

12 Steps for Incorporating Emerging Technologies into Long Range Transportation Plans

Ever wonder how you might account for emerging technologies and autonomous vehicles in your long-range transportation plan? We don't have a crystal ball for what the world might look like 20-25 years from now. However, we can certainly suggest some ways to start integrating emerging technologies and autonomous vehicles into your planning process now.

- 1) **Define your vision** for how people live, work, and play in your region before someone else does. Auto manufacturers are moving ahead with autonomous vehicles regardless of whether we are ready for them. Take full advantage of the benefits of autonomous vehicles and plan and mitigate for the trade-offs.
- 2) **Develop goals, objectives, and a project prioritization framework** that align with this new forward-thinking vision. Consider developing new evaluation criteria, metrics, and weighting scenarios used to rank projects that promote this new vision.
- 3) **Broaden your stakeholder group** to include partners that can educate you on evolving challenges and opportunities, such as your local transportation management center, law enforcement, and even a ride-hailing company representative and/or trucking company, among others.
- 4) **Explore new data options** to evaluate current and evolving travel behavior, such as continuous National Household Survey (NHTS), American Time Use Survey (ATUS), Omnibus Surveys, GPS-trace and cellphone-trace data and travel apps, such as Waze. A better understanding of travel patterns and shifts will provide a critical foundation for the long-range transportation planning process and ensure effective and equitable mobility options.
- 5) **Develop alternate future scenarios** to account for potential "what if" scenarios based on the potential mix of autonomous vehicles and different investment strategies.
- 6) **Consider developing and applying off-model post-processing tools** that predict shorter-term travel behavior scenarios that complement the traditional travel demand models in place today.
- 7) **Consider the impact of emerging technologies on the aging and disabled**, including increased opportunities to age in place.

- 8) **Create a more diverse portfolio of projects** for evaluation that might also include testing alternative pavements, re-striping, electric vehicle charging infrastructure, curbside management, testing of new technologies, etc.
- 9) **Re-evaluate planning-level cost estimate assumptions** to reflect emerging technologies and potential design criteria impacts.
- 10) **Evaluate the impact of electric vehicles on transportation revenue** and consider alternate revenue streams.
- 11) **Develop a funding strategy that leverages innovative components of projects for potential grant opportunities.** Grant opportunities often include innovation as one of the merit criteria used to select projects. By including innovation in more projects, you open yourself up to more funding possibilities.
- 12) **Revisit your plan annually** to determine if any interim analyses should be conducted that might reshape the outcome of your plan. Given the rapid pace of evolving technologies, too much can change if you wait 4-5 years before your next federally required plan update.