Pavement Condition Survey
Some New Tech

Bill Buyers
CAIS User Group
October 19, 2021
PAVER™ Pavement Management System
Automated Survey
• Windshield Mounted Smartphone
• Survey at Highway Speeds

Video and Geolocation Data Processed Overnight Using Artificial Intelligence
Interactive GIS, graphical, and video displays and analysis tools
### 4.1 Costs

#### ROADAI – PILOT PROJECT COST

<table>
<thead>
<tr>
<th>Setup Costs</th>
<th>Qty</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>259740 / Samsung S20 FE</td>
<td>1</td>
<td>$826.00</td>
</tr>
<tr>
<td>CVMDCACC / Survey accessory kit</td>
<td>1</td>
<td>$310.00</td>
</tr>
<tr>
<td>INFOSVCTRAININGCVUK / Information Service Training-Online</td>
<td>1</td>
<td>$1,180.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Licensing Costs</th>
<th>Qty</th>
<th>Price</th>
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<tbody>
<tr>
<td>Computer Vision Base License</td>
<td>1</td>
<td>$7,080.00</td>
</tr>
<tr>
<td>Data Collection and Storage Licenses - Basic (0-600hrs per yr)</td>
<td>1</td>
<td>$2,030.00</td>
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</tbody>
</table>

#### Computer Vision Applications

<table>
<thead>
<tr>
<th></th>
<th>Qty</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>Road Sign Inventory</td>
<td>1</td>
<td>Included in Y1</td>
</tr>
<tr>
<td>Line Markings Condition Analysis</td>
<td>1</td>
<td>Included in Y1</td>
</tr>
<tr>
<td>Road Condition Survey - Road pavement condition and defect analysis</td>
<td>1</td>
<td>$1,652.00</td>
</tr>
</tbody>
</table>

#### TOTAL PROJECT COST

**$13,078.00**
Barriers We Had To Overcome

- Server hosting in the EU (Germany)
  - Working to establish US hosting in 2022
  - Cloud Server Request
  - Is this data captured “Sensitive”
    - People and Vehicles redacted during processing
- Security Restrictions for Video Capture
  - Saturday surveys in some areas to minimize capturing people and transport vehicles
  - Avoid security staff and vehicles
User Interface Demonstration
How Will INL Use This Tool

• Identification of degraded pavement to inform investment prioritization
  – Use pavement engineers to determine treatments
  – Need to calibrate RoadAI PCI thresholds for investment
• Sign Inventory and imaging for sustainment planning
  – Not yet capturing all the signs
• Line marking condition for sustainment planning and investment prioritization
• Credit for assessment completion