

NEW ENGLAND TRANSPORTATION CONSORTIUM QUARTERLY PROJECT PROGRESS REPORT

A. PROJECT NUMBER AND TITLE:

NETC 20-2 Current Status of Transportation Data Analytics and A Pilot Case Study Using Artificial Intelligence (AI)

B. PRINCIPAL INVESTIGATOR(s) & UNIVERSITY(s):

Yuanchang Xie, PhD, PE, University of Massachusetts Lowell

C. WEB SITE ADDRESS (*If one exists*):

None

D. START DATE (*Per NETC Agreement*):

5/5/2021

E. END DATE (*Per NETC Agreement*):

3/31/2023

F. ANTICIPATED COMPLETION DATE:

3/31/2023

G. PROJECT OBJECTIVES:

- (1) Provide clear and comprehensive picture to the six New England state DOTs regarding their data assets, data needs and emerging data sources, modeling and workforce needs, and data collection, analysis, utilization, storage, and sharing practices related to traffic operations;
- (2) Provide strategic and practical recommendations to prepare New England DOTs for future data-driven transportation system analytics; and
- (3) Conduct a pilot case study of using AI techniques to analyze existing multi-source data for improving traffic operations and safety.

H. REPORT PERIOD:

1st Quarter, 2022

I. ACCOMPLISHMENTS THIS PERIOD:

Meetings/Interviews

- Meeting with Intelligent Automation, A BlueHalo Company on 01/14/2022 to discuss the AI work they have done for Delaware DOT (DelDOT) as a part of DelDOT's ATCMTD project.
- Progress update meeting with the NETC 20-2 panel on 02/14/2022. Feedback received from this meeting include (1) solid work for Task 1, (2) more specific recommendations for Task 2 are needed, and (2) wrapping up Task 2 before moving into Task 3 and Phase II.
- Meeting with RIDOT on 03/22/2022 to solicit inputs on recommendations (i.e., Task 2)
- Meeting with MaineDOT and NHDOT on 03/30/2022 solicit inputs on recommendations (i.e., Task 2)

More specific recommendations for Task 2 have been prepared and will be shared at the upcoming project meeting on April 20, 2022.

J. PROBLEMS ENCOUNTERED (If any):

None

K. TECHNOLOGY TRANSFER ACTIVITIES:

None

L. STATUS BY TASK:

Task	Description	% Complete
Task 1	Review of Current Data Collection and Utilization Practices	100%
Task 2	Assessment of Data Needs, Emerging Data Sources, and Data Processing and Analytics	90%
Task 3	Recommendations	70%
Task 4	Case Study	Not started
Task 5	Draft Final Report	Not started
Task 6	Final Report	Not started

M. PERCENT COMPLETION OF TOTAL PROJECT:

40%

N. ACTIVITIES PLANNED FOR NEXT QUARTER:

The team will finalize Tasks 1~3 and start to work on Phase II of this project.

O. FINANCIAL STATUS:

As of: March 31, 2022

Total Project Budget: \$200,000.00

Total Expenditures: \$10,870.72

Note: This report should not require more than 2-3 pages & should be e-mailed to the NETC Coordinator so as to arrive no later than three (3) working days after the end of each calendar quarter.