Summary of Responses to State Pavement Management Systems Questionnaire

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U.S. Department of Transportation
Federal Highway Administration
Background

- Questionnaire was sent out in December 2006
- Responses received from 51 Division Offices
- No comparisons between States were made
## Division Offices & Their Involvement With PMS

<table>
<thead>
<tr>
<th>Number of Division Offices</th>
<th>Level of involvement ( % FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2% &lt;= FTE</td>
</tr>
<tr>
<td>16</td>
<td>2% &gt;FTE&gt;= 5%</td>
</tr>
<tr>
<td>16</td>
<td>5% &gt;FTE&gt;= 10%</td>
</tr>
<tr>
<td>5</td>
<td>10% &gt;FTE&gt;= 15%</td>
</tr>
<tr>
<td>3</td>
<td>15% &gt;FTE&gt;= 25%</td>
</tr>
<tr>
<td>0</td>
<td>25% &gt;FTE&gt;= 50%</td>
</tr>
<tr>
<td>2</td>
<td>50% &gt;FTE&gt;= 75%</td>
</tr>
<tr>
<td>1</td>
<td>75% &gt;FTE&gt;= 100%</td>
</tr>
<tr>
<td>Number of DOTs</td>
<td>Number of Staff</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>0 = Number of Staff</td>
</tr>
<tr>
<td>5</td>
<td>2 &lt;= Number of Staff</td>
</tr>
<tr>
<td>15</td>
<td>2 &gt; Number of Staff &gt;=5</td>
</tr>
<tr>
<td>11</td>
<td>5 &gt; Number of Staff &gt;=10</td>
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<tr>
<td>8</td>
<td>10 &gt; Number of Staff &gt;=15</td>
</tr>
<tr>
<td>2</td>
<td>15 &gt; Number of Staff &gt;=20</td>
</tr>
<tr>
<td>2</td>
<td>20 &gt; FTE</td>
</tr>
</tbody>
</table>
PMS Data Accessibility

PMS Data Accessibility

Percentage of States

- Everyone
- District Offices
- Available upon request
- A few selected Offices
- No one
- Only Central Office
- Only District Engineers
- HPMS Group
- Traffic Group

0%
5%
10%
15%
20%
25%
30%
35%
40%
Inclusion of Essential Data in PMS

Construction date
Construction type
Rehabilitation date
Rehabilitation type
Materials data
Preventive maintenance date
Preventive maintenance type
Traffic volume AADT
Truck volume AADTT
Truck loadings

Percentage of States

Yes
No
No answer
Treatments Included in PMS

- Reconstruction
- Rehabilitation
- Preservation
- Routine maintenance

Number of States

- Yes
- No
- Under Development
PMS Applications in Forecasting Pavement Condition and Tracking Performance

- **Forecasting Pavement Condition**
  - Yes = 76%
  - Under Development = 8%
  - No = 18%

- **Tracking pavement performance**
  - Yes = 64%
  - Under Respondents = 14%
  - No = 22%
PMS Application in Engineering & Economic Analysis

**Engineering Analysis**
- Yes = 57% (49% based on 2004 questionnaire)
- No = 16%
- Under Development = 27%

**Life Cycle Cost Analysis Used to Evaluate Alternative Designs**
- Yes = 59%
- No = 33%
## PMS & Remaining Service Life

### Remaining Service Life

<table>
<thead>
<tr>
<th>Network level</th>
<th>Project level</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>37%</td>
</tr>
<tr>
<td></td>
<td>37%</td>
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</table>
Data quality

<table>
<thead>
<tr>
<th>Quality</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Good</td>
<td>39</td>
</tr>
<tr>
<td>Fair</td>
<td>10</td>
</tr>
<tr>
<td>Fair/Poor</td>
<td>1</td>
</tr>
</tbody>
</table>
PMS Role in Project Selection and Prioritization

Is PMS used to select projects?

Yes = 44
No = 6
Under development = 1

Selection Methods

Worst first = 9
Through optimization = 1
Multi-year prioritization = 6
Combination of above = 23
Others = 5
Use of PMS in Developing Statewide Plans and Programs

Use of PMS in Developing Statewide Plans and Programs

- **Pavement Preservation Program**: 25 states use PMS, under development in 7, no answer in 3.
- **STIP**: 20 states use PMS, under development in 5, no answer in 2.
- **LRTP**: 15 states use PMS, under development in 4, no answer in 3.

Legend:
- **Blue**: PMS is used
- **Red**: Under development
- **Yellow**: No answer
Next Level of Improvement

- Upgrade/ New software/ Redesign the system 14
- Incorporating RSL into PMS system 7
- Upgrade to a web-based application 6
- Data integration 5
- Performance Models Improvement 5
- GIS interface 4
Future Training Needs

Future Training Needs

Number of States

NHI Course on PMS
NHI Course on TAM
Advanced PMS Training
Executive Training
Other

Yes
No
Possibly
No answer