

Technical Memorandum

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From Steve Kuciemba, Principal Investigator, NCHRP 20-24(128)

Subject Implementation of Research Findings, NCHRP 20-24(128)

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This technical memorandum is a companion to the Summary of Observations under NCHRP Project 20-24(128), "State of the Art Review of Cooperative Automated Transportation Systems." This memo presents general recommended next steps to further this research.

The objective of this project was to document and disseminate lessons learned from Cooperative Automated Transportation (CAT) system deployments (both domestic and international) that can have immediate benefit to State DOT executive leaders.

The observations from these scan tours were intended to help support and promote cooperation between infrastructure owners & operators (IOOs) and the private sector to ensure mutually beneficial outcomes with public safety being the primary goal. Therefore, the primary audience was State and Local DOT leaders and decision-makers.

The following next steps are listed for consideration of future steps that might advance the research objectives originally set forth for the project:

- Even though the CAT Coalition is in transition, there are many observations from this trip that can and should be shared with them once it is re-started. Some of the ideas and lessons from organizations both domestically and internationally would be helpful to various stakeholders in the CAT space.
- Some of the government organizations we spoke with had a strong commercialization emphasis (one or two agencies in the US, and one or two agencies internationally). At the federal level in the US, we would benefit from additional conversation or research concerning industrial strategy being considered to advance the market for CAT in the US.
- Several panel members felt strongly that we needed to follow-up with the behavioral psychology piece. More conversations, perhaps a future NCHRP or FHWA research statement – one member made it clear that whatever we do "it's not just a 5-question survey, but instead it needs to be comprehensive and designed to inform decision-making." This is not selling a product we already have a concept for to the public – this is engaging the public about a concept and how it might need to be adjusted/changed. This is not market research.
- When reviewing the observations from international government agencies, it is important to acknowledge that the role of the federal govt in the US may be very different – and a direct

comparison could be problematic. In fact, some international transport ministries might function more like a US state DOT, which should be taken into consideration when discussing potential lessons learned. In general, we should look at function over there and how that translates into form over here.

- The concept of sharing information and potentially coordinating across different test beds and testing sights was identified by several panel members as an action to explore for the US. Recognizing that once again the scale and scope of activities in the US are much more complex, perhaps starting with an awareness of what's going on is an important starting point, and that could lead to future collaboration and potentially coordination.
- A lot of the private companies in the US that we spoke with wanted some kind of government role, but there lacked consistency in what that role should be. Future conversations and research is needed to tease out exactly what that means. There was an acknowledgment by some that they "want flexibility until they feel they're treated different - then they want consistency." It's a balancing act.
- The panel felt there is value in ongoing scan tours focused on this topic, even though it was time to wind-down this specific project. The question of whether or not to form a new panel with a similar construct (primarily State DOT CEOs) versus forming a panel with a broader mix of stakeholders will need to be discussed further before such activities could be initiated.

An important element of this implementation plan is also to consider how to best share some of the observations and lessons contained in the summary report. A PowerPoint presentation was developed for use at the ITS World Congress and contains the key messages that the panel could rely on for future distribution.

- The panel strongly agreed that sharing a portion of the observations with other associations – both within the transportation space and outside of it – would have great value and should be explored.
- Having a set of messages ready for the AASHTO Washington Briefing in the early Spring would be a good target to aim for. There will be a lot of new CEOs next spring – this effort and transmitting these observations would have good value.
- CAT Coalition meetings are also good for sharing information.
- Throughout the course of the project, we identified the following list of groups as potential targets for information sharing:
 - AASHTO CTSO, CAV Inter-Committee Working Group, various AASHTO committees, State CAV Community of Practice, guidance for AASHTO CAV Policy Principals
 - ITE, ITS America, ATSSA, ARTBA, and other key industry associations that are paying attention to the CAV space
 - Non-traditional stakeholder groups that we've already met with – like the National Governor's Association (NGA) and the National Council of State Legislators

- Non-traditional stakeholder groups that we haven't met with yet – like Uniform Law Commission, National Association of Regional Councils (NARC), American Trucking Association (ATA), American Public Works Association (APWA), Association of Metropolitan Planning Organizations (AMPO), and American Association of Motor Vehicle Administrators (AAMVA).

The evolution of Cooperative Automated Transportation will continue in the US and abroad, as will other key transportation innovations such as the transition from internal combustion engines to electric vehicles, an increase in mobility as a service and mobility on demand, and a long-standing need to address infrastructure funding by means other than a gasoline tax. How CAT fits into all these innovations will remain an important conversation in the years ahead, and the observations from this Scan project will therefore be an important resource for many stakeholder audiences in the years ahead.