



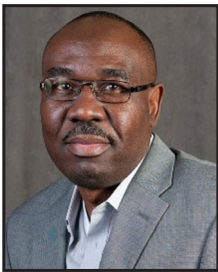
# UNIVERSITY TRANSPORTATION CENTER RESEARCH BRIEF

**PROJECT TITLE:** An In-Depth Study to Categorize Pacific Northwest Highway Project Types as a Way to Enhance Future Investigative Study on Contract Administration Practices and Performance

**PRINCIPAL INVESTIGATOR:** George Okere (WSU)

**INSTITUTION:** WASHINGTON STATE UNIVERSITY  
**ESTIMATED COMPLETION DATE:** AUGUST 2019

**SPONSORS:** THE PACIFIC NORTHWEST TRANSPORTATION CONSORTIUM, WSU



## **Background**

According to the CBO (2015), in 2014 over \$165B was spent by the federal, state and local transportation agencies on highway projects, and the amount is projected to rise in coming years. With increasing expenditure comes the concern of overruns, delays and poor contract administration on highway

projects. The construction industry's inability to control cost overruns and project delays may in part be for use of wrong theories. It is common knowledge that all roadway projects are not the same, all bridge projects are not the same, and neither is a flat slab bridge the same as a box girder bridge. In addition, a roadway resurfacing project is not the same as a new roadway alignment constructed in urban-core area. Construction projects are unique, and they are of different types, sizes, materials, locations, construction methods, and complexity. Shenhar et al. (2002) argue that one of the fundamental misconceptions in the construction industry is that all projects are the same. At present, within the state DOTs, it is difficult to find consistency in data gathering and reporting, or validity in the analyses of contract performance when such efforts use inconsistent and ah-hoc classification systems, and/or use incorrect levels of abstraction that are not aligned with the reality that "all projects are not created equal." Such efforts fail in design and method, and do not help to see, measure and understand patterns that are evident in the unique nature of projects. A more in-depth understanding of project phenomenon is required at the project type level instead of the current practice of looking at the program level or project level and making overarching generalizations which may not necessarily reflect reality at the project type level.

A major concern that has been raised by a program administrator with WSDOT is that without a standardized system to classify project types, it is difficult for program

administrators on state DOT programs to look at trends and patterns within the projects they deliver. This problem is in part because a proper classification of project types does not exist. Classification is aimed at making things more manageable. It is "not only a way of representing entities but is also a way of imposing order on them" (Kwasnik, 1992, p. 63).

## **Research Project**

The objective of this research is to develop a classification system for project types using data from Pacific Northwest DOTs on projects that are completed, active and awaiting execution. The classification system will be based on several dimensions such as type of system, geographical location, controlling scope of work, level of complexity, contractual constraint, project delivery method, and other set parameters. Such standardization could improve validity of research findings, and deeply enhance research and practice on highway projects within the Pacific Northwest and the entire U.S.

This is an in-depth analysis of Pacific Northwest highway projects within the last five years. Working with data gathered from the state DOTs, a criteria will be developed for categorizing different project types based on a set of dimensions and measures. A final review will be conducted by the state DOTs to validate and verify that projects are correctly mapped, and if necessary, refine the grouping to accommodate gaps.

