



U.S. Department
of Transportation
**Federal Highway
Administration**

**FEDERAL
HIGHWAY
ADMINISTRATION**

TRANSPORTATION ASSET MANAGEMENT ASSESSMENT



Office of Infrastructure | Office of Asset Management

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I. OVERVIEW

What is a Transportation Asset Management (TAM) Assessment?

It is a formal process that provides a customized evaluation of a Transportation Agency's Asset Management implementation progress that helps to formulate an improvement plan. It develops a benchmark of the implementation stage and corporate position or maturity level and identifies opportunities, resources and priorities for improvement.

What is the process of the TAM Assessment?

- The Transportation Agency, usually a DOT, works with the local FHWA Division Office to request a TAM Assessment from the Office of Asset Management.
- Once the request for the TAM Assessment is approved by the Office of Asset Management, the Transportation Agency is usually requested to conduct an Organizational Self-Assessment. This self-assessment can be found in the Asset Management Guide located at: <http://downloads.transportation.org/AMGuide.pdf>. This self-assessment is analyzed by FHWA and helps an organization to identify the strategic basis of the TAM Assessment.
- Based on the analysis of the Self-Assessment, the Transportation Agency defines its high level goals and objectives for wanting a TAM Assessment.
- The FHWA Office of Asset Management will conduct [background research](#) of the Transportation Agency to identify and obtain pertinent information about the Transportation Agency.
- Once background information is assembled and the TAM objectives have been identified, key players, stakeholders and tentative Assessment Team members are identified by both the Transportation Agency and the FHWA.
- At this point, [TAM Overview training](#) or a webinar can be scheduled with the Transportation Agency to help them understand the basics of Asset Management. This time also allows the Agency to ask any questions about Asset Management or the TAM Assessment.
- Ideally, after this training, a [TAM Assessment Plan](#) for the conduct of the Assessment is developed in conjunction with the leadership of the Transportation Agency and FHWA.
- At the conclusion of the [TAM Assessment](#), the findings and recommendations of the Assessment Team are documented for an initial presentation to the

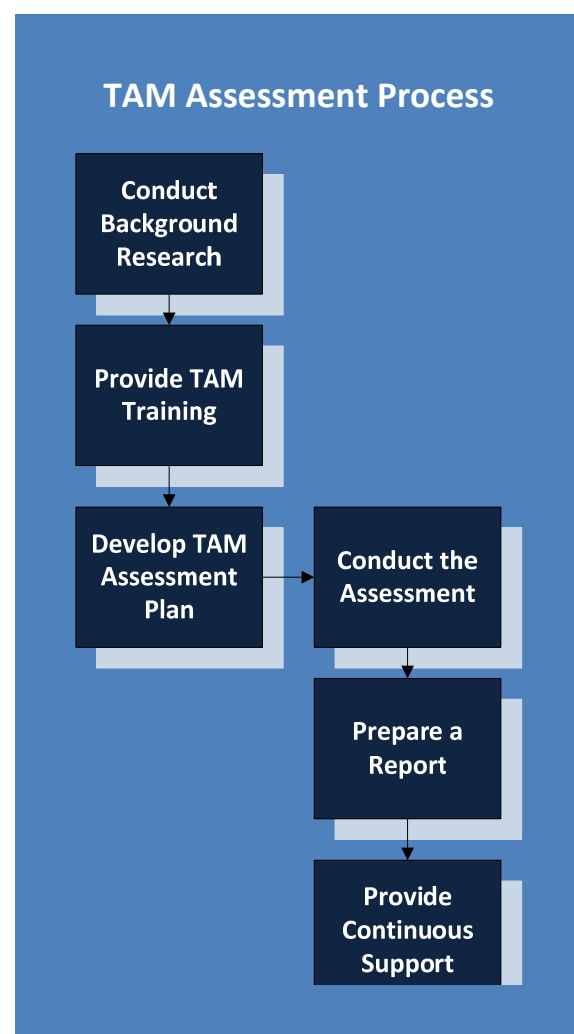


Figure 1 - TAM Assessment Process

Transportation Agency at the [Closeout Meeting](#). The Closeout meeting also allows the Transportation Agency to establish what type of support it would like from the FHWA in implementing any recommendations.

- Over the next few months, the TAM Assessment Team will draft up a report that further clarifies any findings and recommendations. This [draft report](#) is circulated to the Transportation Agency for review and comment.
- As the [final report](#) is prepared, a TAM Support and Follow-up Plan is also being prepared. These documents help the Transportation Agency and the FHWA to plan necessary resources in the implementation process.
- The final report is prepared, distributed and may include:
 - Implementation Plan –includes recommendations, time frames and priorities of the Transportation Agency.
 - TAM Support Plan – includes any training and/or technical assistance requests.
 - Follow-up Plan- includes what happens next to ensure TAM Implementation will occur at the Transportation Agency.
- The last step in the process is that the FHWA TAM Assessment Team meets to discuss [and document Lessons Learned](#) from the current TAM Assessment to continually ensure that improvements are made in the TAM Assessment process.

What are the benefits of an Agency having a TAM Assessment?

Past Assessments have shown that a Transportation Agency may benefit from a TAM Assessment in the following ways:

- Provides an opportunity for open communication between the program areas of the Transportation Agency.
- It fosters a greater awareness of what TAM is and how it can be implemented in an organization.
- It helps a Transportation Agency focus on its long-term organization success.
- It promotes transparency in the organization.
- It is comprehensive for almost all of the Transportation Agency’s program areas and provides a “reality check” of where the organization is.
- It formalizes the Transportation Agency’s TAM Improvement and Implementation Plan.

Additional benefits of having FHWA conduct the TAM Assessment on behalf of the Transportation Agency include:

- The specialized evaluations of program areas are at no cost to the Transportation Agency except a time and space investment.
- A team of multi-disciplinary experts are ready to provide immediate assistance, upon request.
- From the national perspective, FHWA’s Office of Asset Management generally serves as a clearinghouse on good TAM practices.
- FHWA will provide an impartial and non-judgmental assessment of where a Transportation Agency can benefit from TAM implementation.

- Having FHWA resources (Division Office, HQ, RC, Federal Lands, and TF) available to assist with coordination and collaboration for any follow-up actions and technical assistance requests.

What are the Areas of Focus in a TAM Assessment?

Typically the following program areas are included in the TAM Assessment evaluation process:

- Planning and Programming
- Information Technology
- Policy and Guidance
- Bridges
- Pavements
- Maintenance
- Safety
- Operations, and
- Finance

Additionally, at the request of the Transportation Agency, the following areas can be included:

- Construction
- Design
- Research and Technology
- Facilities Management
- Real Estate
- Human Resources
- Equipment
- Right-of-Way
- Multi-modal areas – rail, transit, air
- Others, as requested by the Transportation Agency.

These program areas will determine the make-up of the TAM Assessment Team both from the FHWA and Transportation Agency's perspective.

II. CONDUCT BACKGROUND RESEARCH

The knowledge and insight gained through background research will provide critical information to target the TAM Assessment and conducting the interviews.

The following is the type of information to seek:

- Strategic Plan
- Organizational Chart
- Long Range Plan
- STIP/TIP
- NCHRP Reports

- Bridge Manuals
- Pavement Manuals
- Construction Manuals
- Maintenance Manuals
- Regional Conference Reports
- Personal Contact with Division Office/Resource Center
- HIAM Shared Directory (e.g. trip reports)

III. PROVIDE TAM TRAINING

Many DOTs, that pursue TAM, would benefit from having their staff participate in TAM Training prior to their participation in the TAM Assessment. The FHWA offers TAM Training through the National Highway Institute in two courses:

Transportation Asset Management : COURSE NUMBER: FHWA-NHI-131106

Transportation Asset Management with Workshop: COURSE NUMBER: FHWA-NHI-131106A

The training will:

- Champion the use of asset management principles and concepts within your agency.
- Define your role in supporting your agency's asset management efforts.
- Using the 5 core questions, describe the state of your agency's asset management program.
- Using existing resources enhance your agency's use of asset management.
- Identify specific steps the agency can take.

The descriptions for the courses follow:

Asset management principles are becoming increasingly important to help agencies manage their assets as they face fewer available resources, higher expectations for customer service, and increased demand for more transparency in the decision process. In an asset management environment, investment decisions are linked to targeted performance levels that have been established based on current and expected asset conditions. Trade-offs between investments in different types of assets and different investment priorities can be assessed because of the availability of reliable data and a clear set of performance metrics that the agency hopes to achieve. As a result, agencies are better able to use their funding effectively and to defend their need for additional resources.

The Transportation Asset Management course introduces a strategic approach to managing physical transportation infrastructure. This course covers the principles of asset management and introduces the five core questions every agency should be able to answer about its assets. The course also illustrates available tools to support the use of asset management in transportation agencies and provides guidelines for the implementation of these principles.

To further support the implementation of asset management principles, this 1.5-day version of the course includes a ½-day workshop that will be conducted immediately before or after the presentation of the course materials. During the workshop the instructors will facilitate activities that include one of the following:

- A self-assessment to determine agency strengths and weaknesses in terms of asset management.
- Breakout groups to develop strategies for addressing specific implementation strategies for adopting asset management principles.

Work sessions to help develop portions of an asset management plan. To schedule TAM Training, click here: [National Highway Institute](#).

IV. DEVELOPING THE TAM ASSESSMENT PLAN

The TAM Assessment Plan provides a logical framework for the Transportation Agency as well as the TAM Assessment Team to conduct the Assessment. The framework incorporates the stakeholder's perspective on key focus areas, identifies Team members and assigns roles and responsibilities, establishes the flow of the Assessment activities, and provides logistical and essential coordination details. See figure 2 for reference.

1. TAM Assessment Focus Areas

The first section of the plan includes the focus areas that the TAM Assessment will focus. The focus areas are specifically tied to the goals and objectives identified during previous activities such as a review of the TAM Self Assessment results. The TAM goals and objectives align with the agency's mission and strategic goals. These are derived from agency guidance documents such as a business plan or long range plan. The TAM Assessment's primary objectives include determining the agency's current maturity level relative to a long-term vision of asset management; identifying achievable near-term



Figure 2 - TAM Plan

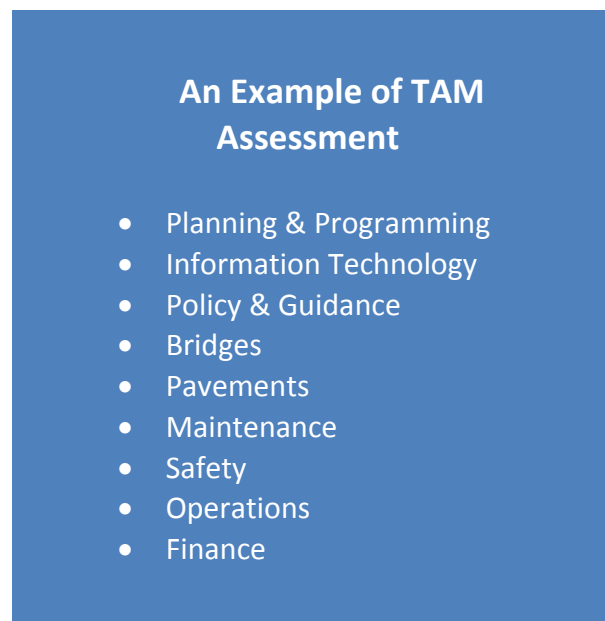


Figure 3 - An Example of TAM Assessment

objectives for an improved process; identifying opportunities for making the organization ready for improvement; documenting the current and steps for improved processes and their expected results; and ultimately promoting the adoption of practical skills and tools that are required. It is highly logical for the development of focus areas to be derived from the TAM “Self Assessment”.

2. Assessment Agenda

Once the Focus areas are identified, a TAM Assessment agenda can be developed. This agenda identifies the specific Offices within the agency that should participate in the Assessment. It provides the opportunity to coordinate the schedules of stakeholders in each department, as identified in the next step, into appropriate time frames and provides time specific listings of activities to be conducted during the Assessment. The agenda developed in this step provides an outline of the Assessment to be conducted and refined by stakeholders identified in the next step. It includes time allocations for pre-, kick-off, and close-out meetings with various stakeholders. The development of the agenda can be a time consuming process as key stakeholders of the various focus areas are identified and their schedules are coordinated.

3. Assessment Team Members

After the draft agenda is completed in the previous phase, this section identifies Team members. There are two levels of participants in the TAM Assessment, those extracting information, The Review Team, and those providing information, Interviewees. A TAM Assessment Coordinator should be identified early in the selection of Team members. It is quite possible that a TAM Assessment Team member might play both roles in some cases by reviewing other offices or division and providing details for their own. Skills and backgrounds

of persons selected to participate on the Assessment team should directly correlate to the objectives identified by the agency as well as the TAM Assessment Focus Areas. It is logical that TAM Assessments coordinated by the FHWA would include participants on the Assessment Team from The office of Asset Management, Resource Center, Division Office, Transportation Agency, various Program Offices, Turner Fairbank Highway Research Facility, and Federal Lands. A list of participants including office and cell phone contact information should be assembled during this step.

TAM Team					
Review Team			Interviewees		
Name	Title	Office/Organization	Name	Title	Office/Org.

Figure 4 - TAM Team

4. Roles and Responsibilities

Once the Assessment Team members are identified, each team member should be assigned to a focus area. A team member might be assigned to multiple focus areas depending on their expertise. Care should be taken to assure that the agenda allocates time appropriately for members responsible for multiple focus areas. This should include travel time if necessary. Once focus area teams are identified, a focus area team structure should be assigned. Each focus area should have designated at a minimum a team leader, note taker, summary writer, and close-out meeting presenter. These roles and assignments should be coordinated with the overall TAM Assessment Coordinator.

5. Questionnaire

Once participants have been identified and assigned to their individual focus areas, the Assessment Team should coordinate the development and/or revise the existing core review questions to meet the objectives of the TAM Assessment. The existing core questions should be reviewed for each focus area and tailored to the agency's TAM Assessment objectives. A review of the existing core questions may identify additional questions to meet the needs of the agency. The questions should be added to the subject review and may be incorporated into the core questions for

An Example of TAM Assessment (Continued)

Time	Day 1	Day 2	Day 3	Day 4	Day 5
8am-9am	Travel	S.E. & S.W. Management District Interview Sessions	Data & Information Technology and Maintenance		Travel
9am-10am				Close-out Meeting	
10am-11am		Planning & Programming and Construction Review Sessions	NW & NE Management District Sessions		
11am-noon	Review Team Coordination Meeting	Pavement Design and Finance Review Sessions			
Noon-1pm	Lunch	Lunch	Lunch	Lunch	Lunch
1pm-2pm	TAM Assessment Kick-off Meeting	Research and Bridge Design	Review Team Findings Coordination and Prep Meeting		
2pm-3pm		General Policies & Procedures and Right of Way			
3pm-4pm					

Figure 5 - An Example of TAM Assessment (Continued)

future Assessments. The selected questions should be coordinated with the Transportation agency prior to the commencement of the actual Assessment.

6. Review Templates

A critical part of the Assessment process is the collection and reporting of information in a consistent manner. To achieve this outcome, Assessment template should be used. Various templates have been developed and should be reviewed for appropriateness. New templates should be developed and used by all team members as needed.

7. Travel and Logistical Details

It is useful for Assessment team members to coordinate their travel arrangements to provide opportunities of optimizing time and resources. Travel plans to meet the agenda requirements should be provided to the Team Assessment Coordinator. Travel plans should include lodging, flight schedules, transportation to and from the airport as well as between meeting locations during the Assessment. Details could also include outing details for activities such as breakfast, dinner, and lunch arrangements.

Logistical information relating to the addresses of the review activities, room numbers, parking, and access restrictions should also be developed and included in the TAM Assessment Plan.

8. Pre-Assessment, Kick-Off and Close-out Meetings

The TAM Assessment plan should include details about the flow of the Pre-Assessment and Close-out meeting.

The Pre-Assessment Meeting should include Team Members. This meeting should review the objectives of the Assessment, specify ground rules, and review the agenda. Participants should discuss any concerns or submit any questions.

The Kick-Off Meeting should include key stakeholders as well as operational representatives of the agency participating in the Assessment as well as the FHWA team members. This meeting should identify the objectives of the Assessment, specify ground rules, and review the agenda. Participants should discuss any concerns or submit any questions.

The Close out Meeting should include key stakeholders as well as operational representatives that participated in the Assessment as well as the FHWA Team members. This meeting should include presentations by Team members from each of the focus areas on their Findings and Recommendations. The reports should be formatted according to templates. The participating agency should be provided with summary sheets of the findings and allowed time to discuss any topic of particular concern. Key discussions during this first presentation of finding should

include the delineation of desired courses of actions. Near term and long term objectives should be discussed.

V. CONDUCT THE ASSESSMENT

This section describes how the process is normally conducted prior to the onsite interviews and the initial steps taken to implement the onsite TAM Assessment.

1. Template

A template should be developed (if not already available) and used as a master or pattern for interviewers while conducting the TAM Assessment process and drafting presentation materials. Utilizing templates fosters consistency, flow of TAM Assessment and sequential steps taken as TAM Assessment is conducted.

2. Logistical Details

Detail room assignments and locations shall be determined and scheduled prior to the TAM Assessment. It is important for Focus Area Leaders and TAM participants to have a clear understanding of all breakout session locations, meeting rooms, conference rooms, restrooms and cafeteria locations prior to the TAM Assessment. This reduces confusion of who will attend and participate during specific breakout sessions and where each breakout session is located.

3. DOT Identify Focus Areas

The DOT identifies which specific programs will be the focus areas of the TAM Assessment. This discussion takes place with the Transportation Agency TAM Coordinator, FHWA TAM Coordinator and local FHWA Division Office leadership.

4. Pre-Assessment Meeting

A pre-Assessment meeting should be scheduled with FHWA local Division Office staff prior to the initial kickoff meeting with the Transportation Agency. This meeting is designed to brief the FHWA Division Office on the TAM Assessment meeting agenda, the focus of the TAM Assessment, who participants are, introduce the TAM Assessment Team and discuss Division Office role as participants during the Assessment. FHWA Division staff are assigned as the local TAM Assessment liaison and fully expected to take a lead role in conducting the Assessment.

5. Kickoff meeting

The kickoff meeting is held at the Transportation Agency, including leadership, staff employees, FHWA Assessment Team and local FHWA Division Office participants. During this meeting, introductions are given by each participant explaining their roles, responsibilities, and expectations for participating in the TAM Assessment and individual outcomes hoped to gain at the conclusion of the TAM Assessment.

6. Flow of Agenda

- Welcome from DOT Leadership
- Appreciation of invitation from FHWA TAM coordinator
- Introductions
- Overview of agenda
- Breakout groups and assignments
- Breakout rooms and locations

7. Assign Writers

Prior to breakout session, writers from the TAM Assessment Team should be assigned for each identified focus area. The writer is responsible for recording notes, taking comments, assembling notes from flip charts and working with Focus Area Leader to organize notes to be included in the draft presentation document.

8. Interview Session

Each interview session is led by Focus Area Leaders. Prior to the interview sessions, each Focus Area Leader will utilize TAM Assessment core questions designed to focus on the identified Transportation Agency program areas. Once developed, all core questions should be submitted to the TAM Assessment Coordinator for consolidation then submitted to Transportation Agency leadership for further comment and recommendation. Once approved, core questions are utilized during the interview session to further capture the Transportation Agency needs, concerns, progression and areas for suggested improvements.

9. Assemble Finding & Recommendations

After the TAM Assessment is conducted, each Focus Area Leader assembles all findings and recommendations. The Focus Area Leader will ensure all documentation, recommendations, findings; issues and concerns are accurate and recorded to be included in the draft presentation document for final assembling. In addition, each Focus Area Leader is responsible for keeping track of all Transportation Agency responses and collecting original images from Transportation Agency which will be recorded and included as part of the draft presentation.

10. Draft Presentation Document

A draft Presentation document is assembled after each Focus Area Leader consolidates all findings and recommendations from each breakout session. This document is assembled by the TAM Assessment Team, then shared and discussed with Transportation Agency leadership prior to finalizing document for Transportation Agency staff review.

11. Closeout meeting

A closeout meeting is held to recap the focus and accomplishments of the TAM Assessment. During the closeout meeting “*Observations & Recommendations*” will be the focus of discussion. In addition, future steps taken by the TAM Assessment Team and Transportation Agency leadership should be discussed. As part of the closeout meeting, final tasks and functions are assigned to various TAM Assessment Team members and Transportation Agency leadership and staff. Then a follow up meeting is scheduled by the TAM Coordinator and Transportation Agency TAM Coordinator to discuss future steps.

VI. PREPARE REPORT

This section describes the process of documenting observations from the conducted onsite interviews along with recommendations and publishing the documentation as part of the TAM Assessment.

1. Draft Interview Summaries

Upon completion of the TAM Assessment, each Focus Area Leader is responsible for summarizing all pertinent information from the conducted interviews for the respective focus area(s). The contents of this document is based on the interviewed questions and discussed issues, and a draft interview summary typically includes (1) observations made by the TAM Assessment Team members for the focus areas, (2) recommendations addressing the observed issues, and (3) discussion to support the developed recommendations and its reasons, intended benefits and/or risks. The draft interview summaries are due to the Team leader no later than 2 weeks after the completion of the TAM Assessment. Upon receipt of all draft interview summaries from individual Focus Area Leader in each focus area, the TAM Assessment Coordinator synthesizes the draft interview summaries, verifies the contents for consistency, accuracy and completeness, and improves the flow of the consolidated document.

2. Draft Executive Summary

Upon completion of consolidation of draft interview summaries, an executive summary for the report is drafted. This executive summary is a synopsis of a concisely description of the findings of the TAM Assessment and identified key issues in advancing TAM at the Transportation Agency. Thus, a draft report includes an executive summary and the consolidated draft interview summaries described in previous section.

3. Review and Revise Draft Report

The draft report is then distributed to the TAM Assessment Team members for comments. The comments are reconciled and incorporated into the draft report. The revised draft report is then sent to the hosting Transportation Agency for review the draft report, and the agency provides comments to the TAM Assessment Coordinator. The comments are reconciled and incorporated in the revised draft report. Once the Transportation Agency's comments are addressed in the report, the revised report is considered as the final report. During this time, the Transportation Agency supplies the original files of digital photos and images of relevance to the TAM Assessment Coordinator as part of the report preparation.

4. Finalize Report

The TAM Assessment Coordinator will meet with FHWA Publications to provide instructions and to review the format of the report publishing. The final report is sent to the FHWA Publications along with collected digital photos and images for publishing. The final report can include the TAM Implementation Plan, TAM Support Plan, and/or TAM Follow-up Plan.

5. Distribute the Final Report

The published report (hard and/or digital copies) then will be distributed to the following recipients:

- The participating Transportation Agency
- FHWA Division Office leadership
- TAM Assessment Team members
- HIAM Director
- HIF Associate Administrator

VII. PROVIDE CONTINUOUS SUPPORT

This section describes the process for providing continuous support to the Transportation Agency in better implementation of TAM after the Assessment.

1. Extract Support Areas

The TAM Assessment Team will meet to identify potential areas of support from the final TAM Assessment report. The extraction of support areas are based on the priority, the Transportation Agency identified from the TAM Assessment and available resources and expertise within the FHWA and/or peer agencies.

2. Develop Support Plan

Upon the identification of support areas, the TAM Assessment Team will formulate strategies to provide necessary support to the Transportation Agency. The support could be in many different forms, but some example support methods are listed below.

- Provide direct training and technical support
- Recommend trainings from the National Highway Institute, other agencies or private industry
- Facilitate peer exchange with other Transportation Agency
- Assist in developing TAM Improvement Plan
- Assist in improving other business processes related to TAM

3. Follow-up Plan with the Transportation Agency

Upon completion of TAM Assessment, the Team members will follow up with the participated transportation for progress of TAM improvement activities. The follow-up will be typically done at 6 months, 12 months and 24 months after completion of the TAM Assessment. The follow-up progress information will be shared among the TAM Assessment Team members.

4. TAM Assessment Team “Lessons Learned” Meeting

Upon completion of developing post-Assessment support plan (described above), the TAM Assessment Team members will meet to discuss lessons learned and what worked well during the TAM Assessment. This is part of continuous improvement of the TAM Assessment process, and the TAM Assessment process will be revisited for identifying areas of improvement and sustaining the areas of achieved success. During this meeting, other pertinent information (e.g. new legislative policies, new technologies, trends in overall TAM implementation, etc.) will be exchanged in improving the TAM Assessment process. This document will be updated as a result of these meetings.