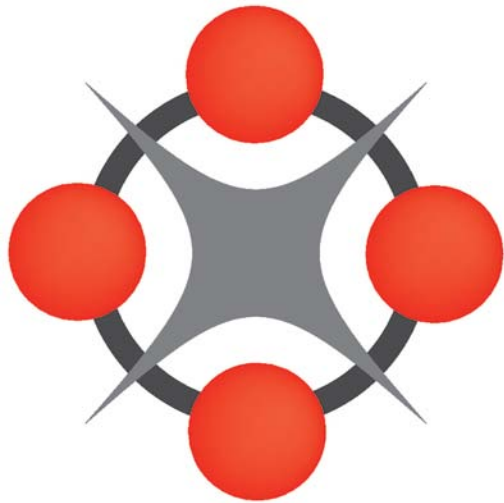# Evaluating Compass Maintenance Quality Assurance and Asset Management Program

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Emil Juni
Teresa M. Adams
CFIRE - University of Wisconsin-Madison

National Center for Freight & Infrastructure Research & Education

Overview

- Compass History
- Compass Data
- Compass Report
- Performance Measures in Compass
- Compass Improvement
- Summary

Compass History

- Compass – Asset management and MQA program at WisDOT
  - Pilot
  - Statewide implementation (highway features only: drainage, roadsides, shoulders, traffic and safety devices)
  - Adding other types of transportation assets throughout the years (pavement distress, sign, bridges, winter maintenance)

Compass Data

- Data collected from different sources
  - HSIS for bridges (NBI ratings, routine/periodic inspection, suggested maintenance)
  - SIMS for signs (service life, years beyond)
  - PMMS for pavement (pavement distress)
  - Sample data for highway features (backlog percentage, threshold set for each feature)
  - HMS for expense data (maintenance expenditures)
  - Target measures set annually by WisDOT Maintenance Supervisors and Operations Managers
- Reduce, analyze, and report

Compass Report

- Contribution Category
  - Critical Safety (centerline, hazardous debris)
  - Safety (fences, markings)
  - Ride/Comfort (cross slope, potholes)
  - Stewardship (culverts, ditches)
  - Aesthetics (litter)
- Maintenance Report Card
  - Define condition thresholds: assign grades A-F
- Five-year condition trends

Performance Measures in Compass

- Using historical and trend data to improve Compass

- Monitor the performance of the program by looking at lagging and leading measures
  - Lagging: Allow the program to be reactive to the results and adjust maintenance plans accordingly
  - Leading: Track performance and envision future plans and potential problems

Performance Measures

- Leading vs. Lagging Measures
  - Leading – tells you where the performance is going
  - Lagging – tells you where it has been
- Compass Leading - Lagging Measures
  - Lagging
    - Expenditures
    - Backlog percentage
    - Target values
  - Leading
    - Deficiency level
    - Maintenance needs
    - Maintenance schedule
    - Funding level

Performance Measures

- Lagging
  - Expenditures
    - Constrained by budget
    - Controlled by allocation/distribution (policy/needs)
  - Condition
    - Maintenance backlog, years beyond service life, time to bare wet, pavement distress
  - Target values
    - Constrained by policy/budget availability

Performance Measures

- Leading
  - Deficiency level
    - Current condition level
  - Maintenance level and funding needs
    - Estimate the amount of fund needed to maintain a certain level of service

Compass Improvement

- Making changes/improvement based on feedback from lagging/leading measures
  - Reactive
    - Improve report
  - Proactive
    - Revise sampling method

Summary

- Utilization of performance management methods has been essential in Compass improvement/growth

- Keep up to date, make necessary adjustment to adapt to the situation

- Always consider potential future assessment/update