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CALTRANS DIVISION OF RESEARCH, INNOVATION AND SYSTEM INFORMATION
TRANSFORMING IDEAS INTO SOLUTIONS

Research Notes

Scoping Study for Next Generation Pavement Management System (PMS)

Evaluate frameworks for the Next Generation PMS.

Pavement

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Project Title: PPRC23: Pavement Management System

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WHAT IS THE NEED?

The California Department of Transportation (Caltrans) manages its pavements with a new and modern pavement management system, PaveM. While the Caltrans PMS (PaveM) has set a national standard for PMS practice, it is clear that the PMS architecture of the software (which is derived from 1980s computer architectures) is not adequate to handle the complex decision-making environment in California. However, PMS software vendors are not attempting to address these deficiencies. A better framework is needed to allow for full use of the data collected and provide more accurate predictions.

WHAT ARE WE DOING?

This project will investigate what type of decision support software is actually needed and will propose an architecture for this software based on modern computer architectures (e.g., cloud based, big data, machine learning). The scope will also include linking other software (design, LCCA, LCA) directly into the PMS to speed project delivery. This project will not develop this software, only outline what would be required, so that Caltrans can decide how to proceed.

WHAT IS OUR GOAL?

A scoping and architecture document will be provided for a next generation PMS. This project will not develop this software.

WHAT IS THE BENEFIT?

The improved PMS will allow to make better pavement predictions and, thus, Caltrans can be more proactive

Caltrans

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in maintaining its pavements. This will lead to reduce maintenance costs and create savings by maintaining longer lasting pavements.

WHAT IS THE PROGRESS TO DATE?

Attended Caltrans BIM 4 Infrastructure summit. Continued scoping and architecture development. (65% of work is completed).

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