



Transit



Asset Management Guide

Background

For some time, the Federal Transit Administration (FTA) and the U.S. transit industry have been working to improve the understanding and practice of transit asset management. Improving transit asset management is now a national policy. In its 2010 National State of Good Repair Assessment, FTA found an estimated backlog of \$50 to \$80 billion in deferred maintenance and replacement needs, of which the vast majority is rail-related. The enactment of Moving Ahead for Progress in the 21st Century (MAP-21) places the requirement on transit agencies to prepare a Transit Asset Management Plan. Transit agency customers, policy makers, and public agencies are holding agency management accountable for performance and increasingly expect more business-like management practices.

To advance transit asset management, this guide provides a transit-specific asset management framework for managing assets individually and as a portfolio of assets that comprise an integrated system. The guide provides flexible, yet targeted guidance to advance the practice and implementation of transit asset management.

Objectives

The objectives of this report are to explain what transit asset management is and what the business benefits to an agency are; provide an enterprise asset management framework and business model that agencies can refer to as “best practice”; describe the elements of transit asset management plan; detail, for each major asset class, the major enabling components of asset management—inventory, condition assessment, performance analysis and modeling, risk management, and lifecycle cost management; and guide organizations through the migration from their current baseline to high-performance asset management.

Findings and Conclusions

Asset management allows transit agencies to more effectively use available funds to improve their system's physical condition and performance, thus potentially increasing ridership.

This guide provides the following definition: “Transit asset management is a strategic and systematic process through which an organization procures, operates, maintains, rehabilitates, and replaces transit assets to manage their performance, risks, and costs over their lifecycle to provide safe, cost-effective, and reliable service to current and future customers.”

Asset management processes are ongoing and involve evaluating and managing the relationships between costs, risks, and performance over the asset's lifecycle. The transit asset management framework has three categories of business processes:

1. Asset Management Vision and Direction – agency-wide processes that establish the organization-wide asset management policy and strategy and drive resource allocation
2. Lifecycle Management – the processes involved in the lifecycle management of individual asset classes; these include managing the data (inventory), monitoring the assets' condition and performance, and developing lifecycle management plans
3. Cross-Asset Planning and Management – agency-wide processes that consider information from all asset classes to support the capital programming and operations and maintenance budgeting process

The fundamental concepts of asset management are straightforward; however, implementing the changes required to become a mature asset management organization requires careful planning and execution. As a starting point, this guide identifies steps for planning, implementing, and institutionalizing an asset management improvement program.

Benefits

Through asset management, transit agencies can more effectively use available funds to improve the physical condition and performance of their system. This, in turn, has the potential to increase ridership. Some of the benefits associated with improved asset management activities are as follows:

- Improved customer service – improves on-time performance and service operations, vehicle and facility cleanliness; reduces missed trips, slow orders, and station shutdowns, and focuses investments around customer-centered goals and metrics
- Improved productivity and reduced costs – maintains assets more effectively, using condition-based approaches and using predictive and preventive maintenance strategies (where these can be employed) to reduce costs while improving service delivery
- Optimized resource allocation – better aligns spending with an agency's goals and objectives to obtain the greatest return from limited funds and incorporates lifecycle cost, risk, and performance trade-offs into capital programming and operations & maintenance budgeting
- Improved stakeholder communications – provides stakeholders with more accurate and timely customer-centered performance indicators and provides tools to communicate forecasted performance metrics (including level of service) based on different levels of funding

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Project Information

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