



PlanWorks Case Study

Collaboration in Performance Measures and Target Setting Missouri DOT and Mid-America Regional Council

The development of performance measures and setting targets represents an excellent example of collaboration between a state DOT and MPO. While Missouri DOT and MARC did not use PlanWorks for this purpose, the PlanWorks Performance Measures Application will be very useful in helping other agencies interested in this approach.

Executive Summary

Missouri DOT (MoDOT) has a strong history of performance management as well as robust and effective coordination with its planning partners (MPOs and RPCs). Ongoing communication and collaboration with partner MPOs, neighboring States, and Federal agencies in advance of the MAP-21 performance measure and target setting requirements have helped reduce institutional and administrative barriers and prepared local agencies to decide whether to support State targets or develop their own.

The agency's commitment to this approach is demonstrated by its use of the Tracker, a performance tracking and reporting framework that has driven decision-making since 2005. To further streamline data sharing with planning partners, MoDOT released the Transportation Management System (TMS) Data Zone, a new data-sharing website. Although MoDOT previously shared their TMS data with partners, the system required considerable database querying skill. The new site has user-friendly analysis tools and filter options for data and performance measures so planning partners can build a report using the data to support required selection and reporting of MAP-21 performance targets and metrics for the State's MPOs.

In addition to data sharing, MoDOT has taken steps to support interagency and cross-jurisdictional coordination in advance of the MAP-21 reporting deadlines. MoDOT initially created a website in November 2012 to share MAP-21 information with MPOs. During MoDOT's annual statewide partners meeting in February 2015, bi-state MPOs expressed concern on how to coordinate with multiple neighboring State DOTs in relation to performance measures and target setting. As a result, MoDOT started monthly partner collaboration webinars that are attended by the MPOs, neighboring State DOTs, FHWA and FTA divisions, and regional planning commissions (RPCs).

Project Snapshot

- MoDOT's performance management and data sharing experience allows the agency to support its partner MPOs in the MAP-21 performance reporting requirements.
- MoDOT's Tracker, a cross-cutting performance management tool, and TMS Data Zone, a user-friendly public data sharing website hosted by MoDOT, are tools that support the commitment to performance management.
- Other steps that support collaborative performance management are interagency and cross-jurisdictional performance measure and target-setting meetings, workshops, and webinars.
- Seven Regional Safety Coalitions develop safety strategies in support of MoDOT's Strategic Highway Safety Plan; this assists MPOs to adopt targets appropriate for their regions.

MoDOT has a lengthy history of coordinating with its MPOs for State and local safety initiatives. In partnership with FHWA and NHSTA, the agency piloted the Missouri Safety Target Setting Coordination Workshop in 2016 that brought together regional, State, and Federal stakeholders in order to facilitate this process. In the fall of 2016, MoDOT proposed a process for coordinating on safety targets where MoDOT will provide data on local and statewide safety trends with the intent to help MPOs understand and coordinate on assumptions behind the safety targets. Through the monthly partner collaboration webinars, neighboring State DOTs shared their approach to target setting, which ensured the bi-State MPOs have what they needed to develop targets. MARC, whose jurisdiction encompasses portions of Missouri and Kansas, report these activities resulted in increased readiness to implement the MAP-21 transportation performance management requirements.

MoDOT's Strategic Highway Safety Plan, or Missouri Blueprint, provides another example of safety collaboration. To help reach the Blueprint target, Missouri established seven Regional Safety Coalitions in 2005. The Mid-America Regional Council's (MARC) Destination Safe Coalition is one of these coalitions and develops approaches fitted to local context. These Regional Safety Coalitions decide which safety strategies to apply in their region to achieve the best results and may also be involved in target setting. By involving MPOs right after the passage of MAP-21, MoDOT has made sure that its MPOs are fully prepared to choose whether to use the MoDOT targets for MAP-21 or to develop their own targets using resources like the TMS Data Zone.

Missouri DOT's Culture of Performance Management

In the early-2000s, MoDOT developed the Tracker tool to measure statewide outcomes around seven Tangible Results in focus areas like safety; project budgets and timelines; and the preservation and maintenance of the State's transportation resources. MoDOT's mission and value statements form the basis for these Tangible Results, which are the outcomes expected by Missouri's transportation system users. Each of the Tracker's Tangible Results is assigned to a specific senior leader who is tasked with reporting on overall progress at quarterly statewide Tracker meetings. In turn, each

Decision Guide Connections

While MoDOT did not use the PlanWorks Decision Guide during the collaborative performance measure and target setting processes highlighted in this case study, the agency's actions illustrate how the following PlanWorks key decision points can be successfully applied:

- **LRP-1.** MoDOT works with planning partners to identify Missouri citizen driven goals and objectives, along with data, trends, local needs, funding and policies inform its long-range planning at the State and local level. These activities also influence long-range planning at the regional level. For example, MoDOT's TMS Data Zone provides MPO access to statewide performance data that supports required performance target setting and reporting.
- **LRP-2.** Through webinars, meetings and workshops like MoDOT's statewide annual planning partner meeting, State and local stakeholders come to a shared understanding of goals and objectives; these agreements influence State and MPO long-range planning and performance management activities.
- **LRP-3.** MoDOT and its partner MPOs select performance metrics for MAP-21 reporting and for local and State planning activities through efforts like Missouri's seven Regional Safety Coalitions; these metrics support regional decision making.
- **PRO-4.** Projects are prioritized for STIP and TIP investments according to the needs of MoDOT's local planning partners. Using the performance data in its Tracker tool, MoDOT was able to pinpoint areas underperforming in safety and invest in appropriate countermeasures.

of the underlying metrics is assigned to a single staff person who reports on progress at the quarterly meetings and is charged with collecting the relevant data and meeting the specific measurement's objective. Performance is also benchmarked, where applicable, against other State DOTs and against the private

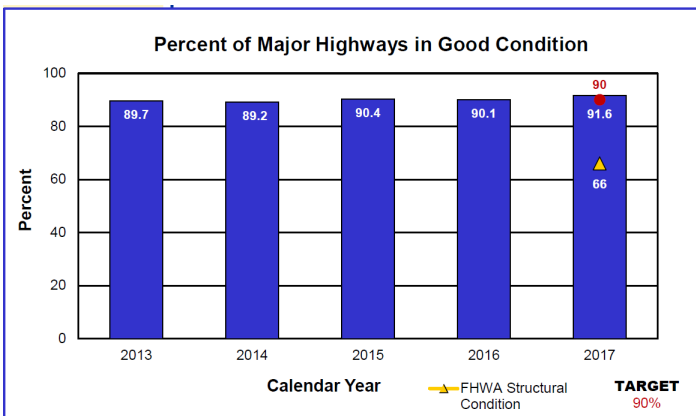


Figure 1: Percent of Major Highways in Good Condition report from MoDOT's October 2018 Tracker.

sector. Performance across these Tangible Results is even tied back to employee reviews.

The quarterly Tracker publications and meetings allow for continuous monitoring of progress and ensure staff and agency accountability and transparency at a granular level. To keep performance measures on track, senior leaders may put together a quick-action team of cross-functional staff to brainstorm improvement strategies or conduct a root-cause analysis to understand why a measure is declining and what can be done to influence the trend. For example, the State's highway safety record recently began declining. Using its performance data, MoDOT was able to pinpoint specific target areas and invest in engineering countermeasures like rumble strips that produced the greatest safety returns.

Through ongoing iteration, the performance management approach embodied in the Tracker has become a part of the agency's culture. Since the Tracker was implemented, the percent of major highways in good condition has increased from 61 percent in 2005 to 91.6 percent in 2017 (Figure 1 provides results for this performance measure from the five most recently available years). The accountability and flexibility of this approach has helped to ensure efficient and effective decision-making and gives MoDOT the ability to adapt with changing administrations, policies, and priorities. The agency's experience with the Tracker and its agency-wide approach to performance management provides a solid foundation for this target setting.

Data Sharing

To foster data-driven decision-making and prepare

MPOs for the MAP-21 target setting, MoDOT recently updated its statewide transportation database. This database, called the Transportation Management System (TMS), was originally created in the late-1990s. Although the original TMS database was accessible to MoDOT's partners, the platform required considerable technical skills in query and report writing and MoDOT staff were frequently required to help MPOs understand how to access the desired data. From this original interface, TMS has evolved to include not only applications and mapping tools to support roadways and bridges, but also those that support travelers, such as the Traveler Information Map that alerts the public to travel impacts from work zones, crashes, weather events, and other incidents. All TMS data use an integrated location referencing system and are available for GIS mapping.

In 2016, MoDOT started the TMS Data Zone project — a web-based tool to make it easy for planning partners to access data from TMS (Figure 2). The tool consists of a series of web pages containing maps, pre-defined data summaries, and other tools. MoDOT has always shared data with its planning partners, but the TMS Data Zone makes data sharing significantly easier. The data for each MPO and RPC is available for its performance-based planning and programming needs and includes Missouri Highway Patrol's safety and public roads data as well as MoDOT inventories on pavement condition, congestion and other indicators that support trend reporting and target setting for some of the MAP-21 performance measures. This data can also be used to support additional performance-based planning and programming activities at the planning partner level.

Interagency and Cross-Jurisdictional Coordination on MAP-21 Performance Measures and Targets

When MAP-21 passed in 2012, MoDOT developed a website to help MPOs understand the new requirements and review comments on the new Federal regulations on performance measures. Additionally, MoDOT communicated notices of proposed rulemakings and other resources by email, phone call, and during MoDOT's statewide annual planning partner meeting. In response to bistate MPOs' concerns on how to coordinate with multiple State DOTs, MoDOT initiated monthly partner collaboration webinars

in March 2015 to engage all of the department's planning partners. These include: MPOs; RPCs; staff from FHWA, FTA and NHTSA divisions; and the State DOTs from the neighboring States of Arkansas, Kansas, and Illinois. During these webinars, MPOs suggest agenda topics and share noteworthy practices. MoDOT facilitates these webinars by creating an agenda and showing the presentations from the MPOs, subject matter experts within MoDOT, and other State DOTs as they explain their processes. MoDOT also shares the FHWA/FTA/NHTSA resources, tools, websites, webinars, and training opportunities. Due to this multi-year ongoing conversation, the MPOs and the State DOTs now have a better understanding of what each agency is doing and how they can coordinate their efforts to set the Federally-required performance targets.

Coordination on State and Regional Safety Initiatives and Target Setting

MoDOT's strategic highway safety plan, called Missouri's Blueprint – A Partnership Toward Zero Deaths has been a coordinated effort involving statewide partners for more than 10 years. A 30-person, cross-disciplinary team including law enforcement, emergency responders, MPOs, RPCs, FHWA, NHTSA, and university representatives revises the Blueprint every four years. In the yearlong Blueprint revision process, this team analyzes the trends in safety data including forecasts of VMT, funding, engineering countermeasures, education, outreach and policy directives. Following this analysis, they evaluate how to influence those trends and establish strategies to move those trends in the right direction. The team determines a four-year target based on the expected influence of those trends and other variables. To help reach the Blueprint target, Missouri established seven Regional Safety Coalitions throughout the State in 2005. These regional coalitions decide which safety strategies to apply in their region to achieve the best results and may consider safety targets.

Mid-America Regional Council (MARC), the MPO for the bistate Kansas City region, leads the Destination Safe Coalition. The Destination Safe Coalition unites Federal, State, regional and local agencies to improve safety outcomes by addressing the specific needs of the 13-county bi-state region. Coalition partners include traffic and safety engineers from the two State



Figure 2. TMS Data Zone's user interface provides easy access to State and local transportation data.

DOTs, and transportation planners from MARC and the Pioneer Trails Regional Planning Commission, a neighboring RPC. MoDOT played an important role in helping MARC convene this coalition that MARC subsequently led. MARC staff reports this collaborative decision-making body has been an integral part of their transportation planning process since it was first convened, helping regional stakeholders develop common agreements about assumptions and priorities. The Coalition has also provided a platform to bring nontraditional stakeholders into the planning process.

The Destination Safe Coalition has helped the region bridge various institutional and administrative divisions to improve safety outcomes for the region, helping achieve the broader goals of the Blueprint while informing MPO decision-making both for the MAP-21 safety target setting and for local planning activities. For example, MARC used performance data to conduct a cost-benefit analysis comparing different types of projects against their shares of funding. While MARC found bicycle and pedestrian investments underperformed in meeting the region's congestion management and air quality goals, MARC used safety data and the goals developed in the Destination Safe Coalition as a counterweight in evaluating bike/ped outcomes and impacts. From this enhanced evaluation, MARC decided to maintain a fixed allocation of Congestion Mitigation and Air Quality (CMAQ) program funds for bike/pedestrian investments because of the combined benefits to safety, congestion mitigation, and air quality (regional goals).

Missouri Safety Target Setting Coordination Workshop

In 2016, MoDOT partnered with FHWA and NHTSA to pilot the Missouri Safety Target Setting Coordination Workshop. In addition to MoDOT, FHWA, and NHTSA

staff, participants at this workshop included partner MPOs. Missouri's highway safety division is part of the State DOT, so the MoDOT behavioral and engineering staff attended the meeting along with planning staff. This helped educate everyone on the safety data and safety requirements, the display of the data (statewide as well as MPO-by-MPO), safety analysis, performance measure requirements, and target-setting requirements.

In the fall of 2016, MoDOT used one of their monthly partner collaboration webinars to discuss a draft process for safety target setting coordination with MPOs that built upon the outcomes of the workshop. In March 2017, prior to the webinar, MoDOT shared a statewide safety data spreadsheet showing the last 10 years of data and the trend line for the next five years. For each of the five required safety measures, the spreadsheet provided statewide and MPO-specific data and graphs. Participants on the call discussed the assumptions made (e.g., VMT, fatality/serious injury reduction rate, policy issues, funding) and what effect these assumptions might have on the statewide safety targets. The additional safety target setting coordination process is outlined below:

- MoDOT solicited feedback on the target setting assumptions from planning partners.
- MoDOT and MPOs finalized assumptions to use for safety targets during the monthly partner collaboration webinar.
- MoDOT applied final assumptions to the safety data for each of the five required safety performance measures and submitted these to FHWA and NHTSA. MoDOT shared targets with planning partners through email and the monthly partner collaboration webinar.

By involving MPOs early in the process, MoDOT ensured the MPOs are fully prepared to choose whether to support statewide targets or establish their own. Through the monthly partner collaboration webinars, neighboring State DOTs shared their approach to target setting, which ensured the bi-State MPOs have what they needed to develop targets. For example, MARC, whose jurisdiction encompasses portions of Missouri and Kansas, report that these activities resulted in increased readiness to implement

the MAP-21 transportation performance management requirements.

Selection of MPO Performance Metrics and Targets

MoDOT's performance management focus has served as a model for the State's MPOs. MARC, for example, reports on 30 performance trends. When the MPO releases a performance report, they share the findings with their planning and programming committees. Underperforming areas are highlighted in these reports, and these findings are taken into account as sub-allocated funds are prioritized for both long-range planning and programming activities.

MoDOT's robust performance management framework, TMS data sharing portal, and its interagency and cross-jurisdictional coordination activities in advance of the MAP-21 reporting deadlines have prepared the State's MPOs to select performance metrics and targets. Ultimately, MARC and a few of the State's other MPOs decided to set their own regional safety targets, demonstrating considerable levels of local engagement. MARC, for example, collaborated closely with the region's transit providers to establish transit performance targets. MARC reports that these shared measures increase transparency and break agency siloes, while also helping to improve coordination and communication.

Stakeholder Collaboration

MoDOT's decades-long history of allowing local agencies to identify and prioritize projects through collaboration has resulted in strong relationships, improving the ability to solve shared challenges, including the required MAP-21 performance measures and target setting. Activities facilitated by MoDOT that have bolstered collaboration among regional, State, and Federal stakeholders include:

- The creation of a MAP-21 collaboration website, monthly partner collaboration webinars, and other communication strategies to help MPOs understand the new MAP-21 requirements.
- The development of the TMS Data Zone website that provides easily accessible data on safety and other areas to support MPO performance measures and target setting.

- Support of a series of interagency and cross-jurisdictional performance measure and target-setting meetings and workshops, especially around safety; these include statewide collaboration around MoDOT's SHSP and support for the State's seven Regional Safety Councils like the Destination Safe Coalition that bring stakeholder collaboration around safety to the regional and local levels.

Key Outcomes

MoDOT's performance management experience, extensive data-sharing, and robust engagement activities with planning partners in advance of the MAP-21 reporting deadlines have resulted in a number of key outcomes:

- MoDOT's Tracker tool has resulted in a host of tangible benefits; since implementing this tool the State has seen a 26 percent drop in highway fatalities and a 31 percent increase in the percentage of highway in good condition.

- MoDOT's history of collaborating with its MPOs for the SHSP, support of the Regional Safety Councils, and the Missouri Safety Target Setting Coordination Workshop have provided a solid foundation for local safety target setting.
- Ongoing communication and collaboration with partner MPOs, neighboring States, and Federal agencies in advance of the MAP-21 performance measure and target setting requirements have helped reduce institutional and administrative barriers and prepared local agencies to decide whether to support State targets or develop their own. Agencies like MARC, who have built a network of local partnerships with State support, have chosen to pursue their own safety targets, demonstrating considerable engagement with the performance measures and metrics.

For more information

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Resources

- **MoDOT Tracker:** <https://www.modot.org/tracker>
- **MoDOT Collaboration Best Practice** (one-page flyer): <http://www.fhwa.dot.gov/tpm/noteworthy/mo.pdf>
- **MoDOT Blueprint (SHSP) collaboration and coalitions:** <http://savemolives.com/>
- **MoDOT Tracker** (one-page flyer): <http://www.fhwa.dot.gov/tpm/noteworthy/mo2013.pdf>
- **TMS Data Zone website:** <http://datazone.modot.org/>