Pavement Management Roadmap

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Project Team

- FHWA sponsored project
- Project Team
  - APTech
  - SAIC
  - NCPP
  - Technical Panel
  - Workshop Participants
Background

• Over the past decade…
  – Advances in technology
  – Increased emphasis on managing assets
  – Reduced funding/purchasing power
  – Deteriorating network conditions
  – Shifting focus from expansion to preservation

• Roles of Pavement Management
  – Past: condition assessment, investment prioritization, and funding estimation
  – Present: asset management, strategic performance
Roadmap Objectives

- Address pavement management gaps
- Guide new research and workforce initiatives

Identify short- and long-term goals
Identify research development
Identify technology transfer needs
Project Summary

• Review literature
• Conduct regional workshops
• Summarize gaps and identify needs
• Prioritize needs statements
• Finalize and promote roadmap
Literature Review

- Identify state of the practice, current research initiatives and topics of concern
- Compile into 10 key focus areas
Focus Areas 1 - 5

1. Data collection techniques, equipment, and emerging needs
2. Data quality
3. Data storage integration
4. Performance modeling
5. Treatment selection
Focus Areas 6 - 10

6. Use of pavement management in the decision process
7. Changing needs and emerging technology in data collection and analysis
8. Quantifying the benefits of pavement management
9. Integrating pavement preservation and pavement management strategies
10. Institutional issues and other factors influencing the use of pavement management
Regional Workshops

• Stakeholder involvement
• Number invited: 154
• Number attended: 88
  – 31 SHA
  – 14 FHWA
  – 7 Local agencies
  – 13 Private contractors
  – 6 Academia
  – 7 Team members
Needs Identified

- Total needs statements generated: 242
- Final number included in Roadmap: 47
- Themes
  1. Existing technology and tools
  2. Institutional and organizational issues
  3. Role of pavement management
  4. New tools, methodologies, and technology
Focus Area Needs Topics

• Focus Area 9: Pavement Preservation
  – Integration of preservation treatments
  – Appropriate intervention levels
  – Costs and benefits of preventive maintenance
  – Impact of preventive maintenance on performance
  – Promoting pavement preservation
  – Effective performance measures for pavement preservation treatments
Pavement Preservation Needs Statements

• Short-Term Needs
  – Comprehensive study to guide the integration of pavement preservation and pavement management (1)
  – Developing guidelines for the communication of pavement management information and benefits (2)
  – Development and use of effective performance measures (3)

• Long-Term Needs
  – Methods of defining and calculating the effect of pavement preservation treatments on pavement life (1)
Prioritization Process

- Draft Roadmap Created
- Webinar
Prioritization Process

- Participants asked to rate and rank needs/themes
- Values are used to determine a weighted average for each need
- Calculated values used to establish priorities
Next Steps

• Finalize Roadmap
  – Insert prioritized short- and long-term needs
  – Add research problem statements for each need
  – Establish a recommended plan

• Promote the Roadmap
  – TRB and AASHTO Committees
  – Conferences
Thank You!

providing engineering solutions to improve pavement performance