FY 2010 RESEARCH PROBLEM STATEMENT

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TITLE (*more info*)

WEB-BASED TOOL TO COLLECT SUPPLEMENTAL DATA ON THE CONDITION OF HIGHWAY MAINTENANCE EQUIPMENT

PROBLEM (Description of need) (*more info*)

ODOT Fleet Services provides management of ODOT's fleet, which consists of over 5,000 pieces of active equipment worth approximately $340 - $390 million. This equipment includes a variety of small and large trucks, cars, as well as heavy machinery such as graders, bulldozers, and many types of tractors.

An important and difficult part of managing such a large fleet is deciding which assets to replace and when. Currently, ODOT Fleet Services identifies candidate assets for replacement by running a condition (replacement) model implemented in Microsoft® Access. The condition model calculates a condition index for an asset based solely on quantitative data, including usage (i.e., miles or hours), the number of years an asset has been in service and life-to-date maintenance costs. Reports are produced where assets are ranked based on their condition index and segregated by district and maintenance crews. These reports are sent to the corresponding districts for later review and discussion with ODOT Fleet Services personnel.

Based on ODOT Fleet Services experience, a considerable difference still exists between the assets that the condition model recommends for replacement and those that district managers and maintenance crews think should be replaced.

PROPOSED RESEARCH, DEVELOPMENT OR TECHNOLOGY TRANSFER ACTIVITY (*more info*)

The objective of this project will be to develop a web-based application to allow maintenance crews to enter qualitative ratings to supplement the quantitative data used by the condition model. For example, a maintenance crew may own a 10-ton truck that based on usage (i.e., mileage) and years of service is judged a candidate for replacement by the condition model. However, this truck may still be reliable enough or have equipment that the crew values. If this information were reflected in the condition model, it would provide an additional criterion to ODOT Fleet Services that could make the replacement process not only more efficient but also more credible in the eyes of districts managers and, especially, maintenance crews.

BENEFITS (*more info*)

- Improved efficiency of discussion between Fleet Services and maintenance crews
- Improved credibility of Fleet Services condition model
- Data integrity
- Use of a similar method to enter data
- Timing of data

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