UTC Project Information	
Project Title	IoT Platforms for Smart City Implementation in Rural and Urban Communities: A Comparative Review
University	University of Idaho
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Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans $40,000 University of Idaho $ 40,000
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Agency ID or Contract Number	69A3551747110
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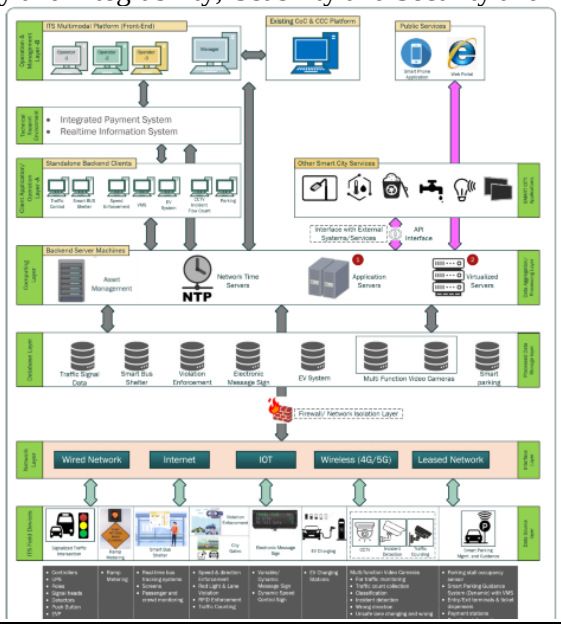
Brief Description of Research Project	Transportation agencies in urban, sub-urban, and rural communities have plans or are amid developing initial Smart City projects. The major component of these projects comprises the Internet of Things (IoT). IoT enables collecting data flows and exchange to enable the analytics needed to manage and achieve the end goals of any smart city project. Many agencies find that IoT Platform (IP) selection is very challenging compounded by limited technical resources and are struggling to implement vital concepts aimed at enabling more effective and sustainable mobility. Representative IP solutions have proprietary "vendor-specific" features that lock agencies into specific vendors' solutions. IPs developed by smaller vendors, while they come with strong customer support and a high degree of openness, face many challenges in terms of interoperability and scalability. The objective here is a comprehensive review to establish an improved understanding among transportation agency policy makers and professionals concerning IP operational characteristics focused strengths, weaknesses, and future directions.

Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	The project outcome has been focused on two main areas dedicated to the evaluation of smart city projects. The first area was an evaluation of some private and public smart city projects which varied in their system architectures, implementation, and goals. These projects provide a transparent view into how smart cities will be built in the future, by highlighting both challenges and achievements in previous projects. The second area was an in-depth evaluation of a small sample of IoT platforms by different vendors. Each one of these vendors provided a different service which would be integrated into an overall smart city Platform. Overall, each project and vendor evaluated a valuable baseline to build from for future smart city projects using IoT platforms and devices covering different operational elements including System Functionalities, Interoperability and Integrability, Usability and Security and Resilience. 
Impacts/Benefits of Implementation (actual, or anticipated)	The outcome of the project provides transportation agencies in the federal, state, and local levels with an improved understanding of the characteristics of IoT platforms needed for smart city implementation. This allows agencies to more effectively plan, design, procure, and implement secure and resilience smart city projects.
Web Links • Reports • Project Website	