



# RESEARCH PROJECT CAPSULE [17-6SS]

September 2017

TECHNOLOGY TRANSFER PROGRAM

## Evaluation of HeadLight: An E-Construction Inspection Technology



Figure 1  
HeadLight screenshot

### JUST THE FACTS:

**Start Date:**  
April 1, 2017

**Duration:**  
18 months

**End Date:**  
September 30, 2018

**Funding:**  
TT-Fed/TT-Reg

**Principal Investigators:**  
Tyson Rupnow, Ph.D., P.E.  
Associate Director, Research  
225-767-9124

Mary Leah Coco, Ph.D.  
Associate Director, Technology Transfer  
and Training  
225-767-9167

**Administrative Contact:**  
Tyson Rupnow, Ph.D., P.E.  
Associate Director, Research  
225-767-9124

**Technical Contact:**  
Kirk Zeringue, P.E.  
Special Studies Research Administrator  
225-767-9169

Louisiana Transportation  
Research Center  
4101 Gourrier Ave  
Baton Rouge, LA 70808

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### POINTS OF INTEREST:

Problem Addressed / Objective of  
Research / Methodology Used  
Implementation Potential

[WWW.LTRC.LSU.EDU](http://WWW.LTRC.LSU.EDU)

### PROBLEM

Project delivery and inspection are challenging, resource-intensive jobs. The quality/accuracy of collected field data is crucial. The Louisiana Department of Transportation and Development (DOTD) still relies on a primarily paper-based process for field data collection. The electronic collection and utilization of this data from the beginning to end of a construction project may be more efficient and economical.

### OBJECTIVE

The overall objective of this project is to understand impacts on DOTD when leveraging e-construction innovations, specifically a mobile project inspection system called HeadLight.

### METHODOLOGY

The past performance of the HeadLight e-construction technology will be investigated, including, but not limited to, applications in Texas and Washington. Other e-construction technologies will also be reviewed and compared.

A minimum of 12 construction projects will be used for piloting HeadLight, their selection based on the research team's consultation with DOTD construction personnel. For purposes of this study, all equipment needed to conduct the field performance trials of HeadLight will be leased.

The leased equipment will be assembled by HeadLight personnel to match DOTD reporting requirements for materials and pay items. HeadLight personnel will also provide training on how to use the equipment.

The amount of time spent on the field inspection, the timeliness of daily report submissions, the quality of collected data, and the abatement of claims risk will each be evaluated. A preliminary assessment of HeadLight's adoptability by DOTD will be prepared.

### IMPLEMENTATION POTENTIAL

The implementation of e-construction technology for project inspection will potentially benefit DOTD economically through increased quality/accuracy of inspection data, reduced claims risk, and increased field-inspection productivity. The results of this study will greatly assist DOTD in determining whether or not to implement the HeadLight e-construction technology.

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