Expanded (2)	Advanced (3)	Comments
Description	<ul style="list-style-type: none"> + Separates both elements and gives information on the requirement. + Indicates that projects are ranked over time and prioritized on projected investment. 	<ul style="list-style-type: none"> + Describes E3 & 4 as a combined process. + Uses an anecdotal process and narrative to create a roadmap to decision. 	<ul style="list-style-type: none"> + Incorporates an analytical and quantitative process and narrative to create a roadmap to decision. + References other elements in plan, (i.e., condition assessment, policy and implementation). + Demonstrates that the tool (E3) determines the ranking of E4 by use of a calculation or 	

			qualitative narrative.	
Rating				

** Required for Tier I Agencies Only*

Table 6. Element 5. TAM and SGR Policy (E5)

	Compliant (1)	Expanded (2)	Advanced (3)	Comments
Description	+ Describes expectations for TAM as well as actions that support the implementation of TAM policy.	+ Included in the Executive Summary of the Plan. + References E3 & E4.	+ Identifies larger policies and concepts (e.g. ISO 55000). + References E6, E7, E8, or E9.	
Rating				

** Required for Tier I Agencies Only*

Table 7. Element 6. Implementation Strategy (E6)

	Compliant (1)	Expanded (2)	Advanced (3)	Comments
Description	+ Includes operational actions that a transit provider decides to conduct, in order to achieve its TAM goals and policies.	+ Aligns and is consistent with the other elements. + Justifies the methodology that is used. + Identifies schedule of implementation activities.	+ Includes Risk Mitigation Strategies. + Involves all levels of the organization. + Covers two TAM plan cycles (8 years). + Uses analytic approach to develop (e.g., SWOT, Cost Benefit). + Discusses change management.	
Rating				

* Required for Tier I Agencies Only

Table 8. Element 7. List of Key Activities (E7)/Immediate Needs

	Compliant (1)	Expanded (2)	Advanced (3)	Comments
Description	+ Includes key activities that the provider engages over the TAM horizon period.	+ Refers to other elements. + Provides an explanation of relationship with other Plan elements. + Matches the needs identified in E4.	+ Contains metrics and targets. + Aligns with other programmatic needs (e.g., strategic planning). + Aligns with other rules and regulations (e.g., planning, safety and oversight reviews).	
Rating				

* Required for Tier I Agencies Only

Table 9. Element 8. Identification of Resources (E8)/Order of Steps

	Compliant (1)	Expanded (2)	Advanced (3)	Comments
Description	+ Summarizes or lists resources that help the development and implementation of the TAM plan.	+ Specifies resources (staff time, consultant time, materials and funding) for each element and justification is given to support the decision. + Aligns with the other elements of the plan. + Includes an organization chart. + Explicitly references financial requirements to support E5 and TAM vision.	+ Discusses agency's technical capacity (training, software, hardware, etc.) to implement TAM. + Incorporates plan to address technical capacity needs. + Categorizes and organizes per element, linked across the plan. + Includes Lifecycle Management strategies. + Contains timeline of events or tracker to keep track of dates.	
Rating				

* Required for Tier I Agencies Only

Table 10. Element 9. Evaluation Plan (E9)/Continuous Improvement Plan

	Compliant (1)	Expanded (2)	Advanced (3)	Comments
Description	<ul style="list-style-type: none"> + Outlines how it will monitor, update, and evaluate the implementation of the TAM Plan. + Addresses the continuous improvement to the TAM Plan. 	<ul style="list-style-type: none"> + References the other Elements. + Incorporates a timeline beyond the “as needed”. + Demonstrates a systematic and detailed plan. + Connects all the elements together. 	<ul style="list-style-type: none"> + Involves planned evaluation to consider present efforts and future work. + Contains a plan for each element as an individual entity while connecting overall. + Includes a monitoring plan for each element. 	
Rating				

Section III: Observations

- *List the items not qualified elsewhere in this review that impacted your rating of this TAM Plan's Quality.*

Section IV: Rating Tally

- For General section, **enter total from section I on page 7.**
- For Plan Element section, list the selected rating for each element from section II (choose only one for each element) and enter corresponding point value (**Compliant=1, Expanded=2, Advanced=3**).
- Calculate the totals for the TAM Plan in third column.
- Ensure all comments have been recorded.
- Tier I rating guide: **13-21 points=Compliant, 22-35 points=Expanded, 36+ points=Advanced.**
- Tier II rating guide: **8-13 points=Compliant, 14-22 points=Expanded 23+ points=Advanced.**

Table 11. Rating Tally

Category	Rating (Compliant/ Expanded/ Advanced)	Point Value	Comments
General			
Element 1			
Element 2			
Element 3 & 4			
Element 5			
Element 6			
Element 7			
Element 8			
Element 9			
Total			

Conclusion

Now that you've taken the time to assess your agency's TAM plan, what should you do with the rating?

Table 12. Explanation of Rating Levels

Compliant	Expanded	Advanced
<p>Overall Tier I Plan Score =13-21</p> <p><i>*Scoring assumes that at a minimum, all general questions in first set of questions in section I were answered affirmatively and that all elements were rated as compliant.</i></p>	<p>Overall Tier 1 Plan Score = 22-35</p> <p><i>*Scoring assumes that at a minimum, all general questions in first and second set of questions in section I were answered affirmatively and at least 5 elements received expanded rating, with others receiving compliant rating.</i></p>	<p>Overall Tier I Plan Score = 36+</p> <p><i>*Scoring assumes that at a minimum, all general questions in section I were answered affirmatively and at least 5 elements received advanced rating, with others receiving expanded rating.</i></p>
<p>Overall Tier II Plan Score = 8-13</p> <p><i>*Scoring assumes that at a minimum, all general questions in first set of questions in section I were answered affirmatively and that elements 1, 2, 3&4 were rated as compliant.</i></p>	<p>Overall Tier II Plan Score = 14-22</p> <p><i>*Scoring assumes that at a minimum, all general questions in first and second set of questions in section I were answered affirmatively and at least 2 of elements 1-4 received expanded rating, with other(s) receiving compliant rating.</i></p>	<p>Overall Tier II Plan Score =23+</p> <p><i>*Scoring assumes that at a minimum, all general questions in section I were answered affirmatively and at least 2 of elements 1-4 received advanced rating, with other(s) receiving expanded rating.</i></p>
<p>+ Presents information needed for compliance.</p>	<p>+ Exhibits comprehension of FTA TAM rule with applications of other Asset Management principles.</p>	<p>+Demonstrates understanding through policies and practices of the TAM Plan. + Ties all TAM elements into the organization structure of the document.</p>

Potential Uses:

1. This exercise and the rating generated by it are for internal use at your agency. The initial rating could be used as a baseline to measure progress at future assessments.
2. While the overall rating can be useful to indicate the general state of a TAM plan, it may be more helpful to consider the individual element ratings to determine practical ways to improve TAM practices, processes, and tools at your agency.
 - a. Content from the Elements Section (Section II) could be used to identify specific areas of enhancement that can improve your TAM plan.
3. The TAM Self-Assessment is a tool that can assist you in turning a TAM plan that meets the minimum requirements and supports a functioning TAM program into a plan that best suits your agency's needs. It provides the necessary information and level of detail needed to ensure the plan will act as an effective guide for the success of your TAM program.

APPENDIX A. TAM Plan Excerpt and Example Rating

EXAMPLE: Tier II TAM Plan Excerpt, Element 2, Condition Assessment

In order to establish a baseline condition assessment for the revenue service fleet, XYZ’s Operations Superintendent for Maintenance developed a review and assessment process. In February of 2018, utilizing existing preventive maintenance inspection protocols, XYZ staff began performing visual inspections on targeted areas of each vehicle in the fleet.

The assessment criteria focused on six primary areas that accounted for passenger and operator safety, ensured preventive maintenance practices were being followed, and considered passenger experience. Staff was charged with scoring the six primary areas for each revenue vehicle. The primary area assessment criteria and corresponding scoring can be found below in Table 1.

Table 1. XYZ Revenue Service Vehicle Assessment

No.	Primary Area	Assessment Criteria
1	Exterior	Visible cracks, dents, rust, discoloration
2	Interior	Condition of floors, windows, seats, side and modesty panels
3	Undercarriage	Visible leaks, rust, condition of tie rods, bushings, king pins
4	Powertrain	Compression tests, output, oil analysis, noise, leaks
5	Safety Systems	Function of brakes, emergency exit windows and doors
6	Suspension/Steering	Condition of springs, shocks, struts, steering wheel “play”

XYZ maintenance staff were directed to score each primary area based on rating scale intended to account for general wear and tear and the age of a vehicle/component parts. Table 2 shows the rating guide and associated scoring applied to each of the primary areas.

Table 2. XYZ Revenue Service Vehicle Primary Area Rating Guide

Score	Rating	Description
0	--	Continued operation is safety risk to XYZ
1-3	Poor	Requires frequent major repair – within 6 months
4-6	Good	Good working condition -minor or infrequent repair – more than 6 months
7-10	Excellent	Brand new, no major issues, only routine PM required

The final step in the vehicle assessment process was to total all six primary scores and apply an overall baseline condition rating based on where the total score fell between four ratings as provided in Table 3.

Table 3. XYZ Revenue Service Vehicle Condition Assessment Guide

Score	Rating
Less than 20 Points	Unusable/Inoperable
20-40	Poor
40-70	Good
70-100	Excellent

EXAMPLE RATING: COMPLIANT

Tier II TAM Plan Rating for Element 2, Condition Assessment

- Using the content for E2 in the table on page 9 and the quality indicators on page 5 as a guide, a rating for the example can be determined. Please note that for each element, plans do not need to include all items listed to qualify for a rating but should include a majority of those listed. The following are considerations that led to the rating determination for the example:
 - The agency in the example mentions the type of assets that were assessed (revenue vehicles), which is the desired information for a compliant rating.
 - It also uses qualitative data in its ranking process, which the table on page 9 shows is an example of information that would be found in a TAM plan with an expanded rating.
 - However, the other aspects of a TAM plan with an expanded rating (reference to the TERM scale and the impact on performance targets) are not present in the example.
 - Also, none of the items listed in the table on page 9 for a TAM plan with an advanced rating are included in the example.
- Given that the example aligns well with the quality indicator on page 5 and includes information to support a compliant rating but only one of the three points listed to achieve an expanded rating, the example agency TAM plan would receive a **compliant** rating for E2.
- If the example incorporated at least one additional item from the content for an expanded rating, it would have received an **expanded** rating.
- If the example included content in the compliant and expanded columns from the table on page 9 as well as three of the four items in the advanced column, it would have received an **advanced** rating.

APPENDIX B

From FTA's [Asset Management Guide](#) (Table 3.2 Asset Management Plan Contents)

Section Name	Contents Description
<p>Asset Inventory and Condition Assessment</p>	<p><i>FTA regulations require all providers to include the appropriate inventory of their assets used to provide public transportation, and a condition assessment of the assets for which it has direct capital responsibility in its asset management plan.</i></p>
<p>Asset Management Policy and Strategy (What are the asset management goals?)</p>	<p><i>States asset management policy and strategy and describes process for developing these. It also explains the relationship to agency-wide policies and strategies. This section explains the past year's accomplishments and planned progress toward goals and objectives. Tier I agencies are required to include their TAM and SGR policies in their TAM plans.</i></p>
<p>Implementation Strategy (What needs to happen to implement asset management strategy?)</p>	<p><i>Outlines a plan showing the activities necessary to achieve the asset management goals (including all aspects of change management). This plan outlines a schedule with roles, responsibilities, accountabilities, tasks, and dependencies. Tier I agencies are required to include the implementation strategy in their TAM plans, but it is good practice for all transit operators to consider how they will implement TAM programs. FTA requires all transit providers to include a description of the analytical processes that they use to estimate capital investment needs over time and develop their implementation prioritization.</i></p>
<p>Key Asset Management Activities (What will be accomplished in the next year?)</p>	<p><i>Lists the key asset management activities that are planned to be accomplished in the upcoming year. Tier I agencies are required to include key asset management activities for the TAM Plan horizon period in their TAM plans. If appropriate, this portion of the plan can be where the selected implementation path (see Section 5) is described.</i></p> <p><i>FTA also requires that all transit providers include their project-based prioritization of investments in their TAM plans. Examples of activities include combine three departments' asset inventories, develop a lifecycle management template and populate it with information from three most-critical asset classes, or hire asset management program manager.</i></p>
<p>Financial Requirements (What are the estimated capital and operations and maintenance costs?)</p>	<p><i>Specifies the resources (including internal staff time, consultant time, technology requirements, and materials) needed to develop and implement this plan. This information should be easily transferred to the agency's capital program or operations and maintenance budget, as required. Tier I agencies are required to include this in their TAM plans.</i></p>
<p>Continuous Improvement (How can we ensure we continue to get better at asset management?)</p>	<p><i>Outlines how this plan and all related business processes will be revisited, updated, and evaluated, as needed, to ensure that the organization is embracing continuous improvement of the asset management initiative. Tier I agencies are required to include this in their TAM plans.</i></p>