Wisconsin Department of Transportation

State Trunk Network Data Collection
Lean Summary Report

Project Summary

The Bureau of State Highway Programs (BSHP) had no streamlined methods to identify construction projects that require attribute updates to the State Trunk Network (STN). This could lead to delays in data collection of other federally and state required data. BSHP was new to this process because the work was previously being done by Division of Transportation System Development (DTSD) regions. Multiple methods of identifying projects made the process long and involved manual steps. Due to these different methodologies and the short timeframe to collect data after construction was complete, data was not consistently identified and collected. These inconsistencies led to backlogs of field data collection.

Historically, the identification process for 5 DTSD regions averaged 400 hours of staff time each year. Moving these duties to DTIM, decreased staff time to 120 hours. The goal of this project was to further reduce staff hours spent to identify projects and their completion dates to repurpose hours to other projects and duties.

Improvements

- Reduced staff time to identify construction projects
- Identified steps to streamline and improve efficiencies while reducing staff time to ID finished projects.
- Reduced manual process steps
- Reduced process lead time
- Produced more consistent data

MAPSS Core Goal Area

- Accountability
- Service

Statewide Goal Area

- Customer satisfaction
- Cost of Government

The Division of Transportation Investment Management (DTIM) works extensively with State Trunk Network (STN) data to collect physical road attributes and update data in the STN log and on the mainframe. The STN collection process begins with identifying specific construction projects that require attribute updates. Once construction has been identified and completed, field staff drive the project area and collect attributes. Data is then checked for accuracy and uploaded to the mainframe. A few items warranting this collection are: changes to geometry of existing roadway, changes in the median, additional lane(s), change in shoulder type/width, roundabout attributes and to inventory bridge location and length. In the past, this process had been a DTSD region responsibility until transfer of duties to DTIM. This transfer of duties allows for a faster response to changes in federal requirements and for a faster response to statewide collection needs.

Lean Six Sigma Process

- Identified key issues and concerns from the WisDOT business areas
- Identified the lack of a formalized process as a key factor to the time it takes to identify and collect attribute data
- Mapped a value stream to identify redundant processes and potential process improvements

Results

Annual time spent identifying projects at the DTIM Central Office was reduced by 66% (from 120 hours to 40 hours) with the help of FIIPS (Financial Integrated Improvement Programming System) data.

The use of automated, monthly Construction Finals reports reduced the number of manual steps. Five manual steps on average which included calls and/or emails to Project Managers where reduced to 1 with the use of the reports. This monthly report provided by DTSD with completed projects virtually eliminates these calls and the time spent from 200 hours to 50 hours. This is a time savings of 75%.

Lead time was reduced from 25 days to 14 days showing a 44% reduction.

Finally, data accuracy was improved. Previous methods may not have allowed for a complete list of projects and completion dates. By updating the methods and tools used to identify projects and completion dates it ensures more consistent and accurate data is produced for all stakeholders.

Next Steps

The Data Management Section will continue to reach out to DTSD to make changes to the STN collection identification process. One step currently underway is participation in a Light Detection and Ranging (LIDAR) study that may benefit not only BSHP but the department. We are also working with BITS to establish a more user-friendly interface to improve collection time.

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