

Research Division

MDOT Study Chosen for AASHTO Sweet 16

The Research Advisory Committee (RAC) to the AASHTO Standing Committee on Research (SCOR) awarded its 2012 Sweet Sixteen High Value Research Projects at its annual summer meeting held in July in Burlington, Vermont. Each year, RAC collects High Value Research highlights from member states across the nation. These highlights showcase projects that are providing transportation excellence through research. From these submittals, each of the four RAC regions selects its top four projects to form the Sweet Sixteen Awards. MDOT State Study 214, MDOT Implementation Plan for GPS Technology in Planning, Design, and Construction Delivery, was among those chosen.

This project, done by Drs. John (“Jeff”) Hannon and Tulio Sulbaran of the University of Southern Mississippi, resulted in great time and money savings on earthwork costs, more accurate grade control, and valuable recommendations for 3D model design delivery. Technical experts from many parts of MDOT (Roadway Design, Division of Transportation Information, Information Systems, Districts) made this project a success. For the full final report, go to [http://sp.gomdot.com/Research/Reports/Interim%20and%20Final%20Reports/State%20Study%20214%20-MDOT%20Implementation%20Plan%20for%20Global%20Positioning%20Systems%20\(GPS\)%20Technology%20in%20Planning,%20Design,%20and%20Construc.pdf](http://sp.gomdot.com/Research/Reports/Interim%20and%20Final%20Reports/State%20Study%20214%20-MDOT%20Implementation%20Plan%20for%20Global%20Positioning%20Systems%20(GPS)%20Technology%20in%20Planning,%20Design,%20and%20Construc.pdf).

In addition to being presented at the RAC annual meeting, the Sweet Sixteen will also be showcased in a poster session at the 2013 Transportation Research Board (TRB) Annual Meeting. These projects were selected from 120 High Value Research projects submitted for 2012. To see the complete list of projects, visit the RAC publication, Research Impacts: Better - Cheaper – Faster, posted on its website, <http://research.transportation.org/Pages/HighValueResearchProjects.aspx>

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Inside

- Research Project Chosen by AASHTO Standing Committee on Research Sweet Sixteen
- Transportation Asset Management, the Way to Move Forward
- Calendar of Events



Transportation Asset Management, the Way to Move Forward

Transportation Asset Management (AM) is an ongoing strategic approach to managing the existing transportation infrastructure in a cost-effective and efficient manner. It promotes more effective resource allocation and utilization based upon quality information, and is transparent and data-driven to address facility preservation, operation, and improvement.

Implementing principles of AM can be an overwhelming task. To begin the process, goals and objectives should be established that would tie into performance management.

Transportation AM should consist of the following elements:

- Developing policy goals, and objectives and data collection processes
- Planning and Program delivery
- Tie to performance measurement program and report results
- Supported by Data Management Systems
- Strong Policy framework-Driven
- Performance-Based programming and budgeting
- Systematic approach to decision making
- Continuous Cycle approach including evaluation and feedback

When managing a large transportation network, the principles of AM can be applied to improve efficiency. Agencies should not wait until their entire wish list of rigorous and sophisticated analysis tools are in place before implementing AM.

In general, there is no one, single, “correct” approach to AM. Rather, the practice must be evaluated in the context of several factors affecting the agency’s infrastructure and its management principles and culture.

Developing performance standards to assist long-range planning and program development is the focus of many state departments of transportation. However, while the definitions of these measures differ among states to reflect particular standards, measures of deterioration, management methods, public perceptions, or data collection methods and strategies, they are similar in nature to one another.

There are several challenges to AM Implementation programs that include, but are not limited to:

- Creating next generation management systems such as trade-off analysis tools reflecting different budget and performance assumptions
- Improving life-cycle analysis methods and incorporating them fully within planning and program development
- Develop comprehensive, GIS-compatible, enterprise-wide databases that better serve AM
- Integrating decision-making and allocation of resources across asset levels or types

- Integrating and combining the financial, management, engineering, and operational perspectives within the decision making process
- Gaining leadership’s support throughout the period of AM implementation, which may last for a long period of time
- Defining performance measure programs that reflect public perspectives and effective user costs

AM is the combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost effective manner. Thus, performance measurement and management are critical components of an effective Transportation AM system.

AM may therefore come across as a general concept or with a certain cast. DOT managers and staff in field offices may perceive it differently from those in the central office, and different organizational units may associate it more with their particular activities rather than the broader picture that AM tries to address. Vagueness and possible misconceptions of AM can be countered with an effective communication program. Such a program can not only de-mystify AM and eliminate confusion as to how it relates to other departmental initiatives, but more importantly it can help departmental units and organizational levels understand how AM influences and can improve the effectiveness of their daily work. For more information contact: **Imad Aleithawe at (601) 359 7645 or email to: ialeithawe@mdot.ms.gov**

Calendar of Events		
November 12-15, 2012	Southeastern Asphalt User/Producer Group (SEAUPG) Annual Meeting http://www.seaupg.org/events-current.shtml	Hilton Head Island, SC
November 15-19, 2012	American Association of State Highway and Transportation Officials (AASHTO) Annual Meeting http://www.cvent.com/events/2012-aashto-annual-meeting/event-summary-13e860b8efa84f0796a3ce3c28105114.aspx	Pittsburgh, PA
January 13-17, 2013	Transportation Research Board (TRB) http://www.trb.org/annualmeeting2013/annualmeeting2013.aspx	Washington, D.C.



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