

# **AASHTO Subcommittee on Asset Management**

## **Strategic Plan**

### **Recommended Strategy Focus Areas**

**2004 – 2010**

#### **Mission**

Advance the State-of-the-Practice of Asset Management in State DOT's to optimize resources utilizing performance based goals and measures regarding operation, preservation, and improvement of transportation systems for member agencies.

#### **Vision**

Asset management is a standard for State DOTs and others for making investment decisions and managing the nation's transportation system.

#### **Goal 1: Promote the development of asset management tools, analysis methods, and research topics.**

##### **❖ Strategy 1:**

Evaluate and promote the development, use, and integration of innovative technology and management systems for asset management.

##### **Task 1-1-1**

Explore opportunities for integrating the management systems into a cohesive transportation asset management system.

##### **➤ Status: TBD.**

Appoint a subcommittee task force to review existing analytical tools currently in use for asset management.

Evaluate the potential for combining the individual management systems into a single evaluation methodology or a more objective and easier to use grouping of components. Make the necessary recommendations for further development.

Conduct the necessary research and/or retain a consultant to follow through.

##### **Task 1-1-2**

Promote the development of management systems where none currently exist or where they are rudimentary.

**? Status: Ongoing – Tunnel management system being piloted by FHWA with Washington, D. C.; roadside safety hardware management being investigated by FHWA and AASHTO committee; additional topics being investigated by FHWA include culverts, retaining walls, movable span bridges, and other structures.**

Identify management systems (e.g., tunnel, safety hardware, etc.) to be further developed.

Coordinate with manufacturers, owners, and maintenance providers to obtain their input and requirements.

Where appropriate, designate an oversight group until the project has been tested and is functioning properly.

### **Task 1-1-3**

Promote the development and use of tools to support coordination between the modal systems.

➤ **Status: TBD.**

Appoint a subcommittee task force to explore issues related to modal systems coordination.

Make recommendations regarding appropriate tools for use within the agencies as well as between agencies.

Make recommendations for follow-up by researchers and/or a consultant.

### **Task 1-1-4**

Review current methods used by States to perform economic evaluations.

➤ **Status: Ongoing – A needs assessment and review of existing analytic techniques and systems is being undertaken under NCHRP Project 20-57. The final report is expected later in this calendar year.**

Describe processes used.

Identify specific factors or input needed to develop new tools.

### **Task 1-1-5**

Appoint a subcommittee task force to seek volunteer State(s) to work with the task force on utilizing promising asset management approaches and evaluating their effectiveness. This task force will perform the following tasks:

➤ **Status: Being discussed.**

Identify volunteer State(s) to work as “laboratory” State model(s).

Scope the extent of experimentation and documentation in coordination with the volunteer State(s).

Set an appropriate period of evaluation.

Establish reporting and documentation of processes, progress, and results.

**Task 1-1-6**

Publish reports and results in a format that provides other agencies with the methods to replicate the asset management approaches utilized.

- **Status: TBD –This information could be disseminated through the Asset Management web site.**

**Task 1-1-7**

Integrate the most promising outcomes into a lead State program described in Strategy 1-1-5.

- **Status: TBD.**

**Task 1-1-8**

Plan and participate in the 1st International Conference on Asset Management in conjunction with the United Engineering Foundation or another organization with worldwide membership.

- **Status: TBD. Preliminary discussions occurred at Task Force meetings.**

Papers and discussion during the conference should include, but not be limited to:

- the asset management guide
- best practices in transportation asset management
- training needs and opportunities

**Task 1-1-9**

Develop an agenda for a 2nd International Conference on Transportation Asset Management with a target date of two years after the 1st International Conference.

- **Status: TBD.**

**Task 1-1-10**

Develop a mechanism for obtaining input from international entities, such as PIARC, OECD, ASCE, TAC, and others, to integrate their practices with those of AASHTO.

- **Status: TBD.**

### **Task 1-1-11**

Publish the proceedings from these conferences in a practical format that will be immediately useful to practitioners.

- **Status: TBD – Dependent upon Tasks 1-1-8 and 1-1-9.**

### ❖ **Strategy 2:**

Develop, improve, promote, and support the use of management systems, economic evaluation tools, and tradeoff analysis methods for application in an asset management context.

### **Task 1-2-1**

Appoint a subcommittee task force to scope a project to evaluate data management needs, methods, and software to support asset management activities.

- **Status: TBD – Discussion at previous Task Force meetings indicated conflicting viewpoints on moving forward with this task.**

Consider existing management systems and their applicability to asset management.

Review member agency practices.

- Identify their current ability to support asset management needs.
- Identify features of database systems that may be useful but are not currently available.
- FHWA publishing Case Studies.
- Data Collection Guide finalized and distributed.

### **Task 1-2-2**

Develop engineering/economic tools (e.g., benefit/cost, Life Cycle Cost Analysis (LCCA), risk analysis).

- **Status: Ongoing – A needs assessment and review of existing analytic techniques and systems is being undertaken under NCHRP Project 20-57. The final report is expected later in this calendar year.**

Develop new methods or tools where needed.

Document and publish a “how-to” manual.

Develop a training course based on the manual.

### ❖ **Strategy 3:**

Share information on organizational approaches and issues related to application of performance measurement, development of common measures

of performance, and decision making tools for transportation system performance including tracking program delivery.

**Task 1-2-3**

**Status: TBD.**

**Goal 2: Communicate with and inform member States how to utilize asset management.**

❖ **Strategy 1:**

Communicate and share information on state-of-the-art practices with member States and others interested in asset management including maintaining the AASHTO Community of Practice website.

**Task 2-1-1**

Maintain the Web site, overseen by the Subcommittee, to promote asset management principles and techniques.

➤ **Status: Ongoing with Lou Adams (NYDOT) leading.**

Determine funding needs and sources of funds to establish and maintain the site.

**Task 2-1-2**

Develop a family of brochures to educate and inform the State DOTs on issues such as “What is asset management?”, the state-of-the-practice, the state-of-the-art, and the role of asset management in the transportation department. These brochures will:

➤ **Status: Ongoing – Brochure outlining Subcommittee’s Strategic Plan to be developed. Additional work to be determined.**

emphasize performance measures

focus on integrated management systems

stress overall benefits

focus on implementation

publish the history of Asset Management

**Task 2-1-3**

Develop and maintain a “Speakers Bureau” with designated speakers (consisting primarily of State personnel) and a core of prepared speeches designed to cover the major topics on asset management for general audiences.

- **Status: TBD.**

#### **Task 2-1-4**

Prepare videos for dissemination to the state transportation agencies on the results of NCHRP Project 20-24(11), targeted at the technical staff.

- **Status: TBD.**

#### **❖ Strategy 2:**

Share information with policy and technical decision makers and elected officials on the benefits of applying asset management principles and techniques throughout the planning process from initial goal setting and investment decisions, through to operations, preservation, and maintenance.

#### **Task 2-2-1**

Publish a quarterly Transportation Asset Management newsletter to help keep practitioners informed of new developments and to educate those who are new to the process.

- **Status: TBD.**

Need a volunteer to take the lead.

#### **Task 2-2-2**

Develop standardized presentations for use by the member States.

- **Status: TBD.**

Prepare separate presentations for the following audiences:

- CEOs, to be given in peer-to-peer presentations at AASHTO meetings or as requested
- legislators, to be given by the DOT CEOs
- senior staff, to be given by the DOT CEOs
- technical staff
- general audiences, including technical and non-technical

Vary the content within the presentations, to include such topics as:

- the impact of asset management on the cost effectiveness of managing transportation assets
- the value of national transportation assets
- asset management as an integral part of management practice

- results of the Asset Management Conferences
- other prioritized items of immediate use to the states, to be determined by the Subcommittee.

Solicit volunteers to develop and give presentations, including representatives from the highest management levels of the State DOTs.

Seek funding where needed to cover travel and subsistence for the presenters.

**Task 2-2-3**

Communicate with existing groups and share information.

➤ **Status: Ongoing**

Publish short synopses of current state efforts. (See handouts from the September 2004 Peer Exchange Workshop)

**Goal 3: Assist member States in assessing and implementing asset management principles.**

❖ **Strategy 1:**

Maintain and update the AASHTO Asset Management Guide.

**Task 3-1-1**

Periodically update the *AASHTO Guide for Asset Management*.

➤ **Status: Ongoing informally – A task force has not been appointed, development of new material being considered.**

Appoint a Subcommittee task force to monitor developments in asset management technologies and processes.

Determine whether significant changes and improvements have been made in the asset management state-of-the-art by conducting an annual review.

Determine the most appropriate method for updating the asset management guide:

- issue addendum(s)
- add chapters
- completely rewrite the guide

Determine best method for conducting this update by:

- committee
- consultant
- other

Publish and disseminate the completed document.

❖ **Strategy 2:**

Provide ongoing support for member States.

**Task 3-2-1**

Develop and administer a “lead State” program for asset management.

- **Status: TBD – The implementation of the Asset Management web site will be a step toward developing a “lead state” program.**

Solicit one or more volunteer states per AASHTO region to be lead-states for specific task areas, such as pavement management, congestion, safety, and testing models.

Decide on appropriate subjects.

Oversee progress.

Lead state will provide insights, lessons learned, and “how-to” information to other states in the region.

Lead states in each subject will confer periodically across regions. One lead state will be designated to coordinate with the other three.

❖ **Strategy 3:**

Undertake educational and training activities.

**Task 3-3-1**

Hold joint meetings of the Subcommittee on Asset Management with other key AASHTO committees and subcommittees, and with the new TRB Committee on Asset Management, to ensure coordinated approach to workshop and conference development.

- **Status: Ongoing.**

**Task 3-3-2**

Develop subjects and scopes for AASHTO Asset Management Conferences through 2010.

- **Status: TBD.**

### **Task 3-3-3**

Develop a comprehensive outline of training that is appropriate for advancing asset management.

➤ **Status: TBD.**

Review existing AASHTO CEO and management training courses, along with existing FHWA training.

Incorporate training ideas from discussions at the 1999 and 2004 Peer Exchange Workshops.

Prioritize the areas of greatest need, such as CEO orientation versus staff ability to conduct analyses of asset management elements.

Consult academic organizations regarding their educational plans in the area of asset management, including Rensselaer Polytechnic Institute, University of Missouri, etc.

### **Task 3-3-4**

Translate the training outline into a specific program.

➤ **Status: TBD – Dependent upon Task 3-3-3.**

Lay out a specific schedule to develop a phased approach to a continuing training program.

Allocate appropriate training modules or programs to the National Highway Institute (NHI), academia, AASHTO, FHWA, and others.

Locate funding as needed to accomplish a comprehensive, continuing training program.

Request coordination of needs between FHWA and NHI.

Set up a monitoring process to track training that has been conducted, including specific courses given and the number of attendees.

Survey the State DOTs every 2–3 years to determine any changes that have occurred since the initial survey in 1999 relating asset management progress to training needs.

Revise training programs as needed and as research becomes available.

**Goal 4: Develop and document an understanding of asset management, how it is being used and how it can be used in the future by member States.**

- ❖ **Strategy 1:**  
Identify knowledge gaps and technology gaps and undertake future research projects.

**Task 4-1-1**

Document the impact of asset management on the cost effectiveness of managing transportation assets.

- **Status: TBD.**

**Task 4-1-2**

Document the value of national transportation assets as a benchmark against which transportation system efficiencies can be measured.

- **Status: TBD – May be partially accomplished as part of the states’ GASB-34 efforts.**

**Task 4-1-3**

Update state surveys from NCHRP Project 20-24(11) every two years.

- **Status: TBD.**

Using the original survey and the Asset Management Guide developed in the NCHRP study as a benchmark, identify ongoing work that is of interest to States that are currently on the cutting edge.

Appoint a project panel and develop a scope for an NCHRP work program.

Allocate funding.

Solicit proposals and designate a consultant.

**Task 4-1-4**

Sponsor synthesis work.

- **Status: TBD – Could be an ongoing process, as needed.**

Consultant will update the synthesis based on an updated electronic query, published reports, and research accomplished since the last published guide.

Design the Synthesis Report for use by member states.

Consultant should identify work in the private sector that appears to have applicability in the States.

#### **Task 4-1-5**

Survey States on appropriate parameters and benchmarks for asset management.

- **Status: TBD – Dependent upon completion of NCHRP studies.**

Build on NCHRP Project 20-24(11), *Asset Management Guidance for Transportation Agencies*, and Project 14-13, *Customer-Driven Benchmarking for Highway Maintenance Activities*.

Develop yardsticks for benchmarking.<sup>1</sup>

#### **Task 4-1-6**

Identify critical measures to evaluate asset management improvements within an organization, including the following aspects:

- **Status: TBD.**

efficiency

effectiveness

life cycle

customer satisfaction

other

#### **Task 4-1-7**

Identify measures that will allow one organization to communicate voluntarily with another organization on the following topics:

- **Status: TBD.**

management systems

productivity

life cycles of comparable system components

other

#### **Task 4-1-8**

Summarize both internal and external benchmarking measures in a report, including the following:

- **Status: TBD.**

measures currently in use

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<sup>1</sup> It is assumed that, where appropriate, the activities in this strategy will utilize the results of the NCHRP Project 20-24(11) as a foundation for benchmarking, recognizing that "one size does not fit all."

measures that are desirable but for which data are not readily available, or for which relational database software is not easily accessible.

#### **Task 4-1-9**

Design a database for biennial benchmarking.

➤ **Status: TBD**

Develop the necessary software to store and retrieve the data.

Market the database<sup>2</sup> as a tool for the states.

House the database at AASHTO.

Update the database with each new biennial synthesis and benchmarking activity.

❖ **Strategy 2:**

**Plan and undertake appropriate AASHTO/FHWA domestic and international scanning tour(s) and disseminate findings.**

➤ **Status: International Scanning Study Tour scheduled for April 2005.**

#### **Task 4-2-1**

Conduct, document, and disseminate the results of the scanning tour.

➤ **Status: Ongoing**

Study tour participant will note what is significant at each location.

Study tour Report Facilitator will consolidate all notes into an executive summary of the tour.

AASHTO/FHWA will publish an executive summary and full report for distribution to all member states.

Study tour participants will be available to meet with member agencies to describe their experiences and answer questions.

#### **Task 4-2-2**

From the results of the scans, identify, document, and define the tools, data, and information that would improve the asset management process but that are not available within the current state-of-the-art.

➤ **Status: TBD – Dependent upon Task 4-2-1.**

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<sup>2</sup> Database should focus on assisting states with self-assessment rather than state-to-state comparisons.

Study Tour participants will question employees at sites visited about tools needed but not available and tools under development.

Study Tour participants will question employees at sites visited about the lack of pertinent data and/or information and the reasons it is not available.

Consultant will summarize findings in a technical report on this aspect of the tour.

**Goal 5: Develop partnerships with public and private entities having an interest in and commitment to asset management.**

❖ **Strategy 1:**

Interact with and coordinate asset management activities within AASHTO and with other organizations such as the Association of Metropolitan Planning Organizations (AMPO) and the American Public Transportation Association (APTA).

**Task 5-1-1**

Establish subcommittee liaisons with other organizations that are interested in and who are pursuing asset management. These organizations include, but are not limited to, the following:

- **Status: Preliminary table of connections between subcommittee members and outside organizations has been developed as a precursor to making contact with these groups. Work has been accomplished with some organizations such as the UTCs (including the recent National Workshop on Asset Management) through informal partnerships.**

Transportation Research Board (TRB)

- Asset Management Committee
- Strategic Management Committee

American Public Works Association (APWA)

American Society of Civil Engineers (ASCE)

Civil Engineering Research Foundation (CERF)

National Association of County Engineers (NACE)

National Association of Regional Councils (NARC)

Association of Metropolitan Planning Organizations (AMPO)

Government Accounting Standards Board (GASB)

Association of General Contractors (AGC)

American Road and Transportation Builders Association (ARTBA)  
American Public Transportation Association (APTA)  
National Association of State Aviation Officials (NASAO)  
Transportation Association of Canada (CANADA/TAC)  
Permanent International Association of Road Congresses (PIARC)  
Organization for Economic Cooperation and Development (OECD)

- ❖ **Strategy 2:** Promote sustained support for the advancement of asset management activities and research in cooperation with other organizations.

#### **Task 5-2-1**

Work with other organizations, such as the National Science Foundation (NSF), University Transportation Centers (UTC), and the organizations listed in Task 5-1-1, to promote long term support of asset management activities.

- **Status: Initial identification of points of contact has been done but the process for developing long-term support/coordination has not been developed.**

Identify points of contact in other organizations and counterparts on the TRB Committee.

Develop mechanisms for communicating opportunities for funding and support and appropriate responses.

- ❖ **Strategy 3:** Jointly sponsor and undertake workshops and seminars that focus on asset management through partnerships with other organizations.

#### **Task 5-3-1**

Hold joint meetings with other organizations and entities involved in transportation asset management.

- **Status: Continuing – National Conference on Asset Management conducted as joint effort with several groups, including UTCs (planned for November 2005).**

#### **Task 5-3-2**

Document the impact of asset management on cost effectiveness, efficiency, customer satisfaction, and life cycles as reported by other organizations.

- **Status: TBD**