# Traffic Forecast Accuracy Assessment Research

RESEARCH RESULTS

NCHRP Project 08-110 developed a process to analyze and improve the accuracy, reliability and utility of project-level traffic forecasts. In doing so, it assembled the largest known database of traffic forecast accuracy, composed of over 1,200 projects from six US states and four European countries. These data were used to understand the factors contributing to forecast inaccuracy, and to estimate a set of uncertainty windows that can be used to determine median and specific percentile estimates associated with a given forecast, based on historic accuracy. The figure to the right shows an example of such uncertainty windows, which can be used in project planning.
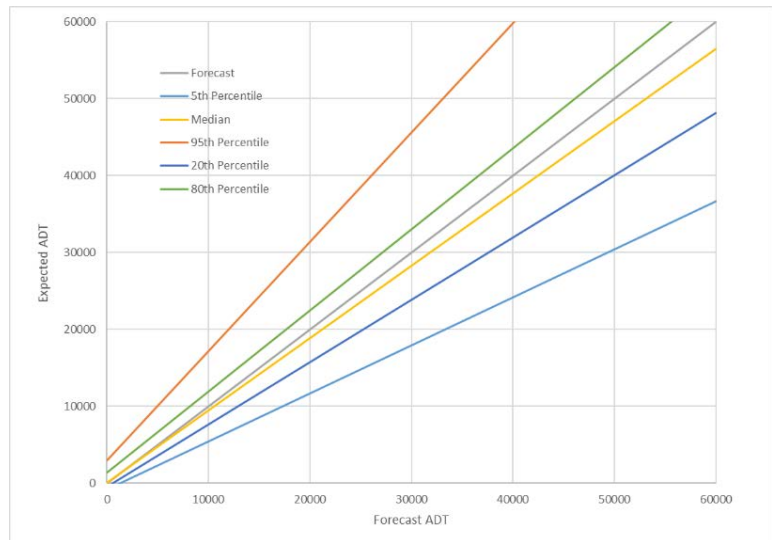
Basic elements of the recommended process involve:

1. Applying uncertainty windows at the project forecasting stage.
2. Archiving key data about traffic forecasts, including both basic attributes and additional details for large projects.
3. Using the data from #2 to estimate local uncertainty windows.
4. Using the collected data to conduct more detailed evaluations examining the sources of error in those forecasts, and using that analysis to inform model development projects.

WORKSHOP GOALS

The NCHRP 08-110 process aims to provide value to agencies involved in producing project-level traffic forecasts without becoming too cumbersome to implement. To explore whether it achieves this balance and increase interest in implementation, we will host a workshop with representatives of agencies that produce project-level traffic forecasts. The goals of the workshop will be to:

1. Test the proposed guidance and archiving process on a set of real-world case studies to identify and refine any pain points.
2. Give the participants a jump-start in implementing the process.

We expect the workshop to involve up to 8 participants, in addition to representatives of the project team. The project will cover travel expenses for the participants. Participants to come prepared with the documentation from a recent project-level traffic forecast that their agency has made, as well as the associated technical files. These examples will serve as hands-on case studies for the workshop.

SCHEDULE AND LOGISITICS

Participants will be reimbursed for all reasonable travel expenses. The workshop will last one day, and occur at a Transportation Research Board facility in Washington, DC. It will be scheduled to accommodate the participants, with an anticipated date to occur during:

- One day during the week of November 26, 2018, or
- One day during the week of December 3, 2018.

The agenda will involve:

- 8:30 – Breakfast and introductions
- 9:00 – Summary of NCHRP 08-110 findings
- 10:00 – Applying uncertainty windows
- 11:00 – Break
- 11:15 – Entering forecast information into database
- 12:15 – Lunch
- 1:00 – Silver standard documentation
- 1:45 – Gold standard of reproducible model runs
- 2:15 – Break
- 2:30 – Post-opening project evaluations
- 3:15 -- Model validation processes
- 4:00 – Lessons learned and feedback for project team

The agenda items will be structured using an instructional approach. The time of each session will have three parts. In the first lesson on applying uncertainty windows, for example, the project team will provide instruction in how to apply the windows. Then the participants will estimate uncertainty windows for their own projects. Then we will reconvene for a group discussion of what worked and what did not work. The session on uncertainty windows will include a discussion of communicating uncertainty and using it in the planning process.

POST-WORKSHOP ACTIVITIES

At the end of the workshop, participants will be polled to see if they see whether aspects of the process are potentially useful to their agencies. If so, they will be for implementation support if additional implementation resources can be obtained. Following the workshop, the project team will revise the recommendations based on feedback from the participants.

CONTACT US

Greg Erhardt, Dave Schmitt and Martin Wachs will host the workshop. Individuals interested in participating should email us at greg.erhardt@uky.edu and dschmitt@ctgconsult.com to express their interest and describe why they are interested. Participants will be selected from the expressions of interest with consideration given to the likelihood of implementation and diversity.