# Pavement Management Systems Peer Exchange Program

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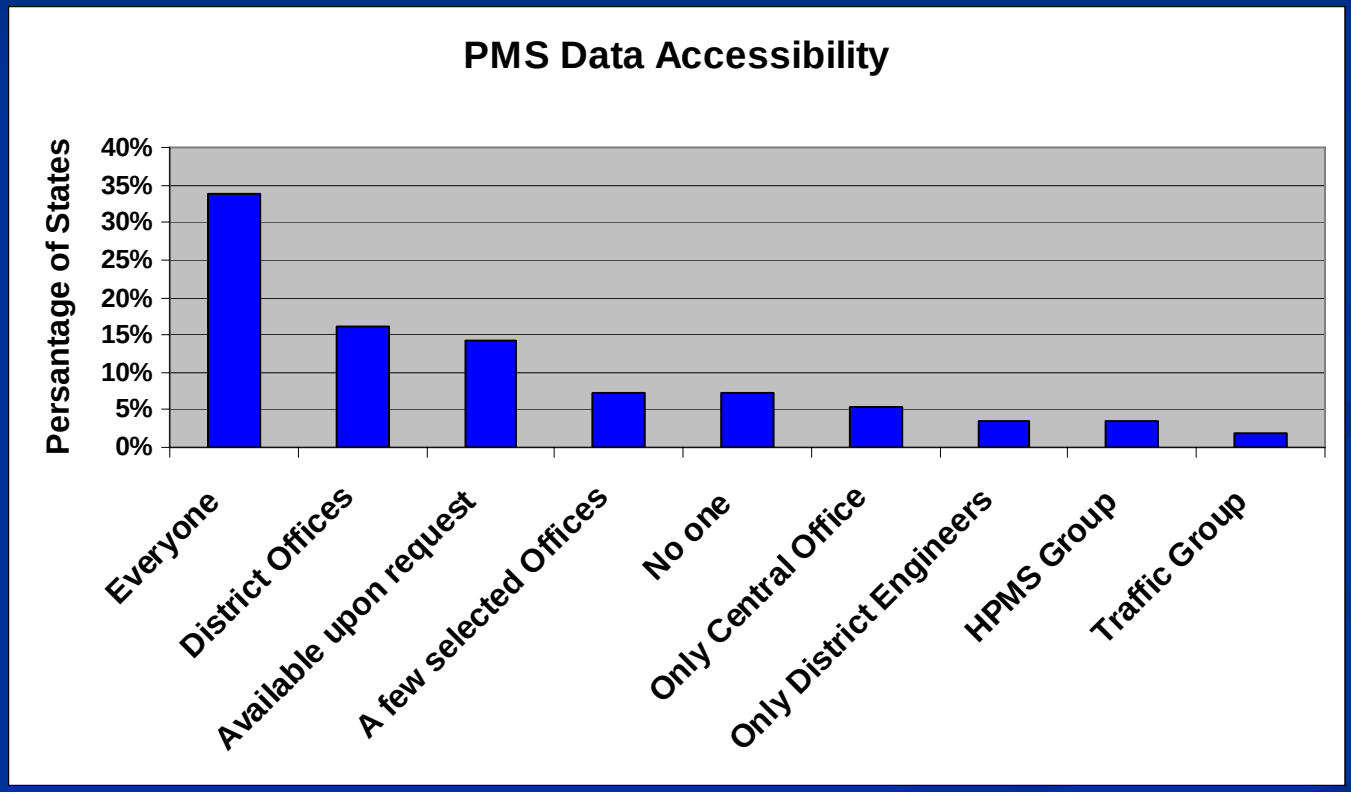
# Background

- The Peer Exchange Program was funded as a result of the 2006 PMS Questionnaire
- 15 respondents are/would be upgrading or replacing their software
- 6 States do not use PMS for Project Selection
- 9 States use “Worst First” approach
- Communication and PMS data accessibility is an issue

# PMS Data Accessibility



# Peer Exchange Program

- The intent was to exchange ideas and share current practices such as:
  - Data collection and analysis activities
  - Decision making process
  - PMS Link with Maintenance
  - PMS Link with and Planning & Programming
  - Strategies for communicating pavement management information throughout the agency

# Peer Exchange Program Participants

- Mn/DOT and UDOT were selected as the host agencies due to the maturity of their pavement management practices.
- Other factors
  - Differences in Pavement Management Software
  - Commitment to Pavement Preservation
  - Links to Maintenance and Planning & Programming

# Peer Exchange Program Participants

- NYSDOT
  - Prepared a draft work plan in May 2007 for enhancing their existing PMS
  - Submit Proposal for funding/project approval
  - Developed RFP documents

- CALTRANS
  - An agreement in place to implement a commercial software.
  - Moving forward with data collection contracts
  - Expect to secure funding in 2008

# Minnesota DOT

- The Pavement Management Unit is located within the Office of Materials of the Engineering Services Division
- Mn/DOT stores its roadway data in a mainframe database (TIS) for use by the entire agency
- The PMS software uses TIS to access pavement data
- Mn/DOT provides data collection services to counties on a contract basis

# Minnesota DOT
# PMS & Planning and Programming

- Strong link between pavement management and the long-range planning
- *Optimize the use of funding for long-range planning*
- Investment levels to achieve performance targets is based on PMS network level analysis

# Minnesota DOT
# PMS & Planning and Programming

- Mn/DOT is a decentralized State with Districts having a significant power over the project selection
- District plan was an effort to develop more consistency in the Department's planning and districts activities
- The PMS group must agree that projects funded are good candidates for the pavement preservation treatments

# Minnesota DOT
# PMS & Maintenance

- PMS team has no electronic access to maintenance activities
- Most preventive maintenance work is conducted under contract
- PMS Team identifies where maintenance improvements have been made using pavement deterioration models for each section
- MN/DOT has developed decision trees for its preventative maintenance program

# Utah DOT

- A leader in promoting pavement management concepts – published the study "*Good Roads Cost Less*" in 1977
- Pavement management is housed within the Division of Asset Management
- PMS optimization analysis is the primary source of pavement management recommendations

# Utah DOT
# PMS & Maintenance

- Strong link with maintenance with focus on pavement preservation in recent years
- The Deputy Engineer for Maintenance served as the Pavement Management Engineer
- A steering committee comprised of PMS staff from the central office and the Region PMS Engineers was involved in the original development of the treatment rules

# Utah DOT
# PMS & Maintenance

- Pavement condition data for the state highway system is collected by both the central office and the Regions
- Maintenance sets a level of maintenance (LOM) for reporting the performance of UDOT's roadway appurtenances
- The LOM for pavement activities is linked to the pavement management system through the Overall Condition Index

# Utah DOT
# PMS & Maintenance

- To help aid the buy-in of Region
  - Offers 1-day training sessions
  - Conducts field visits with Region personnel to review treatment recommendations
  - Involved the Regions in the refinements to the pavement management models.

# Utah DOT
# PMS & Planning and Programming

- PMS information is used to develop a 20-year program, divided into two10-year programs for long-term planning.

- The Asset Management Division makes regular presentations to the Transportation Commission to convey
  - the impact of cost increases on the program
  - current and projected network conditions
  - funding needs to achieve performance targets

# Key Factors contributing to the success of Pavement Management Program

- Strong support from upper management
- Consistency in the pavement management personnel operating the system
- Mn/DOT has approximately 30 users of the PMS software
- UDOT, Pavement Management Engineers are located in each of the four Region offices
- The use of quality data to provide reliable information

# Key Factors contributing to the success of pavement management Program

- A strong relationship with the software providers
- A commitment to pavement management concepts throughout the organization
- The involvement of pavement management stakeholders in decisions regarding changes to the analysis models
- The use of software tools that are flexible enough to adapt to the changing environment in which they must operate.

# Achievements

- Both agencies have better information to support the decision processes due to the availability of reliable data
- Mn/DOT has changed to an organization that places system preservation as a priority
- Mn/DOT is able to demonstrate the amount of road deterioration under various levels of budget cuts
- Using pavement management as a model, UDOT improved their ability to analyze current and future bridge needs

# Achievements

- Economic and engineering analyses are supported through the availability of field data to evaluate treatment performance.
- Pavement management has been able to provide useful information to Region and District Engineers responsible for project and treatment selection decisions.
- On a day-to-day basis, the PMS has enabled these agencies to more efficiently sort through the pavement data to determine candidate projects.

# Contact Information

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