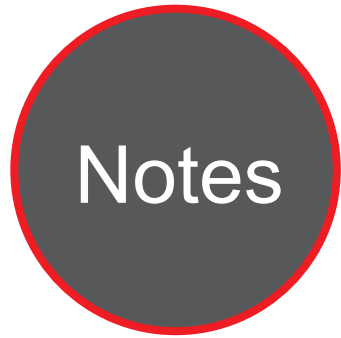




Caltrans Division of Research,
Innovation and System Information

Research



Notes



Advanced
Research

MAY 2020

Project Title:
The Transformation of Transportation

Task Number: 3720

Start Date: February 1, 2020

Completion Date: January 31, 2021

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The Transformation of Transportation: The Potential of Distributed Ledger Technologies in Transportation Applications

To understand the potential, current, and future applications of Distributed Ledger Technology in improving transportation.

WHAT IS THE NEED?

In this project, California State University, Long Beach (CSULB) will work on a comprehensive study of possible applications of Distributed Ledger Technology (DLT) in transportation.

CSULB plans to conduct a thorough review of the state-of-the-art DLT technology from other public agencies, academia, and industry. CSULB will conduct interviews with experts to depict a more complete picture of possibilities, benefits, challenges, and current limitations in this space. Finally, CSULB will provide California Department of Transportation (Caltrans) with a final white paper that summarizes their findings, as well as recommendation on next steps to leverage this technology.

WHAT ARE WE DOING?

Despite the benefits of providing transportation and accessible public information, it raises new challenges and concerns about privacy and security of data. DLT offers potential of enhancing quality, integrity, and security of data using cryptography without sacrificing transparency. The need is to explore the potential of improving Caltrans' business processes using DLT, to transition to digital project delivery and one stop grants management system within Caltrans.



DRISI provides solutions and
knowledge that improves
California's transportation system

WHAT IS OUR GOAL?

The goal of this project is to understand the possible applications and key strategic use cases of DLT in California's transportation and public-sector transportation in general.

WHAT IS THE BENEFIT?

This project will help Caltrans to identify and leverage the use of new and promising DLT; to improve transparency, reduce friction, enhance security, integrity, and quality of data used in department's business process.

WHAT IS THE PROGRESS TO DATE?

January 1, 2020 – March 31, 2020

Kickoff meeting was held.

Task 1 is in progress and the team is reviewing current and emerging DLT use cases in transportation. The team has identified a list of reports and publications that will serve as an important reference for this task. The team is focused on finding DLT within the scope of application of transportation agencies, especially Caltrans.

During this quarter, reports and publications related to the usefulness of blockchain technology and its application and usefulness to transportation agencies have also been reviewed.

A draft report was submitted to the panel in the last week of March.