Wisconsin Department of Transportation
Wisconsin Highway Research Program Project Management
Lean Summary Report

Project Summary

The Wisconsin Department of Transportation's (WisDOT) Research and Library Services Unit is responsible for administering the Wisconsin Highway Research Program (WHRP). WHRP focuses on four main technical areas of research: structures, flexible pavements, rigid pavements and geotechnics. Currently, the program takes too long to deliver research projects and has too many projects going over their established timeframes. The goal of this project is to be able to disseminate and implement project results earlier to ensure that the research is still relevant to the department. This can be done by decreasing the number of end date extensions granted to WHRP research projects, decreasing the average duration of project end date extensions and decreasing the rate of end date extensions.

Improvements

- Created a policy that project oversight committees should identify field sites prior to the project start date
- Have the Research and Library Services Unit be responsible for the creation of the final hardcopy reports for projects to allow for a shorter close-out process
- Create a project management database that allows major project stakeholders to see project statuses and milestones

MAPSS Core Goal Areas

- Accountability
- Service

Statewide Goal Areas

- Reduce the cost of government
- Change government work culture

Issue

Between federal fiscal years 2009-2015, WHRP research projects were on average completed 1.25 years after their initial end dates, causing research results to be disseminated later than desired and implementation plans based on the research findings being developed too late, if at all. There have been numerous examples of WHRP research projects that have exceeded the expected end dates. Since FFY 2009, 60 no-cost time extensions (NCTEs) have been issued on 34 completed projects and 14 NCTEs have been issued on eight projects in progress as of March 2017. On average, there are 1.76 NCTEs per project. The impact of these extended timelines is dated research results, increased research program management costs and delays in the implementation of the research findings. The Federal Highway Administration, which oversees the State Planning and Research funds used for WHRP projects, recently issued new guidance regarding end date policies. Going forward, research projects using this funding will be under closer scrutiny for adherence to project end dates.

Lean Six Sigma Process

Research and Library Services Unit staff within the Office of Policy, Finance and Improvement participated in multiple team meetings to:

- Create SIPOC diagrams for the project selection process and the project management process
- Create a process map of the research cycle to identify any time traps
- Create a process map of the current and future states of the project close-out process
- Collect data and statistically analyze the causes of end date extensions for a sample dating back to federal fiscal year 2009
- Identify root causes and develop solutions to overcome the causes of end date extensions

Results

An improvement plan is being implemented by the Research and Library Services Unit to control for the close-out process duration, the creation of a new project management database, and a new policy to identify field sites for a research project prior to the project's start date. A control plan includes performance metrics to continuously validate these changes as actual improvements. Since end date extension requests are infrequent, observable results are expected at the end of federal fiscal year 2019.

Next Steps

The Research and Library Services Unit will continue to collect data on the causes and frequency of end date extensions for research projects in order to identify any new trends and add information to the data set. Staff will also follow the control plan and review data on an annual basis to ensure that improvements are made.