



April 2019

## Planning for emerging mobility solutions

### Transportation agencies now have a starting point for incorporating new technologies

With connected and automated vehicles predicted to hit the roads as early as this year, integration of these transformative technologies, including electric, automated, connected and shared vehicles, is becoming part of the transportation agenda. Given the uncertainty about how these technologies will play out, their potentially far-reaching impacts and the limited resources with which many agencies have to conduct research and planning, many don't know how or where to start. Despite the ambiguity, some states are moving forward.

#### Florida Department of Transportation's policy guide

The Florida Department of Transportation, for example, has created a first-of-its-kind policy guide, addressing each of the four technologies, their potential impacts and implementation.

The overriding theme? Planning for emerging mobility solutions is not a one-size-fits-all exercise. Each region or county should be considered and planned for individually.

Demographics, geography, existing transportation networks and the willingness of citizens to adopt these new technologies may vary widely across state and county lines. Adoption rates will differ dramatically by region and priorities, and should be planned for accordingly.

#### First steps

Below are some initial steps that transportation agencies and metropolitan planning organizations might consider for determining how to best address emerging mobility solutions in their short- and long-range transportation plans:

#### 1. Rethink future goals and performance measures

Many DOTs have long-range plans to widen heavily congested corridors. Will autonomous and connected vehicles, which can travel closely together at high speeds, automatically create more capacity and eliminate the need for expansion?

Or, what about the goal to decrease vehicle miles traveled? VMT may actually increase as autonomous vehicles shuttle between fares as new demographic groups, such as senior citizens and children, enjoy the freedom of mobility these emerging technologies will afford.

On the flip side, safety and environmental benefits also may increase as more electric and self-driving cars hit the road. Today's goals of zero fatalities and improved air quality, for example, may be unnecessary once emerging mobility solutions are mainstream.

#### 2. Show and tell

Show community leaders how emerging mobility solutions will transform transportation. Invite them to demonstrations of the technology's safety and platooning capabilities.

Generating a greater appreciation for the impact of emerging mobility solutions among decision makers could earn critical support for key infrastructure programs. With this in mind, the annual Florida Automated Vehicles Summit has emphasized live demonstrations during the past five years for various emerging technologies, including: >>



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- Unmanned aerial vehicles (drones) for inspections or emergency response
- Automated transit shuttles for improved mobility
- Connected vehicles for system performance and improved safety
- Truck platooning for operational efficiencies
- Automated vehicles for greater levels of safety and mobility

### 3. Consider future partnerships

Examine how these technologies, once mainstream, may diminish traditional funding sources. Think how electric cars and their potential could negatively impact gas-tax revenues.

To replenish funds, it may be necessary to look at innovative partnerships that can generate new revenue streams. For example, to relieve curbside congestion, municipalities might charge transportation network companies for each minute they are using highly trafficked locations. Similarly, as mobility on-demand (e.g., Uber and Lyft) becomes more prevalent, repurposing on-street parking for improved shared-use operations and curbside fees may be an effective way to recapture lost parking revenue.

### 4. Review maintenance programs

FDOT's guide also stresses the growing importance of routine maintenance. Roadway pavement, striping and updated signage will be critical, as autonomous vehicles use those elements to navigate.

### 5. Seek training

Web-based curriculums and half-day seminars geared toward emerging mobility solution integration can equip agency staff with effective planning tools and protocols.

## A place at the planning table

Planning for emerging mobility solutions should begin now. By following the steps above, transportation agencies that want to attract and seamlessly incorporate emerging mobility solutions into their transportation plans will have a place to start. ■

### ABOUT THE AUTHOR:

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