

# Transportation Asset Management Framework for Electrified Road System

## Need

Each state is required to “Develop and implement a **Risk Based Asset Management Plan** for the National Highway System (NHS) to **improve or preserve the condition and performance of the system.**”

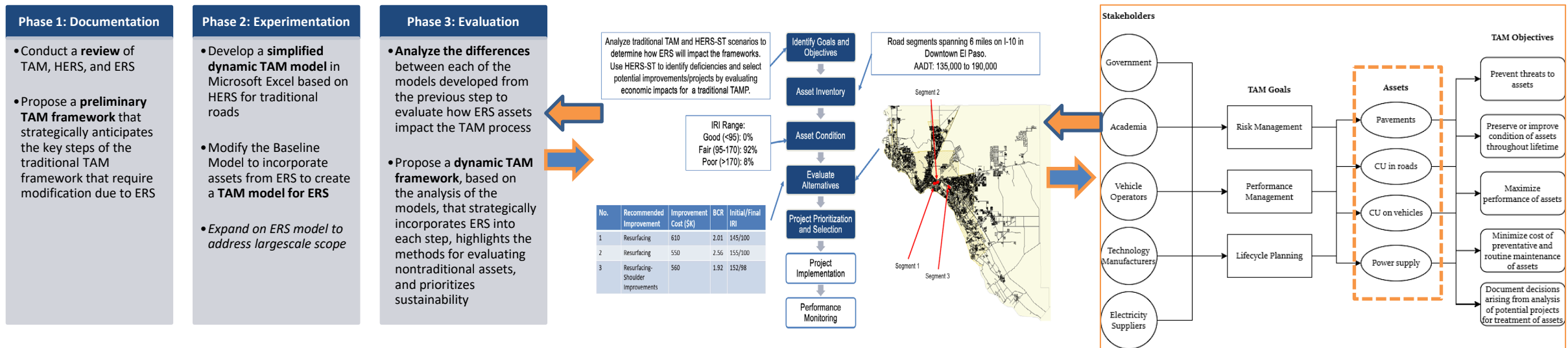


## Gaps

- Limited knowledge of how ERS will impact traditional road operations
- Integrated asset management procedures will be required due to changes in traditional stakeholders
- Lack of data for better decision-making

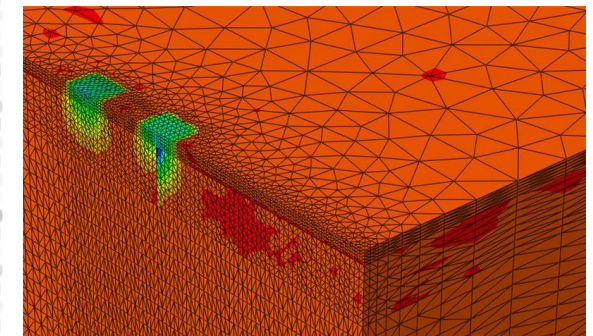
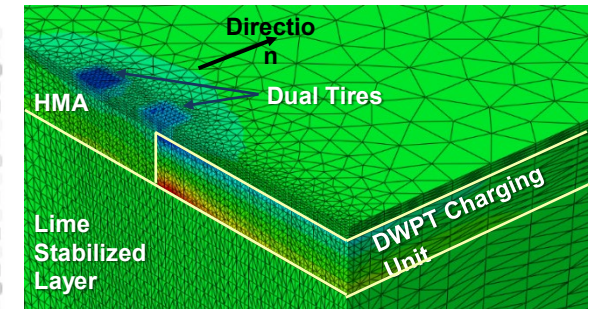
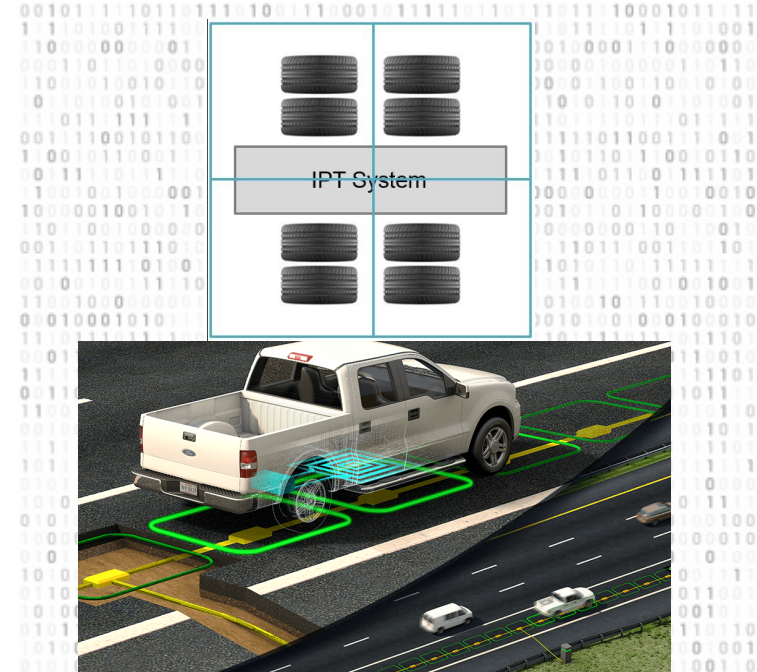
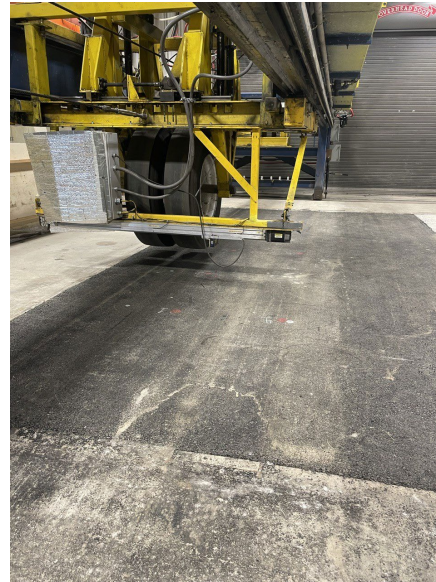
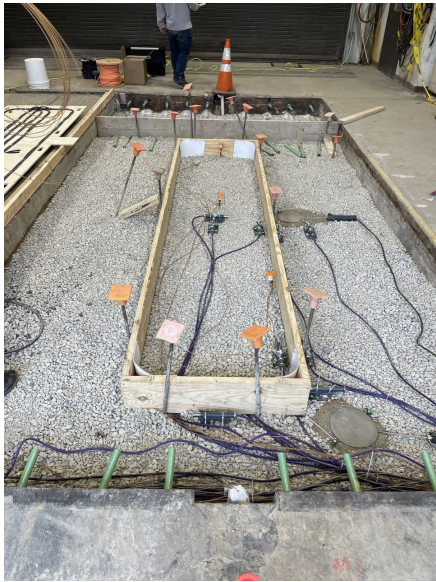
## Objectives

- Develop a dynamic TAM model that strategically integrates new assets arising from ERS
- Explore the relationship between lifecycle performance and investments of ERS to maximize economic benefits



# Performance of Pavement with Embedded Wireless Charging Units (Concrete and Asphalt)

- Maximize reliability and serviceability while maintaining sufficient electromagnetic performance to serve heavy-duty electric vehicles.
  - Optimize DWPT thermal/structural/electromagnetic components
  - Validate models (accelerated pavement testing and actual field testing)



Courtesy of Purdue University