

# **2022 Asset**

# Management System (AMS) Internal Audit

Report #: 2022-12

**Audit Report** 





Sound Transit Audit Division November 15, 2022

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# **Abbreviations**

AMS Asset Management System

CFR Code of Federal Regulations

FTA Federal Transit Administration

ISO International Organization for Standardization

SAMP Strategic Asset Management Plan

TAM Transit Asset Management Plan

# **Executive Summary**

Why did we audit?

As part of our 3-year Agency Audit Plan, Sound Transit's Audit Division performed an internal audit of Sound Transit's Asset Management System.

Our audit aimed specifically to evaluate progress made towards obtaining ISO 55001 certification since the 2021 baseline gap analysis audit by AMCL Inc.

The Audit Division is Sound Transit's independent assurance function that improves how the agency is operated and managed, ensuring public funds are managed transparently, and ultimately keeping employees, contractors and our riding public safe.

The purpose of this audit was to independently examine the agency's progress in meeting the requirements of each ISO clause and sub-clause, and to identify and document areas where we observed progress has been made in the year since the gap assessment.

The scope of the audit covered the requirements of the ISO 55001:2014 standards to provide a preliminary baseline assessment, and the status of adoption of FTA asset management systems (AMS) methods and principles. We reviewed agency policy, leadership engagement, roles and responsibilities, internal and external communications and document controls; as well as performance monitoring and evaluation and continuous improvement.

The techniques we used to complete this audit included document reviews, staff interviews, and verification of process and procedures. However, we want to specify that our verification steps for this audit <u>were limited</u> and primarily focused on the framework of Asset Management under development by Sound Transit's Asset Management Division in the Portfolio Services Office. Future audits will dive deeper into review AMS processes across the agency.

### Results Summary

Based on our review of evidence and processes, we conclude that the agency's asset management system (AMS) is still in the **developing phase** of implementation. We note that while some processes are further developed, many processes have not been initiated as of this audit.

With that said, processes we found that were in progress (shown as part of the clauses below) were captured by the team as <u>observations</u> as the agency is in the early stages of working to meet the ISO standard. The team felt that in our initial work, assignment of findings would be heavy handed. Findings are a non-compliance with a rule, standard, procedure, or process. Auditors did consider that if areas were observed that were non-compliant with the Strategic Asset Management Plan, or other required rules or requirements we would have identified those as findings. However, this was not the case.

Therefore, we conclude that there are no (0) findings of non-compliance and twelve (12) observations.

Each of observation is expanded upon in greater detail in the Appendix B of this report, including response procedures and timelines.

### Audit Work and Scope

Overview of the ISO 55001:2014 standard

We audited sections 4 through 10 of the 55001 Standard. In brief, the standard separates each section into "clauses", giving the organization trying to achieve certification a roadmap to work towards, telling "what" each area means; however, leaving the "how" to accomplish this roadmap to the organization to develop and define as it works for them.

- Section 4.0 Context of the Organization
- Section 5.0 Leadership
- Section 6.0 Planning
- Section 7.0 Support
- Section 8.0 Operation
- Section 9.0 Performance Evaluation
- Section 10.0 Improvement

Our audit scope evaluated processes, procedures, and requirements which may be subject to an eventual ISO conformance audit; such as the 2015 board resolution, the Transit Asset Management Plan (TAM), the Strategic Asset Management Plan (SAMP), and other associated processes to the asset management system.

We excluded sub-clause 9.2: Internal Audit because we cannot conduct an evaluation on our own work.

#### Items to note:

With the agency still in the "developing" phase of its AMS implementation, key elements of the system are not yet in place, or are not yet fully developed. In these cases, there was a lack of plans, policies, and procedures establishing agency requirements related to the AMS.

ISO 55001 certification itself is not yet a requirement set by the agency. Given this context, this audit was conducted as a follow-up gap analysis of agency progress since the 2021 AMCL report; there are no associated findings; however, we did categorize more critical areas we identified as observations for tracking and continuous improvement purposes.

All deficiencies related to any ISO 55001 clause or sub-clause found to be in the Compliance Unlikely (Red) rating were classified as observations. Additionally, any issues critical to the organizational implementation or leadership, under clauses 4 & 5, and shown as "Compliance at Risk" have also been identified in this report as an observation because they effect the organizational approach and implementation of AMS.

Additionally, our audit work had a limited focus on ISO Clause 9: Performance Evaluation and Clause 10: Improvement due to the AMS still being in the implementation stage and systems and processes not yet operating within the management system.

#### **Grading criteria:**

As part of our criteria to evaluate the agency's AMS maturity, the audit team utilized best practices from the Institute of Asset Management (IAM) Asset Management Maturity Scale and Guidance as an "Industry Best Practice" to determine the maturity level of the agency's AMS.

The Audit Division will create future guidance in the future to align to IAM's maturity scale, but with agency stakeholder inputs as it relates to transit.

#### Gap Analysis Grading Scale Definitions

Auditors utilized that same grading scale AMCL's used to ascertain where the agency stands with each ISO sub-clause (grading scale of Red, Amber, and Green).

#### GREEN

#### **Compliance likely**

Based on the information provided during the previous assessment and our current audit, the processes and/or documents necessary to potentially fulfil the requirements in this clause can be broadly characterized as being compliant and applied in a controlled, systematic fashion.

It is likely that ST would achieve compliance to this clause, assuming this could be successfully demonstrated in a fully evidenced Certification Audit.

#### **AMBER**

#### **Compliance at risk**

Based on the information provided during the previous assessment and our current audit, the processes and/or documents necessary to potentially fulfil the requirements in this clause can be broadly characterized as: i.) existing but not yet fully complete or compliant, or ii.) complete or compliant but not yet consistently applied to the management system.

The risk is that ST would not achieve compliance to this clause without further work, such as completing improvement projects or ensuring existing processes are adequately aligned, controlled, integrated and/or applied.

#### RED

#### **Compliance unlikely**

Based on the information provided during the previous assessment and our current audit, the processes and/or documents necessary to potentially fulfil the requirements in this clause can be broadly characterized as not currently in place.

It is unlikely that ST would achieve compliance to this clause, without introducing further processes/documents and ensuring their integration into the organization.

# **Audit Results**

#### AMCL/ST Internal Audit Comparison

		Reviews c	ompleted
No.	ISO 55001 Clause	AMCL 2021	ST 2022
4.1	Understanding the Organization and its Context	GREEN	GREEN
4.2	Understanding the Needs and Expectations of Stakeholders	AMBER	AMBER
4.3	Determining the Scope of the Asset Management System	AMBER	AMBER
4.4	Asset management system	RED	AMBER
5.1	Leadership and Commitment	AMBER	RED
5.2	Policy	AMBER	AMBER
5.3	Organizational Roles, Responsibilities, and Authorities	RED	RED
6.1	Actions to Address Risks and Opportunities for AMS	RED	RED
6.2.1	Asset Management Objectives	AMBER	RED
6.2.2	Planning to achieve Asset Management objectives	RED	AMBER
7.1	Resources	AMBER	RED
7.2	Competence	AMBER	AMBER
7.3	Awareness	RED	RED
7.4	Communication	AMBER	AMBER
7.5	Information Requirements	RED	RED
7.6	Documented Information	AMBER	AMBER
8.1	Operational Planning and Control	AMBER	AMBER
8.2	Management of Change	AMBER	RED
8.3	Outsourcing	AMBER	AMBER
9.1	Monitoring, measurement, analysis and evaluation	AMBER	AMBER
9.2	Internal Audit	AMBER	AMBER
9.3	Management review	RED	RED
10.1	Nonconformity and Corrective Action	AMBER	AMBER
10.2	Preventive Action	AMBER	AMBER
10.3	Continual Improvement	AMBER	AMBER

<sup>•</sup> Clause 9.2 was not fully reviewed as part of the internal audit because the auditors could not review their own process.

#### **Clause 4: Context of the Organization**

4.1 Understanding the organization and its context	There is no change in rating from the AMCL report. Rating remains as Compliance Likely as the organization and its context is clearly identified.
4.2 Understanding the Needs and Expectations of Stakeholders	Rating remains <i>Compliance at Risk</i> as additional stakeholder needs and expectations need to be identified and documented.
4.3 Determining the Scope of the Asset Management System	<ul> <li>Rating improved to Compliance Likely as the scope of the asset management system is clearly identified.</li> </ul>
4.4 Asset management system	Rating improved to <i>Compliance at Risk</i> . Progress has occurred, however significant gaps still are present.

#### Clause 5: Leadership

	Rating has fallen to <i>Compliance Unlikely</i>
	<ul> <li>There has been a lack of engagement from Top Management/ST</li> </ul>
	Leadership. Additionally, it is unclear who the executive
	sponsor/advocate is for the work of gaining ISO certification for asset
5.1 Leadership	management.
and	<ul> <li>There is a lack of clarity of agency commitment towards ISO</li> </ul>
Commitment	certification, as the Agency Five-Year Strategic Plan 2020, lack a goal
	owner for Agency Goal 5.3. and there is a lack of staff clarity on the
	status of the five-year plan, and the timeframe the issuance of a new
	strategic plan and of what the requirements will be for ISO
	certification and for the asset management system.
5.2 Policy	Rating remains at <i>Compliance at Risk</i> .
5.3	Rating remains at <i>Compliance Unlikely</i> .
Organizational	<ul> <li>Top Management/ST Leadership has not adequately assigned the</li> </ul>
Roles,	roles and responsibilities for implementing the asset management
Roles,	system. This is especially the case, for the roles and responsibilities of

# Responsibilities, and Authorities

agency departments outside of the Enterprise Asset Management division that are critical to the success of the asset management system and for ISO certification.

#### **Clause 6: Planning**

6.1 Actions to Address Risks and Opportunities for AMS	<ul> <li>Rating remains at <i>Compliance Unlikely</i>.</li> <li>There is poor agency wide alignment for how risks are identified and managed. Without an agency-wide risk management framework, the risk management requirements of ISO for Asset Management will have critical roadblocks to implementation.</li> </ul>
6.2.1 Asset Management Objectives	<ul> <li>Rating has fallen to <i>Compliance Unlikely</i></li> <li>Although, asset management staff is very focused on identified objectives for the asset management system, there is concern that these objectives may no longer be aligned with the agency's goals and objectives. A new Five-Year Agency Strategic Plan, may have significant impact on these objectives, and require the asset management team to rewrite their objectives for the asset management system</li> </ul>
6.2.2 Planning to achieve Asset Management objectives	<ul> <li>An improvement in rating to <i>Compliance at Risk</i>.</li> <li>A project management analysis has been conducted to identify the requirements, resources, and time needed for asset management system implementation and ISO certification. This analysis determined that ISO certification could be achieved by 2026.</li> </ul>

#### **Clause 7: Support**

7.1 Resources	<ul> <li>The rating has fallen to <i>Compliance Unlikely</i>.</li> <li>Recently two project managers have left the Enterprise Asset         Management group. One of these positions was filled by a new         Deputy Director position, however the other was not filled. Then, the         Director of the division left and currently the duties of the Director are         being administered by the Deputy Director. Meanwhile the         responsibilities for the asset management group are growing as they         work to implement the system and gain ISO certification.</li> </ul>
7.2 Competence	Rating remains at <i>Compliance at Risk</i> .
7.3 Awareness	<ul> <li>Rating remains at Compliance Unlikely as although agency awareness of the asset management system has advanced, a significant increase in agency wide awareness at all levels and related functions is needed.</li> </ul>
7.4 Communication	Rating remains at <i>Compliance at Risk</i> .

#### Rating remains at Compliance Unlikely. Information requirements have not been determined for the asset 7.5 management system and will require an agency-wide effort to Information determine them with the support of Top Management/ST Leadership. Requirements This effort will include financial, legal, operational, technical, safety, and other types of data. Rating remains at Compliance at Risk. Documented information-As an ISO certified asset management 7.6 Documented system is implemented, formal document control will need to be an Information integral part of the ISO system. There is coordination across the agency in documentation that is required and without an agency wide document control protocol it will be more difficult to achieve this.

#### **Clause 8: Operation**

8.1 Operational Planning and Control	Rating remains at <i>Compliance at Risk</i> .
8.2 Management of Change	<ul> <li>Rating has fallen to <i>Compliance Unlikely</i>.</li> <li>There is a lack of continuity planning for staffing changes within the Enterprise Asset Management group. There is limited cross training of duties and responsibilities. Also, although it is evident that the asset management function within the agency will have a significant increase in duties and responsibilities, there is no proactive effort by Top Management/ST Leadership to plan for and address this anticipated growth.</li> </ul>
8.3 Outsourcing	Rating remains at <i>Compliance at Risk</i> .

#### Clause 9: Performance Evaluation

9.1 Monitoring, measurement, analysis and evaluation	Rating remains at <i>Compliance at Risk</i> .
9.2 Internal Audit	<ul> <li>Was not fully reviewed by ST Compliance Auditors due to the auditors could not review their own process.</li> <li>2021 AMCL baseline gap assessment and 2022 AMS Internal Audit conducted</li> </ul>
9.3 Management Review	<ul> <li>Rating remains at <i>Compliance Unlikely</i>.</li> <li>As initially identified by AMCL, a regular and systematic review by Top Management is not yet occurring.</li> </ul>

#### **Clause 10: Improvement**

10.1 Nonconformity and Corrective Action	Rating remains at <i>Compliance at Risk</i> .
10.2 Preventive Action	Rating remains at <i>Compliance at Risk</i> .
10.3  Continual Improvement	Rating remains at Compliance at Risk.

### Conclusion

It was clear to the audit team that staff with Sound Transit Enterprise Asset Management Division are committed to working towards the goal of developing, implementing, and maintaining a safety management system that satisfies all requirements needed to obtain ISO certification.

Furthermore, the current Agency Strategic Plan (circa August 2020), under agency goal 5.3, expresses the goal of obtaining ISO certification by the end of December 2024. However, Enterprise Asset Management staff acknowledges that this timeframe is not obtainable. Staff have changed their approach to implementing an asset management system using a bottom-up approach to one that develops six modal asset plans first before breaking down asset classes further.

Staff believe they can seek ISO certification in 2026 by pivoting to this approach for agency-wide AMS implementation.

An updated version of the agency strategic plan should establish achievable timeframes for AMS implementation and ISO certification that are based on updated data and analysis from the Enterprise Asset Management group and with awareness of the gaps still remaining from the AMCL baseline gap assessment and the work from this internal audit.

The revised strategic plan will recommit top management's support to address management system gaps and accelerate the agency on the path to certification.

Additionally, external and internal audits of the management system should continue, and a management review council or committee should be formed, comprised of executive level representatives with AMS roles and responsibilities.

#### Observations

As noted earlier in this report there were no findings. All ISO 55001 gaps or deficiencies notes have been classified as observations. There are twelve (12) Observation with Recommendation outlined further in the attached appendix.

#### **Next Steps**

For the items raised, the Audit staff will work with **Enterprise Asset Management** staff to determine the party responsible for addressing the observation and its mitigation. The party responsible will be provided with the appropriate response form, and they will be required to use this form to submit a proposed corrective action back to audit within **30 days (about 4 and a half weeks)** upon issuance of the Final Audit Report.

For Observations with Recommendations, responders are not obligated to complete the recommended actions because the identified issue is compliant but are still required to submit the Observation with Recommendations Form (see supplied template). These action plans must be submitted within **30 days (about 4 and a half weeks)** of the distribution of this report.

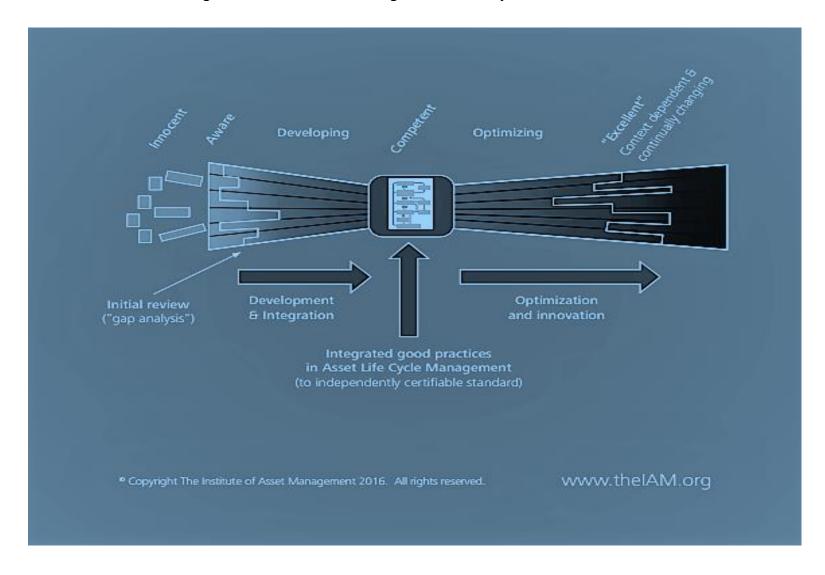
Recommendation responses shall be sent back using the template response format provided and will be tracked, verified, and if necessary, escalated to achieve satisfactory closure to prevent recurrence.

For recommendations, acceptable responses include:

- (1) Accepted
- (2) Accepted with Modification (include modification description) or
- (3) No Action Taken with Justification (including justification explanation and evidence) and changes are not made to prevent a future recurrence.

# **Appendix A: Asset Management Maturity Scale**

Source: Institute of Asset Management (IAM), Asset Management Maturity Scale and Guidance, Version 1.1, June 2016.





## **Appendix B: Observations Table**

The following table summarizes the findings and observations listed in the audit report.

Once received and approved by the appropriate authority, the Audit Division will periodically follow up to ensure that the mitigations are put in place to the identified concerns. Additionally, we will collect and document objective evidence for verification and closure purposes.

#### **Findings:**

There were no (0) findings associated with this audit.

#### **Observations with Recommendations:**

At the time of the audit, we identified twelve (12) Observations with Recommendations where if not addressed have the potential to become a finding in the future.

#### **Context of the Organization: Clause 4.2**

**Observation #1:** Not all stakeholders are identified and documented and stakeholder needs and expectations relevant to the AMS are not clearly defined or documented.

The recommendation is for identification and tracking of stakeholders to the AMS and identification of their expectations for the AMS.

#### **Context of the Organization: Clause 4.4**

**Observation #2:** There is no documented plans to align clauses 4.1, 4.2, and 4.3 to agency business practices.

The recommendation is for the establishment of a documented alignment of agency business practices to the scope and objectives of the AMS.

#### Leadership: Clause 5.1

• **Observation #3:** There is no formal management review process developed or documented including a documented commitment for directing and supporting workers to contribute to the effectiveness of the asset management system.

The recommendation is for a management council or similar to be formed that is responsible for ensuring agency commitment to obtaining ISO 55001 certification and for directing and supporting stakeholders (including ST staff) towards implementation of the AMS. Additionally, a new goal owner for agency goal 5.3 should be assigned as Peter Rogoff is no longer serving as ST CEO.

#### Leadership: Clause 5.2

• **Observation #4:** Asset management safety policy requires review and update to ensure active communication and implementation throughout the agency. The policy should be aligned with agency goals and objectives identified in the agency strategic plan.

The recommendation is for the review and update of the asset management policy statement and endorsement by ST Leadership.

#### Leadership: Clause 5.3

• **Observation #5:** ST Leadership has not adequately assigned the roles and responsibilities for implementing the asset management system. This is especially the case, for the roles and responsibilities of agency departments outside of the Enterprise Asset Management division that are critical to the success of the asset management system and for ISO certification. Additionally, it is unclear who the executive sponsor/advocate is for the work of gaining ISO certification for asset management.

The recommendation is for establishment of a system safety management council or similar (see Observation #3) to gain awareness of the functions outside of Enterprise Asset Management to be performed during AMS implementation and to compel action on AMS implementation tasks throughout the agency.

#### **Planning: Clause 6.1**

• **Observation #6:** There is poor agency wide alignment for how risks are identified and managed. Without an agency-wide risk management framework, the risk management requirements of ISO for Asset Management may have critical roadblocks to implementation.

The recommendation is to conduct a feasibility assessment of opportunities for development of an agency wide risk framework within the time frame required for asset management system implementation.

#### Planning: Clause 6.2.1

• **Observation #7:** Although, asset management staff is very focused on identified objectives for the asset management system, there is concern that these objectives may no longer be aligned with the agency's goals and objectives. A new Five-Year Agency Strategic Plan, may have significant impact on these objectives, and require the asset management team to rewrite their objectives for the asset management system

The recommendation is to review and document alignment of asset management policy and objectives with agency strategic goals and objectives. (See Observation #4)

#### **Support: Clause 7.1**

**Observation #8:** Recently two project managers have left the Enterprise Asset Management group. One of these positions was filled by a new Deputy Director position, however the other was not filled. Then, the Director of the division left and currently the duties of the Director are being administered by the Deputy Director. Meanwhile the responsibilities for the asset management group are growing as they work to implement the system and gain ISO certification.

The recommendation is for identification of additional responsibilities for internal staff (across the agency) throughout the timeline of AMS implementation and maintenance of the implemented system. These additional responsibilities should then be equated to a (FTE) in a staffing needs assessment.

#### **Support: Clause 7.3**

**Observation #9:** Although agency awareness of the asset management system has advanced, a significant increase in agency wide awareness at all levels and related functions is needed.

The recommendation is to document a plan for increasing agency awareness of the asset management system and agency goals and objects for seeking ISO certification. The plan should include requirements for support from ST Leadership for this effort.

#### **Support: Clause 7.5**

**Observation #10:** Information requirements have not been determined for the asset management system and will require an agency-wide effort to determine them with the support of Top Management/ST Leadership. This effort will include financial, legal, operational, technical, safety, and other types of data.

The recommendation is for an asset management system management council, or similar (See Observation #3), with input from Enterprise Asset Management and other internal stakeholders, to initiate an agency wide effort to determine the information needs of a mature asset management system.

#### **Operation: Clause 8.2**

**Observation #11:** There is a lack of continuity planning for staffing changes within the Enterprise Asset Management group. There is limited cross training of duties and responsibilities. Also, although it is evident that the asset management function within the agency will have a significant increase in duties and responsibilities, there is no proactive effort by Top Management/ST Leadership to plan for and address this anticipated growth.

A-The recommendation is to take and document proactive actions to increase staffing for the Enterprise Asset Management group. (See Observation #8)

B-In the near term, increased cross training of duties and responsibilities should be conducted.

#### **Performance Evaluation: Clause 9.3**

• **Observation #12:** There is no formal management review process established.

The recommendation is establishment a system safety management council or similar (See Observation #7) that will conduct a formal management review of the SMS, including its opportunities and risks.



# **Appendix C: Personnel Interviewed**

#### **Sound Transit Staff**

Zahid Khan, ST Deputy Director – Enterprise Asset Management

Michelle Foster, Associate Project Manager – Enterprise Asset Management

# **Appendix D: Documents Reviewed**

The audit team reviewed the following documents and records during the audit.

Resolution No. R2015-32 - Establishing an Asset Management Policy

Strategic Asset Management Plan, Rev 1.0, February 2021 (SAMP & TAM)

Sound Transit's Agency Strategic Plan, August 2020

Sound Transit Asset Management Policy 610, March 2022

AMCL ST ISO 55001 Certification High-Level Gap Assessment and Foundations Plan: June 2021