

Oregon Department of Transportation (ODOT)

Asset Management Program

Executive Summary

INTRODUCTION

ODOT is responsible for managing billions of dollars in non-linear assets such as facilities, fleet, etc. and linear transportation assets such as bridges, culverts and roadways. In order to address the state-wide problems of an aging infrastructure coupled with limited resources, ODOT has recognized the need for a more strategic approach to managing its assets.

ODOT has chosen Asset Management as its strategic approach, has adopted the goals and principles of the AASHTO's *Transportation Asset Management Guide* and is currently integrating Asset Management into its every-day business processes and decision-making at all levels, and across all functions, of the organization.

ODOT recognizes Asset Management as a systematic, strategic and complete approach to maintain, upgrade and operate physical assets, such as facilities, roadways, traffic control structures and bridges, in a cost-effective way. Through extensive research and in conjunction with Asset Management implementation, ODOT has learned that Asset Management is a tool that can be used to manage ODOT assets so that they meet both business and customer needs at the lowest possible cost over the longest possible period. ODOT sees Asset Management as a means to get the right information, to the right people, at the right time, to obtain the right decision.

ODOT BUSINESS PRACTICES (PRIOR TO ASSET MANAGEMENT)

In order to effectively implement Asset Management, ODOT performed an assessment of its business practices. ODOT's goal is to move its core processes closer to nationally and internationally recognized asset management best practices. Currently, in ODOT:

- The data for many of ODOT's assets are generally collected by program-specific staff residing in many Divisions in ODOT. The data resides in approximately 60-70 different databases. There are also approximately 92,000 total databases currently in operation at ODOT. Many of these are developed for a specific work requirement, are unsynchronized, have limited capability for corporate use.
- Assets are referenced using two main reference techniques: by location (i.e., route/highway number, mile point and offset) and by quantity of components in a specific mile point range (i.e., lineal feet of guardrail between two mile points).

- Many of the data definitions used within each asset data system are for the most part unique to the specific program, and the level of performance analysis varies depending on program need.
- Predominantly, asset reporting is performed at a business program level for the benefit of the program that “owns” the data. Summary organizational-level reports are generated manually after contacts with individual program staff.

IDENTIFIED GAPS (PRIOR TO ASSET MANAGEMENT)

Gaps have been identified that limit and to a large extent define ODOT’s current data management processes. These gaps include:

- absence of recognized, widely used or agreed upon organizational data standards and definitions for some categories of ODOT assets;
- absence of coordinated organizational data collection efforts;
- absence of readily available Linear Asset Information to be used in making scoping decisions for highway construction projects;
- incomplete, not readily accessible, inadequate or non-existent location and/or condition data for all asset categories;
- absence of analysis tools to manage all ODOT’s assets result in the inability or difficulty to perform basic system-wide management functions such as generating reports by asset or cross-asset category, condition, functional adequacy, cost, etc.;
- inconsistent tracking of information about physical roadway components that leads to differing levels of management, maintenance and understanding of current conditions; and
- inconsistent corporate asset data in terms of collection interval, scale or level of detail.

FOUNDATION

Much foundational work has already been completed to build, maintain and improve ODOT’s management system and data system structure. ODOT’s intent is to build on this existing foundation; utilize the Goals, Objectives and Strategies shown in its approved Implementation Plan and move, over time, to a fully integrated Asset Management system.

ODOT ASSET MANAGEMENT VISION AND MISSION

Asset Management Vision:

Asset Management is fully institutionalized in ODOT, therefore ODOT’s assets are managed strategically by using integrated and systematic data collection, storage, analysis and

reporting standards on a broad range of transportation system assets, optimizing funding and life cycle decisions for operations, maintenance and construction business functions.

Asset Management Mission:

Recognizing that Asset Management is a process or methodology that ODOT can use to cost-effectively deliver an efficient, effective, reliable and safe transportation service, the mission of ODOT Asset Management is:

- to put in place the plans, people, processes and products that enable ODOT to implement accepted Asset Management practices in a timely and cost-effective manner; and
- to continually monitor and improve Asset Management implementation over time.

We do this so that benefits to ODOT in the areas of accountability, communication, risk management and financial efficiency can be realized.

IMPLEMENTATION ACTIVITIES

To date, ODOT has completed, or is the process of completing, the following Asset Management implementation items:

- Executive Committee Structure
- Tactical (Working Group) Structure
- Data Governance Structure
- Research of Asset Management best practices
- Research of Data Collection/Maintenance best practices
- In-depth assessments of current ODOT Management Systems
- Outreach materials such as: web page, “*INSIDE ODOT*” articles, brochure, Pilot Project in ODOT’s Region 2 will provide a high level ‘gap’ analysis of asset feature data availability on selected roadway segments as well as identify effort and resources required to address the ‘gaps’.
- Communication Plan
- Training Plan
- Strategic Plan
- Implementation Plan
- Linkage with other ODOT efforts and groups such as Sustainability, Mobility, Information Systems (IS), OR-Trans Project, GIS, etc.
- Partnerships with other entities such as the: City of Portland, NW Asset Management User’s Group (AMUG), Association of Oregon Counties, League of Oregon Cities, Oregon Chapter American Public Works Association (APWA)

ASSET MANAGEMENT IMPLEMENTATION GOALS

ODOT's Asset Management Implementation Plan contains specific implementation Goals, Objectives, Strategies and Action Steps. The intent of these items is to build on the ODOT Management Systems foundation already in place, to address identified gaps and to provide direction for accomplishment of ODOT's Asset Management Vision.

ODOT's Asset Management Implementation Goals cover three main areas:

- Goal 1 is primarily focused on improving ODOT's corporate asset data; including location referencing, data storage systems and data collection processes.
- Goal 2 relates to the developing Asset Management Data Reporting processes.
- Goal 3 is focused on the flow and use of asset information throughout ODOT for optimal decision making.

ODOT ASSET MANAGEMENT CORE PRINCIPLES

ODOT has identified a list of core principles that provide a focus for implementation activities. These Core Principles are:

1) Asset Management Will Add Value - Any Asset Management initiative must support ODOT's Vision.

Vision for ODOT: The Oregon Department of Transportation was established in 1969 to provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians. ODOT develops programs related to Oregon's system of highways, roads, and bridges; railways; public transportation services; transportation safety programs; driver and vehicle licensing; and motor carrier regulation.

2) Asset Management Will Be Done Well - National and international best practices will be adopted for ODOT's Asset Management program. Processes and procedures will be developed and refined to take advantage of these proven methods and to create an Asset Management system that is responsive, adaptive and that meets changing business needs brought about by new technologies or by federal or legislative requirements.

3) Asset Management Will Build on ODOT's Good Management System Work - Much work has already been done to build, maintain, and improve ODOT's Management System structure. This structure and the expertise it represents is vital to ODOT's success. To implement Asset Management, we will build on ODOT's existing management system foundation and move, over time, to a fully integrated Asset Management system.

4) Current Efforts Underway to Gather or Improve ODOT Data Will Be Supported – These efforts will be supported and encouraged to move forward. Information regarding new or developing corporate data policies, that support Asset Management, will be made available to current data collection efforts. Every effort will be made to ensure that data collection efforts conform to current data collection policies, processes and procedures to the maximum extent feasible.

5) Asset Management Will Be Part of ODOT’s Daily Work Function - The work to support ODOT’s Asset Management Program, including data collection, storage, and reporting, will be institutionalized and integrated into the everyday work of ODOT staff. New, innovative, and automated tools will be used to accomplish this work.

6) Asset Management Will Use Trusted and Reliable Data - ODOT’s Asset Management System will contain corporate data for transportation features and their condition that is consistent, unduplicated, understandable, reliable, accurate, current, and owned by the responsible ODOT Business Line.

7) Asset Management Processes Will Be Regularly Monitored - Performance Measures will be utilized to monitor the effectiveness of cross-asset decision-making, data monitoring, trade-off analysis reporting structure and other key elements of Asset Management.

8) Asset Management Will Support Broad-based Funding Allocation Decisions - ODOT resource allocation decisions across Regions, Areas and Districts for modes or programs will be made using the filter of performance-based, life-cycle cost, system-wide, cross-asset information.

9) Asset Management Processes Will Allow Readily Available Asset Reports - The Asset Management Data Reporting System will be fully automated, flexible, and complete. It will reliably perform cross-asset analysis and will monitor the inventory, condition, and performance of linear ODOT’s assets. Getting accurate reports will be easy and intuitive.

10) Asset Management Will Foster Cross-asset Communication - ODOT’s Asset Management Program will enhance current systems collaboration, coordination, and communication across asset categories. The right information will be available to the right people at the right time to make the right decision.

ODOT ASSET MANAGEMENT NEXT STEPS

As stated previously, ODOT has chosen Asset Management as its strategic approach to manage its wide variety of assets. The next steps to fully implement and utilize Asset Management in ODOT include:

- Complete Region 2 Pilot Project and incorporate “Lessons Learned” into the agency wide Asset Management Program
- Continue needed training and outreach to stakeholders

- Continue with Implementation Plan activities
- Continue Core Principle focus
- Continue connection and information sharing with key partners
- Continue to research opportunities where Asset Management processes can provide benefits to achievement of ODOT's Vision, Mission, Values and Goals
- Continue to improve inventory, data management, and analytical tools to improve the quality and timeliness of ODOT decisions
- Continue to successfully meet ODOT's Asset Management Program goals by gaining an approval of a Program Option Package for Oregon Transportation Commission and Legislative consideration that would provide permanent dedicated staffing for Asset Management initiatives within ODOT starting July 1, 2007.