

Webinar Follow-Up:

Emerging Technologies in Transportation Management

January 30, 2020

Thank you for your participation is the I-95 Corridor Coalition sponsored webinar. Artificial Intelligence and a National ICM Strategy were the two topics discussed under the umbrella -"Emerging Technologies in Transportation Management," on January 30, 2020.

Many thanks to our speakers for their presentations on these exciting topics:

- Gene Donaldson, Delaware Department of Transportation's TMC Operations Manager
- Nick Compin, PhD, Caltrans Statewide Connected Corridor, TSMO and System Performance Measures Lead; and,
- Joe Butler, University of California Berkeley's Connected Corridors Program Engineering Manager.

Please visit the <u>TSMO page</u> on the I-95 Corridor Coalition website or click on the links below for more information about the meeting.

- · Presentation with Audio
- Slides Only
- Question & Answer Summary

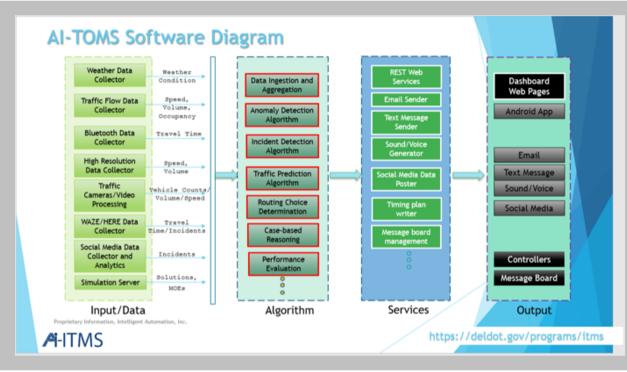
Presentation 1: The Use of Artificial Intelligence in Transportation Management Centers

Gene Donaldson, Delaware DOT

- Gene Donaldson opened his talk by describing DelDOT's ITMS strategic plan update (2017) and stating that it will now incorporate artificial intelligence (AI) and machine learning (ML).
- Management Technologies Deployment (ATCMTD) grant by FHWA and began work on these efforts in October 2019. Gene described how AI can enhance DelDOT's ITMS objectives and that over a 3-year

He explained that DelDOT was awarded an Advanced Transportation and Congestion

- period, DelDOT is planning deployment in 3 project areas. With the ATCMTD grant, DelDOT is currently working towards meeting its expected
- outcomes of being a truly predictive, self-monitoring transportation management system, incorporating automated operation, reducing incident detection time, using CAV data leveraging to improve traffic management, and collecting long-term knowledge for smarter transportation operations. • The graphic below represents the input data and its processing with AI and ML-based
- algorithms to provide a set of enhanced services to the traveling public.



Connected Corridors) in California Nick Compin, PhD, Caltrans

Presentation 2: Breaking Ground: Toward a National ICM Strategy (Showcasing: I-210

Joe Butler, UC Berkeley

Jointly, Nick Compin and Joe Butler presented Caltrans work towards a National ICM

- Strategy through its I-210 Connected Corridors pilot. • ICM is currently under development in Anaheim (Triangle ICM), Sacramento (US50 ICM), San Diego (I-805 south corridor TSMO Plan), and Los Angeles (Metro Regional ITS/ICM
- Plan.) The overarching goal of implementing a statewide ICM program is to more efficiently use the existing transportation network.

Benefits of a single statewide system include replicability for uniform use; scalability to be

- flexible in order to meet unique needs of districts; affordability for stakeholders; and maintainability for the single statewide maintainer, Caltrans IT. UC Berkeley's collaboration with Caltrans will provide engineering documents, workforce
- architecture, ensuring data quality and replicability; and a scalable intelligent data hub with a DSS (Decision Support System.) The goal is to pilot this implementation on California's I-210 in April 2021, spread it throughout the state, then the nation.

 Anticipated benefits include queue reductions and performance improvements (including air quality); improved planning and coordination; changes in roadway operations improving

skill training, consulting, and cloud-based services - including reference implementation

 The graphic below displays how nationwide ICM deployment can assist with effectively utilizing the nation's existing transportation networks.

Caltrans TMC

Foothill Transit

Ramp & Connector Meters

throughput and safety; and fund sharing for larger impact.

CAD/AVL System



https://www.its.dot.gov/factsheets/pdf/ICM 10Attributes.pdf

- For more information on Open Source and Pooled opportunities, contact Dr. Nick Compin
- at 916.653.4574 or Nicholas.compin@dot.ca.gov
- This webinar was brought to you by the I-95 Corridor Coalition.

Questions or Concerns:

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