

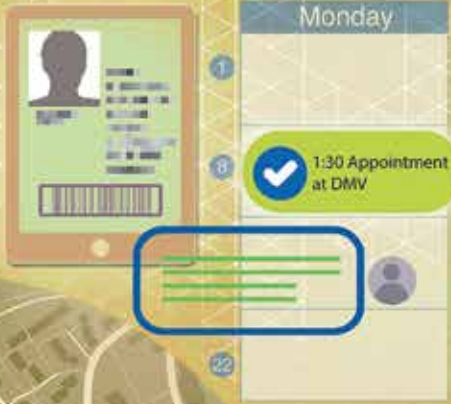
# move

## ALSO IN THIS ISSUE

Drone crash site reconstruction

Data privacy

AI improves service



The future  
of the DMV

## LOOKING FORWARD





When Arizona Department of Transportation (ADOT)  
was looking for a technology partner to help  
**protect identities** and **prevent fraud**,  
they selected **NEC**.

Find out how NEC's NeoFace® solutions help ADOT  
combat identity fraud, visit [www.necam.com/ADOT](http://www.necam.com/ADOT).

# FDR

## FRAUD DETECTION & REMEDIATION

### 2021 UPDATED FRAUD TRAINING NOW AVAILABLE

Fraud Detection and Remediation (FDR) is our most widely-accessed voluntary program. The updated courseware package (January 2021 version) is now available to member jurisdictions! The 2021 Annual Update features a number of important enhancements and new information including:

- **NEW PLATFORM:** Courseware is now entirely in HTML5 format, all Flash components have been removed (Appearance, functionality, and implementation remain unchanged)
- **NEW RESOURCE:** Consolidated Jurisdiction DL Guide Releases as submitted by jurisdictions (Located in parent directory of the download package for administrative distribution, Indexed, searchable format)
- **NEW:** Abandoned Vehicle/Mechanic's Lien Fraud Best Practices Module
- **NEW:** Facial Recognition Best Practices Module
- **NEW:** US Travel Document Material
- **NEW:** Canadian IMM1442 and Temporary Visa Content
- **UPDATED:** DL/ID Standards Document
- **UPDATED:** NMVTIS Guide for Law Enforcement
- **UPDATED:** Indexed, searchable, and comprehensive Job Aids, contact lists, and guides

### IMPLEMENTATION TUTORIAL

AAMVA has developed an FDR Implementation Tutorial to accompany the printed Implementation Guide. Learn how to use FDR in the classroom, distribute electronically, or install on a Learning Management System. The tutorial is included in each download pack, or can be viewed directly on the AAMVA website.

### FDR CHANGE REQUEST TOOL

Have an idea for new or modified course material? AAMVA welcomes all suggestions to improve FDR content. AAMVA has implemented an easy process to submit your feedback and track its progress from submittal through implementation. Visit the website below for more information.

[aamva.org/fdr-training](https://aamva.org/fdr-training)



American Association of  
Motor Vehicle Administrators



**OUR VISION**  
*Safe drivers  
 Safe vehicles  
 Secure identities  
 Saving lives!*



# INTERNATIONAL CONFERENCE

DENVER, CO  
 AUGUST 31-SEPTEMBER 2

We are excited to announce the 2021 Annual International Conference (AIC) will be held **in person** in Denver, CO! On behalf of Chair of the Board, Mike Dixon, we are looking forward to bringing everyone together for AAMVA's premier event to share experiences and learn. Your health is our primary concern, so we will be instituting recommended safety measures and precautions. Denver, with its beautiful scenery, active downtown, and wide-ranging cuisine, is the perfect backdrop for our return to in-person events. This year, along with our usual rich session content, we will also focus on important COVID-19-related topics – such as COVID's impact on customer service, driver testing, and highway safety behaviors, and how to return back to the office safely and effectively. It has been over a year since the AAMVA community came together in a physical space, and we are looking forward to seeing old friends and making new ones.

Register online at [aamva.org](http://aamva.org)

**PRESIDENT & CEO**  
 Anne Ferro

**VICE PRESIDENT, MEMBER SERVICES & PUBLIC AFFAIRS**  
 Ian Grossman

**DIRECTOR, MEMBERSHIP, MARKETING & COMMUNICATIONS**  
 Noemi C. Arthur, MBA

**COMMUNICATIONS & MULTIMEDIA MANAGER**  
 Claire Jeffrey | [cjeffrey@aamva.org](mailto:cjeffrey@aamva.org)

**MEDIA SERVICES PROVIDED BY GLC**  
[www.glcdelivers.com](http://www.glcdelivers.com)

**VICE PRESIDENT, CONTENT STRATEGY**  
 Rene Ryan

**EDITORIAL STAFF**  
 Brad Causey  
 Scott Mason  
 Megan Kramer

**ART DIRECTOR**  
 Elissa Chamberlain

**EDITORIAL**

Have a story to share? Email us at [move@aamva.org](mailto:move@aamva.org).

MOVE Magazine is the winner of



2014 APEX Award for Publication Excellence



2014 Pearl Award



2015 & 2016 AM&P Excel Gold Awards



2017 Hermes Creative Award

2015 & 2017 Ozzie Awards for Cover Design



2020 Hermes Creative Award for Drivers of Success Podcast

**2020-2021 BOARD OF DIRECTORS**

Chair of the Board | Mike Dixon, Colorado  
 Vice Chair | Christine Nizer, Maryland  
 Secretary | Kristina Boardman, Wisconsin  
 Treasurer | Richard Holcomb, Virginia  
 Member at Large | Spencer Moore, Georgia  
 Immediate Past Chair | Whitney Brewster, Texas  
 Ex-Officio | Anne Ferro, AAMVA

John Batiste, Washington; Christopher Caras, Utah; Terri Coombes, Illinois; Walter R. Craddock, Rhode Island; Clayton Boyd Dickerson-Walden, Florida; Alberto Gonzalez, Idaho; Roger Grove, Alberta; Torre Jessup, North Carolina; Eric Jorgensen, Arizona; Peter Lacy, Indiana; Sibongile Magubane, Connecticut; Charles Norman, Ohio; Gabriel Robinson, District of Columbia; Kevin Shwedo, South Carolina

**COPYRIGHT**

©2021 by the American Association of Motor Vehicle Administrators. All rights reserved. Materials may not be reproduced without written permission, except for educational purposes where fewer than 100 copies are being reproduced. Email copyright questions to [move@aamva.org](mailto:move@aamva.org).

The opinions in this publication are those of the authors and not necessarily those of AAMVA or its officers or directors.

**ADVERTISING SALES**

Robert Stershic, Sales Manager,  
 Business Solutions  
[rstershic@aamva.org](mailto:rstershic@aamva.org)  
 703-908-2825 (work)  
 703-839-0647 (cell)

**POSTMASTER**

Send address changes and circulation inquiries to:  
 MOVE Magazine  
 AAMVA  
 4401 Wilson Blvd., Suite 700  
 Arlington, VA 22203

Printed in the United States of America.



**OUR VISION**  
*Safe drivers  
 Safe vehicles  
 Secure identities  
 Saving lives!*

MOVE is the publication of the American Association of Motor Vehicle Administrators. For more information, visit [www.aamva.org](http://www.aamva.org).

# Strengthen Your ID Documents

Thales mobile Driver's License and Digital ID Wallet bring leading-edge features specifically designed in accordance with NIST, AAMVA, and ISO standards for security and interoperability.

Empower your ID documents with a secure mobile companion from Thales.





# 16

## AN INTELLIGENT SOLUTION

How DMVs are using artificial intelligence to improve service

BY ANDREW CONNER

# 24

## WHAT LIES AHEAD

AAMVA partners with industry experts to detail where DMV operations are headed in the future

BY MELANIE D.G. KAPLAN



## IN THE HEADLIGHTS



FROM THE  
PRESIDENT

**05** Pandemic trends to keep—and some to leave behind

**06**

**EDUCATION**  
AAMVA publishes Managing Data Privacy and External Access Best Practice

**10**

**INDUSTRY INSIGHT**  
Nevada DMV upgrades scheduling and queuing system, earning fans on social media

**14**

**MUSINGS**  
In 20 years, what will be the biggest change at DMVs?

**08**

**JURISDICTION SPOTLIGHT**  
Using drones for reconstructing crash scenes

**12**

**DASHBOARD**  
Latest AAMVA surveys on online services

**15**

**AAMVA CROSSWORD**  
Test your wits and motor vehicle knowledge



BEHIND THE WHEEL

**30** Q&A with MADD National President Alex Otte



CROSSROADS

**32** Law enforcement agencies are using new technologies to better meet the needs of their departments and the people they serve

TAILLIGHTS

**36** DMV business should continue to include virtual offerings after pandemic ends

## ONLINE EXCLUSIVES

Don't forget to visit [MOVEmag.org](http://MOVEmag.org) to read the latest web exclusives.

**AAMVACAST EPISODE 45** - AAMVA speaks with Robert Ritter, NHTSA Director of the Office of Impaired Driving and Occupant Protection, about Distracted Driving Awareness Month and efforts to keep drivers focused and safe on the roads.



# Move Forward—In Safety

## PANDEMIC TRENDS TO KEEP, AND THOSE TO LEAVE BEHIND

Spring is in the air and COVID-19 vaccinations are in full swing, bringing the hope that we are teetering toward good health. The sense of hope is also a reminder to reflect on things we want to keep from the past year and things we want to leave behind.

This issue of *MOVE* helps us sort through those reflections, illustrating the forward momentum the DMV and traffic safety communities sustained throughout the pandemic in their innovative, nimble and collaborative approaches to serving the public when other agencies shut down.

There were already trends developing in technology and customer desire for remote and online services, captured in the *Trends Impacting DMVs of the Future* report. There is no doubt the pandemic accelerated deployment of solutions that will support and advance these trends.

Among the DMV changes that were new and not trending before the pandemic was remote work. This may be a pandemic-derived change that will stick, as DMVs find ways to retain the flexibility of remote work in concert with data privacy, digital identity and customers' desires for "touchless service."

As this issue highlights, DMVs are not just meeting the future head-on—they are making it their own.

Also featured in this issue of *MOVE* is the innovative crash investigation work carried out by the Washington State Highway Patrol with the help of drones. It

is a good example of new technologies deployed to achieve safe crash response and investigation, which have long been challenges.

But what if we did not have serious and fatal crashes at all? What will it take to get to zero?

During the pandemic, according to the National Safety Council's estimates, **roadway deaths in 2020 rose 8% while miles driven went down 13%**. In other words, driving was less safe during the pandemic, resulting in an estimated 42,060 deaths and 4.8 million serious injuries from vehicle crashes in 2020.

The National Transportation Safety Board's *Most Wanted List of Safety Improvements* emphasizes the human factors of impairment, distraction and speeding. These are not new behaviors, but the new intensity leading to a dramatic rise in crashes is a pandemic trend we want to shed for good.

The Governors Highway Safety Association (GHSA) recently published timely resources to help DMV and traffic safety officials understand and strengthen countermeasures to reverse this trend:

- › *Using Electronic Devices While Driving: Legislation and Enforcement Implications*
- › *Teens and Speeding: Breaking the Deadly Cycle*
- › *High-Risk Impaired Drivers: Combating a Critical Threat*

There are many reasons to be excited about the changes afoot. There is also cause for pause over the frightening increase in crashes. Let us take time to read and reflect on the behaviors and technologies we want to preserve and advance, and those we want to leave behind in the months ahead.

We can all find joy on this journey while we hold firm to our lifesaving vision. See you soon. **m**

Anne Ferro  
AAMVA President and CEO



# in the **headlights**

- news
- statistics
- events
- education

education

## Personal Protection



## AAMVA PUBLISHES MANAGING DATA PRIVACY AND EXTERNAL ACCESS BEST PRACTICE

**M**otor vehicle agencies (MVAs) collect and store vast amounts of data, much of it containing personally identifiable information (PII). Past incidents of data being stolen from government and commercial entities have made consumers understandably nervous about the security of their information. MVAs are faced with the increasing challenge of balancing transparency with their obligation to protect personal data.

AAMVA is helping MVAs navigate this challenge with the *Managing Data Privacy and External Access Best Practice* report, published in February. The introduction states, “This document is a best practice guide for motor vehicle agencies to protect driver and vehicle records, provide access and authorize usage consistent with law, and apply effective and efficient approaches to internal and external audit practices.”

Although there are numerous data privacy documents, resources and information written for private companies, until now, nothing existed that addresses the specific complexities of MVAs. The Best Practice report was developed over a two-year process by a working group that included 12 jurisdictional experts who run data privacy programs in their jurisdictions. They took the unusual approach of opening the working group to other industry representatives, ultimately consulting with more than a dozen organizations, including private companies and law enforcement, to learn about various privacy practices and procedures.

*One of the key components of the Best Practice report is data governance.*

This broad input allowed the working group to create the first comprehensive document on privacy protection that is tailored to MVAs.

One of the key components of this document is data governance, covered in Chapter 1. Data governance is the framework of rules, processes, responsibilities and formal decision-making used to manage data. In a 2019 AAMVA survey of MVAs, only about half of respondents were aware of a data governance program at their agency. The remainder indicated they did not have a data governance program, they were not sure if their jurisdiction governed the use of data, or they were not familiar with data governance. The Best Practice report provides data governance models that will be useful to a variety of MVAs, from those that lack data governance to those that want to enhance their current structure.

Another highlight of the document is the chapter on compliance and audits. A compliance and audit program ensures that appropriate policies and procedures are in place

and helps enforce data protection requirements. This chapter covers how to monitor data recipients’ use of access to MVA records to make sure outside organizations are receiving PII appropriately and protecting it as much as the MVAs.

Sharing data is an essential function of MVAs. The Driver Privacy Protection Act (DPPA), as well as local laws, protect PII in the United States, and they also permit or require disclosure for certain reasons, such as motor vehicle or driver safety and theft. In order to balance the dual obligations to share data and keep it safe, every MVA must have robust practices in place to manage data privacy and external access of PII. AAMVA’s Best Practice report provides a much-needed comprehensive look at how to do just that. **m**

**find out more** 

ACCESS THE MANAGING DATA PRIVACY AND EXTERNAL ACCESS BEST PRACTICE AT [AAMVA.ORG/BEST-PRACTICES-AND-MODEL-LEGISLATION](https://www.aamva.org/best-practices-and-model-legislation).



*Drones can fly to collision scenes like this train derailment and capture photos quickly, decreasing investigation and road closure time.*



# Aerial Views

*WASHINGTON STATE PATROL USES DRONES FOR RECONSTRUCTING CRASH SCENES*

BY KATHLEEN HAGAN



Since the Washington State Patrol (WSP) fully deployed its unmanned aerial vehicle (UAV) program in 2019, the amount of time its detectives and troopers spend at the scene of a fatal or felony collision has decreased dramatically. Thanks to the ability of UAVs to fly over a scene and capture photographs quickly, there has been an 80% reduction in road closure times related to scene measurement and investigation in the state.

“That time savings is huge,” says Detective Eric Gunderson, Tech Liaison with the WSP. Especially in more remote parts of the state where it can sometimes take a trooper an hour or more to get to the scene, being able to cut down on the amount of time spent photographing and measuring on-site has made a significant difference.

Efficiency isn’t the only benefit of the UAV program, however. Another advantage to using drones is that detectives are able to see new elements and angles of the scene they didn’t have access to before. “With our old equipment, we were setting a 3D scanner on top of a tripod and were limited to what we could capture on foot,” says Lieutenant Ryan Durbin of the WSP’s Criminal Investigation Division. UAVs allow for a complete aerial

*The Washington State Patrol's UAV program isn't used exclusively for roadway scenes. The drones have been employed to map a crane collapse in Seattle, show overhead views of burned out buildings and reconstruct train derailments.*

view with millions of measurement points that ultimately provide the WSP with a 3D model of the scene.

With 111 UAV pilots and units across the jurisdiction, Detective Gunderson says the WSP's UAV program is one of the largest in the United States. But it didn't happen overnight—it took multiple years of learning about the technology, developing and refining the program and training pilots before things really took off.

“As a government entity, we could have chosen to self-certify [our program], but we decided not to go that route,” Detective Gunderson says. “We made sure we did what everyone else has to do, which is testing through the Federal Aviation Administration (FAA Part 107) to get a remote pilot's license.”



*Drones can capture multiple angles of a scene that can't always be captured by someone on foot.*

For other law enforcement agencies looking to emulate the success of the WSP's program, which won AAMVA's 2020 International Innovative Use of Technology Award, Detective Gunderson says understanding the goals and mission of any UAV program is a critical first step. “There's no one-size-fits-all approach,” he says. “The equipment and software that works well for a collision reconstruction program is going to be different than what's ideal for a search-and-rescue mission, for example.”

The WSP has helped provide recommendations, training and advice to countless agencies as they seek to start their own UAV program within their jurisdiction. “It is always nice to be recognized [by AAMVA] for hard work and pioneering new techniques, and seeing other agencies develop this capability has been exciting and rewarding,” Lt. Durbin adds. “It helps the profession by keeping investigations safe and improving their quality.” **m**

Hear more about Washington's AAMVA Award-winning drone program on Episode 36 of AAMVAcast: [bit.ly/3ufqGzc](https://bit.ly/3ufqGzc).

## TYPICAL UAV COLLISION SCENE WORKFLOW PROCESS



PREP & PLAN

Walk the scene to identify and locate evidence.

Identify the points of interest within the scene and mark evidence as necessary.

Develop a plan for how much of the scene is desired for the 3D model.

Evaluate the scene and identify any areas of concern (e.g., trees or overhead obstacles) for overhead flights; complete preflight checklist/safety check of UAV unit.

Lay down ground control points for scale reference—this helps create an accurate model and verify measurements.



DRONE FLIGHT

Fly scene with visual observer.

Recover UAV, check the unit and complete post-flight inspection.

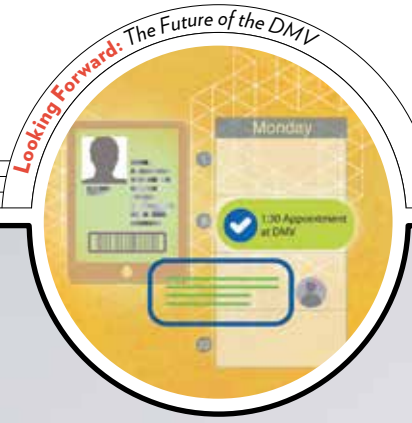
Complete pilot log for flight.



3D MODELING

Utilize photogrammetry software to compile 3D model.

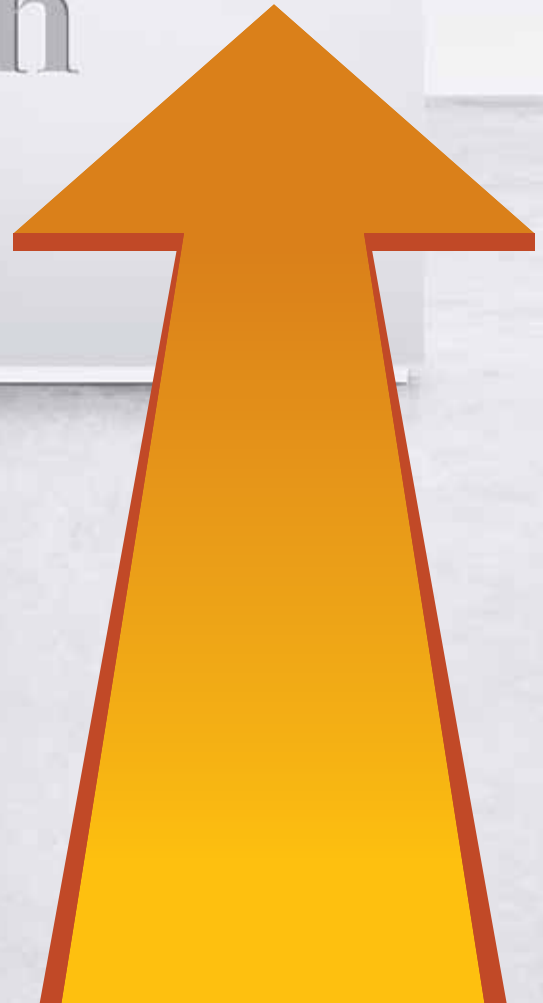
Transfer data from photogrammetry software to mapping software for measurements and scene workup/final product.



 industry insight



# Right On Queue



## UPGRADES TO THE NEVADA DMV SCHEDULING AND QUEUING SYSTEM IMPROVED WAIT TIMES AND EARNED THE JURISDICTION DEVOTED FANS ON SOCIAL MEDIA

BY MEREDITH LANDRY

What's the first thing that enters customers' minds when they think of the DMV? For many people, the answer would be: "Waiting in line."

As one of the busiest jurisdictions in the country, the Nevada DMV is no stranger to long lines. Four years ago, at the Las Vegas-headquartered DMV, customers often waited in line for a couple hours to be seen.

Today, however, most folks are at the front of the line within 30 minutes.

How did they make such a huge improvement?

In 2018, Qmatic, a customer journey analysis software provider headquartered in Molndal, Sweden,

replaced the DMV's outdated queuing system with a more robust one—the Orchestra Enterprise Customer Journey Management platform—which includes queuing, appointment scheduling and text message notifications to customers.

Since the upgrade, Qmatic has helped the Nevada DMV reduce wait times by 42%—but that's not all. "It has also helped us to keep the crowd outside under control, and it's taken a lot of stress off of our staff," says Tonya Laney, a field services administrator at the Nevada DMV's Reno office.

Out of the Nevada DMV's 18 offices, 12 already have the Orchestra system, and there

are plans to upgrade the remaining six offices soon, Laney says.

"I can go on a dashboard and see what's happening at each location, including wait time, average transaction time and even which service is being offered at which window," Laney says. "It's a huge help when you can't be in all offices at once."

In addition to the queuing and scheduling system upgrade, the Nevada DMV added Qmatic's Mobile Ticketing program to their system. With Mobile Ticketing, customers receive regular text updates so they know exactly where they are in line and when it is time to come inside the DMV.

"You don't have to sit in a waiting area or stand in line outside. You get your virtual ticket, then you can run an errand, get some food or do whatever," says Kirk Lyle, enterprise sales executive for Qmatic in Atlanta. "It improves the customer experience and also helps to keep everyone socially distanced."

During the COVID-19 pandemic, a large number of people moved into the state of Nevada, Laney says. Because they weren't already in the local system, they had to go into the DMV in person. With Mobile Ticketing, maintaining a safe distance in line was much easier.

As with any new system, there were growing pains. Qmatic ran a 30-day pilot program at the Nevada DMV, during which time they learned which aspects of the platform were working and which weren't. Those technological changes were implemented, but some challenges took more time to overcome.

"The biggest challenge was having to do a culture shift with our employees and customers," Laney says. "But we listened to feedback, made changes and now everyone seems happy with it."

Employees are certainly satisfied with the new system upgrade, but customers "love" it, according to Laney.

"If anyone ever complains about us on social media, customers are quick to jump in and defend us and say what a positive overall experience we gave them," she says. "Customers seriously love the new system." **m**

*"You don't have to sit in a waiting area or stand in line outside. You get your virtual ticket, then you can run an errand, get some food or do whatever."*

**KIRK LYLE**

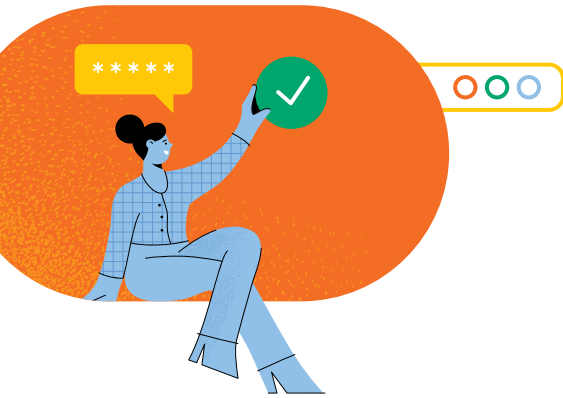
Enterprise Sales Executive, Qmatic

 dashboard

# ONLINE SERVICES

BY AAMVA'S DATA LADY, JANICE DLUZYNSKI

Many jurisdictions have been moving more of their services online since the beginning of the pandemic. Here are the most recent surveys related to online services. All surveys have additional questions that provide more information. Full details of these surveys can be found at [AAMVA.ORG/SURVEY/USER/SEARCH.ASPX](https://www.aamva.org/survey/user/search.aspx).



### ONLINE RENEWALS AND ADDRESS CHANGES

37 RESPONSES

#### DOES YOUR JURISDICTION ALLOW LICENSE RENEWALS TO BE DONE ONLINE?

Yes: 

No: 

#### IF ONLINE RENEWALS ARE ALLOWED, DOES YOUR JURISDICTION ALLOW ADDRESS CHANGES TO BE DONE WITH THE ONLINE RENEWAL?

Yes: 

No: 

#### DOES YOUR JURISDICTION ALLOW ADDRESS CHANGES FOR REAL ID TO BE DONE ONLINE?

Yes: 

No: 

No response provided: 

### ONLINE KNOWLEDGE TESTING

32 RESPONSES

#### DO YOU CURRENTLY OFFER AN ONLINE KNOWLEDGE TEST SOLUTION FOR A NON-COMMERCIAL DRIVER'S LICENSE?

Yes: 

No: 

#### IF YOU DO NOT HAVE AN ONLINE KNOWLEDGE TEST, HAVE THERE BEEN DISCUSSIONS TO IMPLEMENT ONE?

Yes: 

No: 

No response provided: 

### MAXIMUM AGE FOR ONLINE DL RENEWAL

37 RESPONSES

#### DO YOU ALLOW ONLINE RENEWALS FOR APPLICANTS OVER THE AGE OF 65?

Yes: 

No: 

### ONLINE DUPLICATE DL/ID ISSUANCE

36 RESPONSES

#### CAN AN APPLICANT APPLY ONLINE FOR A DUPLICATE LICENSE OR ID CARD?

Yes: 

No: 



Listen to the "Digital Service Delivery" webinar at [aamva.org/AAMVA-Conference-Sessions-Series](https://www.aamva.org/AAMVA-Conference-Sessions-Series).

# SAFE. SECURE. RELIABLE.

DIGITAL SERVICES ANYTIME, ANYWHERE.



**DMV@Home™** is a trusted platform that accelerates the shift from DMV in-office services to remote consumer-initiated transactions to meet the immediate needs of residents while laying the foundation for long-term digital transformation.

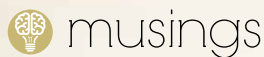
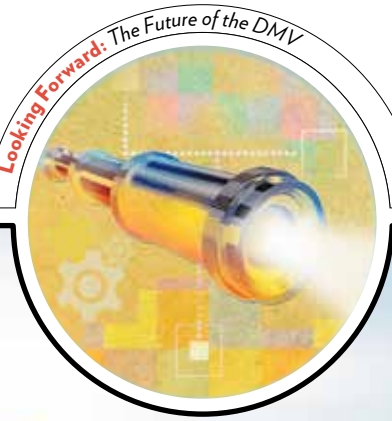
## ELEVATE THE CUSTOMER EXPERIENCE WITH MODERN WEB-BASED TRANSACTIONS

- > Photo Quality Analysis with Background Replacement (ICAO/ISO)
- > e-Driver Services: REAL ID & non-REAL ID
- > Document Scanning & Authentication
- > e-Vehicle Services: Title & Vehicle
- > Photo Capture & Liveness Detection
- > Facial Recognition Verification
- > Payment Processing
- > Signature Capture



**VALID**

**VALID.COM**  
CONNECT WITH US ON LINKEDIN



{THIS MONTH'S QUESTION}

## IN 20 YEARS, WHAT WILL BE THE BIGGEST CHANGE AT DMVS?

**Matt Cole, Director, Division of Driver Licensing, Department of Vehicle Regulation, Kentucky Transportation Cabinet**

*As we progress into the next era of credentialing, our dependency on brick-and-mortar buildings should decrease greatly. We have already moved into the future with widespread online renewal services introduced in many jurisdictions.*

*I believe that DVR will see a large departure from our current structure, with the focus becoming more on online identity services. The digital identity world is going to be such a large portion of any services and goods we will look to obtain and how we protect those identities.*

*The speed at which these innovations become widely available will be of great interest to the DMV community as we work to perfect what we do now, while we look to the horizon for those foreseeable and innovative changes that we know are on the way. What we do know is that we will lead the way with great customer service and a desire to meet all the growing needs of our communities.*

**Marla McHughes, Assistant Administrator of Driver Services, Arkansas Department of Finance & Administration**

*There will be no paper, everything will be electronically generated directly to and from the DMV. There will be no reason for an in-person visit to an office and the offices will disappear.*

**Patrick Fernan, Deputy Administrator, Wisconsin Department of Transportation, Department of Motor Vehicles**

*DMVs will be providing birth and death records, hunting and fishing licenses, and other state services along with current products.*

**Susan Guyer, Chief Communication & Engagement Officer, Indiana Bureau of Motor Vehicles**

*The biggest change will be the user-driven transaction experience. Today, jurisdictions offer customers options to complete transactions in person, at a kiosk, online, by phone or through an app. But in many instances, how the customer can complete the transaction is actually dictated by the transaction itself rather than user preference. Many transactions require physical documents, wet signatures or updated photographs. As technology expands to include document scanning, user authentication and more automated processes such as the expansion of electronic lien and title, users will have more flexibility to demand a seamless experience at whatever location—virtual or in-person—they choose to utilize.*

**Derek Kuhn, DMV Communications Specialist, Colorado Department of Revenue**

Autonomous vehicles will need to be registered, or the artificial intelligence behind it will need to be licensed in some fashion.

**Lisa Danetz, Democracy Fund**

DMVs (at least physical offices and online services) will transform to become state resident service centers, providing one stop for a broad array of state services.

**John E. Bredehoff, Strategic Marketing Manager, IDEMIA**

Reduced need to go to a physical DMV. Behind-the-wheel tests will still be needed, but COVID-19 has accelerated the move toward online operations, even for the presentation of required documents.

**Minnesota Driver and Vehicle Services, from @MnDPS\_DVS via Twitter**

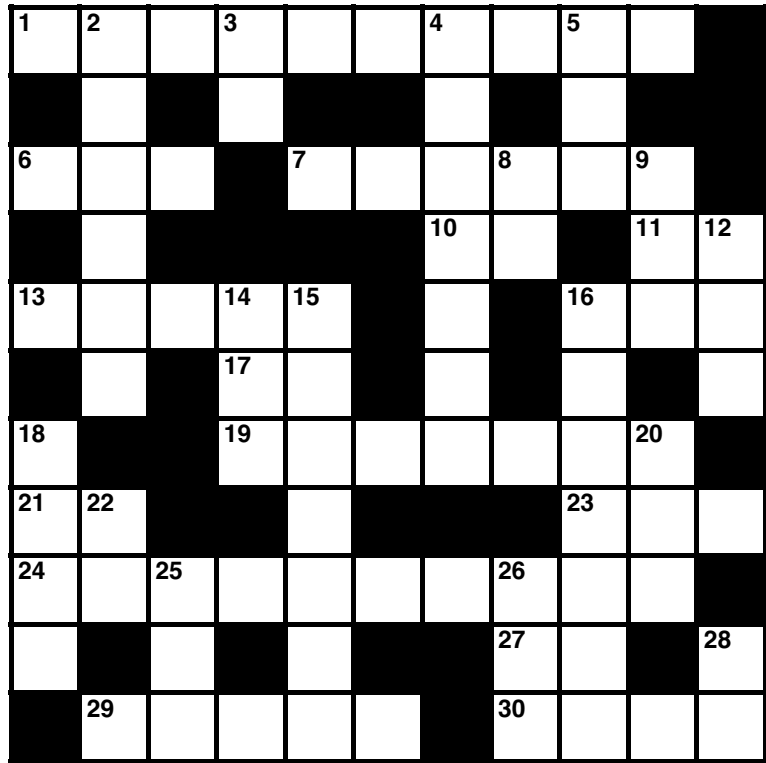
Mobile identification cards, electric vehicles and expanded online services on mobile devices will be the biggest changes in the next 20 years.

**Vermont Department of Motor Vehicles, from @VTDMV via Twitter**

We will move from fuel taxes to some sort of mileage tax. The proliferation of electric vehicles will force change to how highways are funded.

**South Carolina Department of Motor Vehicles, from @SC\_DMV via Twitter**

In 20 years, DMVs will be exclusively virtual. Transactions will all be performed online. Autonomous vehicles will negate the requirement for driver licenses. ID cards will transition to biometrics, effectively eliminating the need for credentials as we know them. In fact, the biometric identification confirmation process will begin at birth. **m**



**ACROSS**

- 1 The A in AI
- 6 Administrative org., for driver licenses and vehicle registration, abbr.
- 7 Custom applications for this can help customers find what they need on a DMV's website
- 10 Super Bowl score
- 11 Raise
- 13 Begin
- 16 Stop signal color
- 17 What?
- 19 Digital
- 21 Billboard feature
- 23 Winter month, abbr.

- 24 Increasing problem for DMVs during the pandemic, reduced by using technology and automated solutions, 2 words
- 27 Not applicable, abbr.
- 29 Grocery store booth that has been used successfully for renewals in some DMV jurisdictions
- 30 Available for business

**DOWN**

- 2 Keyword that highlights a key trend for the future operations of DMVs (applies to work location and services)
- 3 Popular

- 4 Automated technology for communication with customers
- 5 Alphabet start
- 8 Urban thoroughway, abbr.
- 9 Color
- 12 Handheld, abbr.
- 14 Accelerate, with "up"
- 15 Ransomware operatives, essentially
- 16 General plan for the future, 2 words
- 18 One side of a driver's license
- 20 Shelter at sea
- 22 Prosecutor, abbr.
- 25 Hawaiian wreath
- 26 One in Spanish
- 28 Operating

# AN INTELLIGENT SOLUTION





# HOW DMVs ARE USING ARTIFICIAL INTELLIGENCE TO IMPROVE SERVICE

BY ANDREW CONNER





**W**hen doing a title transfer or updating a license to REAL ID, imagine being able to know before your customer comes into the office that not only do they have all the forms they need, but the form information is also accurate and correct. It sounds like a dream, but it is very real and just one of the ways artificial intelligence (AI) can aid motor vehicle departments.

“We piloted intelligent document processing with the REAL ID use case,” says Ajay Gupta, chief digital transformation officer at the California Department of Motor Vehicles. “The customer uploads the documents that prove their identity and we created an AI-augmented process where the AI takes the first stab at processing the documents. If it doesn’t know what to do, we pass it along to the human queue.”

While this is one of the more advanced applications of AI in the DMV space, it gives a glimpse of the future of DMVs—empowering staff to increase

efficiency with the aid of technology. And although DMVs have been investigating this technology for years, the coronavirus pandemic has highlighted its importance. With call center volumes booming due to office closures, canceled appointments and a general wariness of the public to visit offices, doing more with less has never been more important for the motor vehicle services industry.

### LET’S HAVE A CHAT

Even before the pandemic necessitated a stronger online presence for most DMVs, many jurisdictions had experience with AI technology. One of the most common uses is a website chatbot that can interact with customers and direct them to the right place, ideally without ever talking to a human.

“The No. 1 AI application we’ve seen is chatbots,” says Eric Paternoster, president & CEO at Infosys Public Services, a consulting and technology solutions company that works with DMVs to accelerate their digital transformation. “Chatbots are an ideal way to ease into the process of incorporating AI. If you think about the standard construct of AI—where you go through the process of discover, learn, sense and respond—that is the classic AI sequence that any AI application should follow and it’s easy to comprehend with the chatbot.”

“I think incorporating technology into our process is one of the most important things we’re doing right now,” says Lacey Black, Driver Solutions Manager at the Kansas Department of Revenue. “We need to keep up with the times and if we’re not expanding

*“We need to keep up with the times and if we’re not expanding or implementing new technologies, our interactions with customers aren’t going to be as positive as they can be.”*

**LACEY BLACK**

Driver Solutions Manager, Kansas Department of Revenue



or implementing new technologies, our interactions with customers aren't going to be as positive as they can be."

Black and the Kansas DOR implemented an AI-assisted chatbot on their website about three years ago. Another Kansas agency was already using the technology, so Black and her team got into contact with that agency and brought it to the DOR. "I would say the biggest benefit is the reduction in phone calls," says Black. "We've had a really high answer rate in our call center the past year and I think the chatbot reducing call volume has a lot to do with that."

Joseph Cotton, bureau chief of customer service at the Florida Department of Highway Safety and Motor Vehicles, had a similar experience with a chatbot when his jurisdiction implemented it in November 2020.

"It literally does 100,000 contacts per month," he explains. "It allows customers to get answers to their questions,

get directed to the appropriate place on our website and facilitate self-service items. It has been a bit of new technology that has been welcomed."

For jurisdictions that haven't yet implemented chatbot functionality, but are looking into it, Black and Cotton recommend taking your time with testing to ensure a successful launch. "In Florida, the processes and actions associated with implementation can get nuanced and complex, and the vendors are

Florida's chatbox has 100,000 contacts with customers per month.



Chatbots can help customers find what they need, reducing call volume.

not going to understand those nuances," Cotton says. "From a service center standpoint, we have to provide that knowledge. We created the product flows, and after they applied those flows, we would test it to make sure it's working appropriately. We were pretty engaged in the process."

## BEYOND THE BOTS

While they are by far the most common, chatbots aren't the only way jurisdictions are taking advantage of AI to solve problems. The South Dakota Motor Vehicle Division uses search engine technology on their website that acts similarly to a chatbot.

"It's an interactive search engine," says Ashley Zilverberg, Information & Data Services Supervisor for the South Dakota MVD. "The need for it came from our contact centers. Previously, it was really difficult getting customers where they needed to go on the website. Now, for a lot of things, our agents can help them find what they need more easily."

Other AI offerings, such as contact center technology that can answer questions and redirect calls to the service center, also share a lot in common with chatbots in that they operate based on a workflow created by the jurisdiction.

"The first AI use case we actively pursued was a chatbot channel on our website," Gupta says. "And after that, the voice channel came out of necessity because we had a large backlog and were looking for alternatives to work through it. It started with offering the [AI-enabled] smart assistant while customers were waiting on hold, which was successful. Now, we have the smart assistant option right at the front. We are actually working to get our entire IVR [(interactive voice response)] system converted to an AI-based model where customers will be able to speak to the AI using a text-to-speech function."

Gupta and the California DMV are on the cutting edge of implementing AI technology, going even further than live chat and intelligent document processing. In addition to piloting AI-augmented proctors for virtual written drivers' exams—the AI would monitor a video feed of the customer taking the test and flag any potential issues for a human to review—the California DMV is also looking into AI to help optimize workforce management.

"It's a very complex problem," Gupta says. "We have different classifications, different skill sets, different locations, so how do we optimize our schedule for our workforce? How do we create the flexibility they need? We are looking at solutions that use AI and machine learning at their cores to optimize schedules." ▶



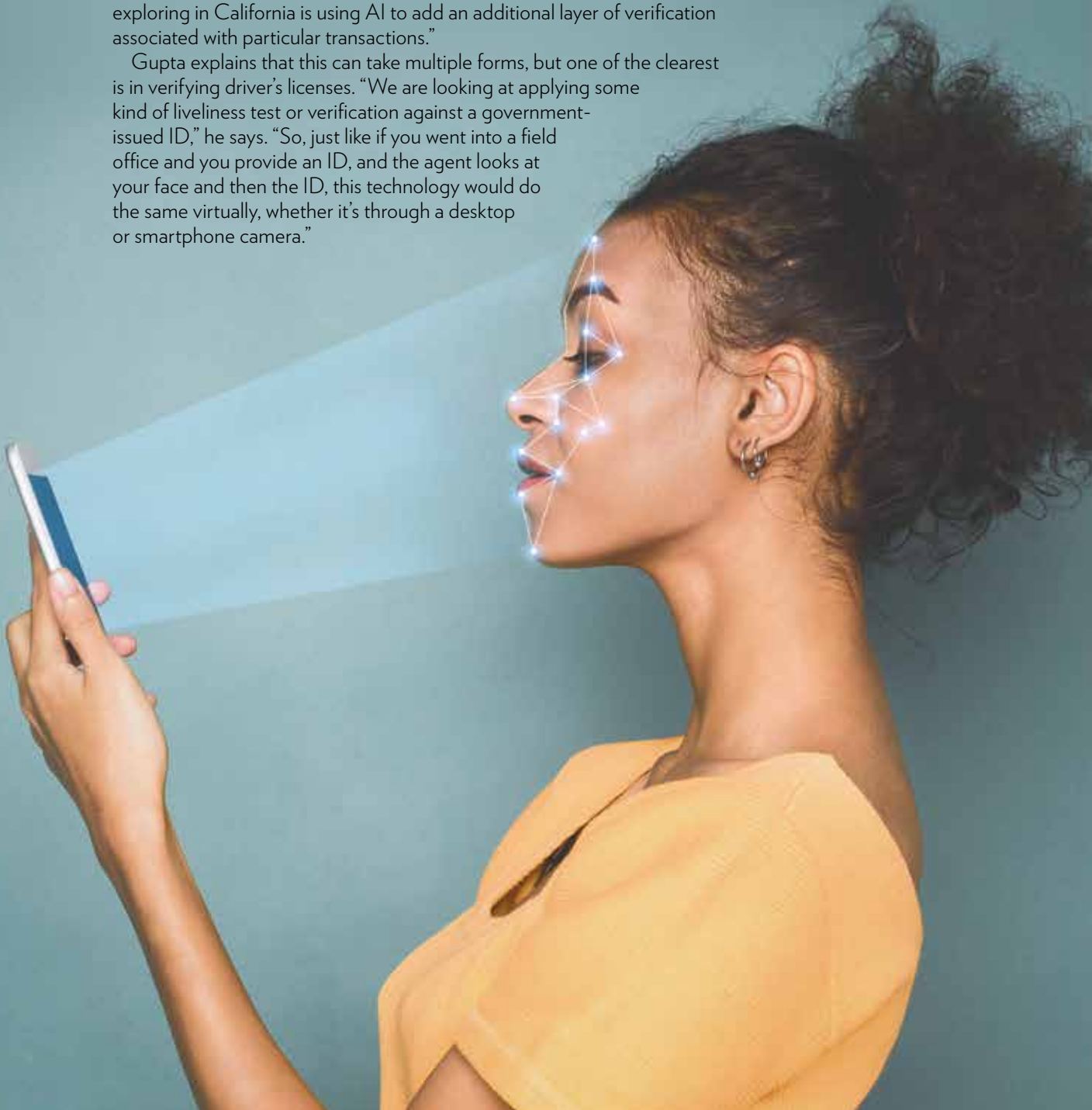
technology

## GETTING SMART ON FRAUD

In addition to customer service applications, another emerging area that artificial intelligence (AI) can help motor vehicles departments with is fraud detection.

“In today’s world, with the digital channel comes ease of use, but it also comes with the ease of fraud,” says Ajay Gupta, chief digital transformation officer at the California Department of Motor Vehicles. “What we’re exploring in California is using AI to add an additional layer of verification associated with particular transactions.”

Gupta explains that this can take multiple forms, but one of the clearest is in verifying driver’s licenses. “We are looking at applying some kind of liveliness test or verification against a government-issued ID,” he says. “So, just like if you went into a field office and you provide an ID, and the agent looks at your face and then the ID, this technology would do the same virtually, whether it’s through a desktop or smartphone camera.”



## MAKING THE CASE FOR AI

It's clear that AI has numerous applications in the motor vehicle space, and those options will only continue to increase as new technologies are developed. However, for many jurisdictions, making the budgetary case for incorporating a new technology can be just as important as that technology's potential applications.

"In the past year, a lot of DMVs have seen budget constraints with public budgets understandably going to higher priority items like unemployment insurance claims processing or public health initiatives," Paternoster says. "Maybe they weren't able to go through with the modernization effort they were planning for in 2020. I think we'll probably see an explosion in adoption of new technologies from pent-up demand."

For Florida, budget constraints are part of what helped Cotton make the case for implementing an AI chatbot last year. "The value of technology has gone up," he says. "We recognize that something else like [the pandemic] could happen again and we want to know how we will be situated in a way to continue operations if it does. That was one of the driving reasons why we adopted the chatbot: We felt the effects of an economy that's been badly hurt. The dollars we receive are driven by the public and we want to make those dollars as effective as possible. The way to do that is leaning more into technology."

The Georgia Department of Driver Services is currently in the process of implementing an AI-enabled voice assistant, a project which is largely driven by increased call volume due to the pandemic.

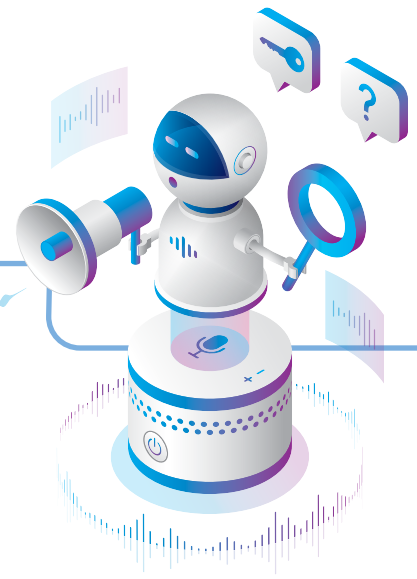
"Since the pandemic started, our call volume has increased by 73% or about 860,000 additional calls," says Kecia Bivins, Director at the Georgia DDS. "We only have 55 agents and there is no way our agents can meet that demand. We definitely want to leverage this technology to better serve our customers."

## PREPARING FOR THE FUTURE

Making the decision to implement an AI-enabled technology is just the beginning. As with any large project undertaken by a motor vehicle department, planning is paramount to success.

"I think the most successful agencies take two often separate approaches and merge them: You do pilots and proofs of concept to test things out properly, but you also take a step back and look at the bigger picture," Paternoster says. "If you just go ahead and spend a bunch of money and implement a new technology without thinking about how it fits

*AI-enabled voice assistants can answer and complete calls, reducing the demand on agents.*



Georgia DDS's call volume has increased by 73% or about 860,000 additional calls during the pandemic.

into your organization, you might miss an opportunity to combine the technology with another goal you're working toward. The best way to look forward is to think holistically about how these technologies can work together to solve different problems more effectively. Once DMVs have this view, they can look at incorporating AI-related requirements into their RFXs for broader modernization and digitization efforts.

"As DMVs navigate to a higher AI maturity level, they'll be able to leverage automated data-science platforms to analyze different type of data sets—from the traditional licensing and registration records to data from IoT/connected devices and traffic-related information to generate predictive and prescriptive insights, like identification of high-risk drivers."

From his experience implementing multiple new technologies at the California DMV, Gupta suggests planning ahead, but also starting

slowly and learning along with the AI.

"You don't need to solve all your complex problems right away," Gupta says. "You want to start small. You also want to plan for treating AI as an employee who's just learning. This means you need to spend time with it and train it. So you need to be ready to spend the upfront effort to train the models, and also assume that initially it will have below-par throughput as it is learning. You want to make sure your organization is really treating AI as an augmentation rather than a replacement."

For anyone in the motor vehicle services industry who is wary of involving AI in their workflow, Gupta makes a key point: AI is not here to replace humans, but to augment them. It should relieve customer service agents of the menial and tedious tasks they often spend time on and, therefore, allow them to focus on more complex problems. While AI is currently in its infancy, its value to the motor vehicle services industry will only grow. **m**

## go online

FIND MORE ARTICLES ABOUT HOW DMVS ARE UTILIZING TECHNOLOGY AT [MOVEMAG.ORG](https://www.move.org).

# ***TAKING THE AIR OUT OF TIRES TO IMPROVE AUTOMOTIVE SAFETY***

*Non-pneumatic technology has tremendous potential to enhance motor vehicle safety by reducing risks associated with improper tire pressure, which may cause tire failures, skidding or loss of control, and increased stopping distance.*

- ▶ *Michelin Uptis is an airless mobility solution for passenger vehicles, which reduces the risk of flat tires and tire failures that result from punctures or road hazards.*
- ▶ *The breakthrough airless technology of the Michelin Uptis also eliminates the need for regular air-pressure checks and reduces the need for other preventive maintenance.*
- ▶ *Michelin Uptis is well-suited to new forms of mobility, especially autonomous and electric vehicles.*
- ▶ *Since Uptis was first announced in June 2019, Michelin has received multiple prominent recognitions for its advancement in airless tire technology, including the 2020 Tire Technology of the Year award at the global Tire Technology Expo<sup>1</sup>, a Golden Steering Wheel Award in Germany<sup>2</sup>, a COYOTE Automobile Award in France and Autonomous Vehicle Technology – Autonomy Connectivity Electrification Mobility Services Award in the United States<sup>3</sup>.*





## **A NEW STEP TOWARD SAFETY AND SUSTAINABLE MOBILITY IS MOVING INTO THE MAINSTREAM.**

Today, tires are condemned as scrap due to flats, failures or irregular wear caused by improper air pressure or poor maintenance. These issues can cause crashes, create congestion on the roads and result in large amounts of tire waste. The majority of these tire-related problems could be eliminated with the transition to non-pneumatic solutions.

Airless wheel assemblies could become the next transformational advancement in vehicle safety and technology. Airless solutions eliminate the risks of flats and rapid air loss due to punctures or road hazards. By removing the air from the tire, airless solutions also reduce irregular wear or other performance degradation due to under-inflation or over-inflation.

Michelin has developed the state-of-the-art, non-pneumatic tire solution: the Unique Puncture-Proof Tire System ("Uptis"). Uptis is an airless wheel assembly that delivers performance on par with conventional "zero-pressure" pneumatic tires, and also provides safety, maintenance and environmental benefits. In an ongoing co-development program, Michelin and General Motors aim to deliver this new technology as an available option to consumers as early as 2024.

The Uptis airless design eliminates the need for regular air-pressure checks and reduces other regular tire maintenance as well, which also makes it ideal for the vehicles of tomorrow – ranging from self-driving vehicles to all-electric and shared-service cars, whose occupants may not be expected to replace a flat tire.

Michelin has been working with non-pneumatic solutions for nearly 20 years. The Company introduced the first commercial airless offering for light construction equipment, the MICHELIN® TWEEL® airless radial solution. Michelin has continued its innovations to expand its portfolio of airless technologies for non-automotive applications, while also advancing this technology for passenger vehicles. Uptis balances highway speed capability, rolling resistance, mass, comfort and noise.

Continuing Uptis' progression to market, in April 2020, the U.S. Tire and Rim Association approved the engineering and design guide for non-pneumatic tire and wheel assemblies, which advances the broad deployment of non-pneumatic tires.

Michelin is a company that thinks long-term about consumer safety, consumer value and sustainable mobility. The introduction of airless mobility solutions for passenger cars represents the next critical advancement in automotive safety and performance.

### **VISIT [MICHELINMEDIA.COM/MICHELIN-UPTIS](https://www.michelinmedia.com/michelin-uptis)**

for more information about Michelin's non-pneumatic solution, Uptis.

(1) <https://www.tiretechnology-expo.com/en/awards-2020.php>

(2) <https://www.rubbernews.com/tire/michelin-uptis-wins-golden-steering-award-innovation>

(3) <https://www.tyrepress.com/2019/12/innovation-awards-for-michelin-airless-prototype-tyre/>



leadership

# WHAT LIES AHEAD

*AAMVA PARTNERS WITH INDUSTRY EXPERTS TO DETAIL WHERE DMV OPERATIONS ARE HEADED IN THE FUTURE*

BY MELANIE D.G. KAPLAN



In the spring of 2019, Georgia's Motor Vehicle Division launched a major technology upgrade to its 20-year-old mainframe-based tag and title system. To promote the system and prepare all the counties—which handle most of the vehicle title and registration services—the division kicked off an awareness campaign that included a 19-city roadshow.

"I did a [media] blitz to get the message out," says Georgia Steele, Ph.D., chief performance officer for Georgia Department of Revenue (which oversees motor vehicles). Steele ran radio PSAs and social media campaigns, spoke to elected officials, held press conferences and appeared on daytime TV shows to talk about the new e-services portal and improved customer service. "I wanted people to fully understand that we're making this huge investment, and we needed their patience while we were transitioning." She says it was a struggle at times to explain the replacement system, but she pushed forward, sometimes using a flip phone as a prop. ▶



In one setting, she spoke to a room of 20 commissioners, one of whom still used a flip phone; she compared that to the outdated technology at DMV. “There’s nothing wrong with a flip phone,” she told them, “but I’m trying to position us correctly for where the future is going.”

That future is the topic of a report released in August 2020, which identifies and assesses the biggest trends administrators are seeing as they find themselves at a crossroads—looking at legacy missions and new technology—as they work to modernize their operations across the United States and Canada. The 28-page report, *Trends Impacting the DMV of the Future*, was produced by the Transportation Research Board (TRB) of the National Academies of Sciences, Engineering, and Medicine and Cambridge Systematics, Inc., and guided by a seven-member technical working group. The

volunteer group comprised experts and leaders from academia, industry and the DMV community from California, Georgia, New Jersey, Oregon, Pennsylvania, and Texas.

“Having it all in one report—the major trends, expectations of customers and the capabilities necessary to meet the future more aggressively—is valuable to DMV leaders,” says AAMVA President and CEO Anne Ferro. “Our board members had raised the idea of having a compilation of what’s happening in the future because for DMVs, planning forward is part of their daily work and part of our annual budget process. This report creates a clearer and more concise summation for policymakers who may fund these programs.”

Research for the report began in late 2019 and was supplemented by a follow-up workshop after the start of the pandemic. COVID-19 provided what Ferro calls a “live

experiment” of what it means for DMVs to shift to digital services; it amplified or accelerated nearly all of the trends addressed in the report and propelled many departments and their customers into the future—even if they weren’t quite ready.

“The report mirrors what’s been tested in this pandemic service delivery space,” she says. “The pandemic created a live pilot of what it means to pivot quickly in how services are delivered and literally tell somebody, ‘For public health reasons, you can’t do that service in person; you can only do it digitally.’ We need to continue to evolve in this concept of virtual service and the use of digital identity to access secure online services.”

## THE FRONT DOOR TO GOVERNMENT SERVICE

Often, the first time a new state resident or a young person comes in contact with their state government is at the DMV when they’re getting their ID, driver’s license or vehicle registration. DMV administrators understand that they only have one chance to make a first impression. “We’re a huge part of people’s lives,” says Steele, a member of the report’s technical working group. “We’re a portal for an interface for so many other services. So we want to be on the front of technology in a way that puts government in a positive light.”

In creating the report, the technical working group brainstormed together and talked about current technological and social trends and how they might affect the future operations of motor vehicle agencies, including growing populations and changing demographics, reduced budgets, increasingly tech-savvy customers and an increase of remote services and teleworking. The participants’ concerns, insights, hopes and fears were invaluable to the report; they talked about doing more with less and discussed how operations could look in the future.

“We prioritized the issues that are in the final report,” says Shelly Mellott, deputy executive director of Texas DMV, also a member of the technical working group that helped assemble the report. “These are the issues that members are seeing now and will see in the near future, and the report prompts them to start thinking about how they

*“There’s nothing wrong with a flip phone, but I’m trying to position us correctly for where the future is going.”*

**DR. GEORGIA STEELE**

*Chief Performance Officer, Georgia Department of Revenue*





want to prepare. We need to think bigger and be more strategic in how we develop our service options, so they will continue to be relevant for years in the future.”

The report is organized around trends and various pathways the DMV could take; plausible futures for DMVs in the 2020s; and a brief implementation plan that defines success for the research, lays out potential next steps and discusses how DMVs can make organizational change. It also identifies the direction of certain trends: The trends are either “accelerating” (such as mobile driver licenses), “maintaining” (such as digital copies not completely replacing paper records), or “reversing” (such as concerns about autonomous vehicles).

### REMOTE WORKING, REMOTE SERVICES

Among the biggest trends is the shift to remote working. Before the pandemic, Mellott says, the Texas DMV was experimenting with telecommuting, and in March 2020, the department went from 10% of its staff working remotely to 90% practically overnight. Staff served customers through call centers, mail-in transactions and online transactions while service centers were closed; once employees were outfitted with the proper PPE, the centers reopened by appointment. The Texas DMV is currently working on several projects that will allow the department to move more transactions online, 24/7.

“Because of the success we have had with telecommuting our call center employees, we will continue to telecommute full-time moving forward,” Mellott says. “That allows us to expand our hiring for those positions statewide to get a larger, more qualified applicant pool, and it helps with employee retention.”

The shift to remote working decreases costs to DMVs and improves options for staff. But it also raises questions, according to the report, such as how to preserve privacy and sensitive information, how to foster collaboration and communication between employees, what new software and equipment is needed and whether some tasks should be privatized or permanently outsourced to increase efficiency.

Ferro acknowledges that remote working is a critical topic and one that had been previously explored but generally rejected; DMVs, historically, are expected to serve the public over the counter, in a lobby and on an examination drive course. “To envision that a big part of the workforce could be working from home through secure mechanisms and documents being transferred digitally is a really interesting development,” she says.

Another DMV trend growing in parallel is the explosion of technology and remote services. As the change occurs, leaders have the opportunity to determine which services must occur face-to-face, which can be conducted remotely and which can be subject to screening. Many jurisdictions are relying on artificial intelligence—like the chatbots commonly seen on corporate sites—to assist customers with website inquiries. That saves time for both the customer and the DMV. “It creates a much less person-intensive experience,” Ferro says, “and sometimes it’s more satisfying for the customer who doesn’t really want the human interaction. They want to just get it done in the middle of the night because that’s when they’re up.”

The state of Georgia has been testing out ways to “put the customer in the driver’s seat,” Steele says, by creating infrastructure that provides more services, ▶

*Remote working can decrease costs and improve options for staff but raises questions on how to preserve privacy and sensitive information.*



leadership

safety and security without having to physically touch documentation. The jurisdiction’s tag-renewal kiosks in Kroger grocery stores, for example, have been wildly successful. “During lockdown, people were getting groceries and then renewing at the kiosk—walking away with decals—in less than 90 seconds,” Steele says. But she also recognizes that different generations have different needs. Young drivers may want instant gratification, but older individuals may still want to walk in the doors of a defined brick-and-mortar building.



### THE PANDEMIC’S SILVER LINING

In 2016, the state of Idaho recorded 260,000 online DMV transactions, and in 2020, that number nearly tripled, says Alberto Gonzalez, DMV division administrator at the Idaho Transportation Department and AAMVA board member. “The way consumers interact

with the government is changing at a rapid pace,” he says. “We have the pandemic to thank for expediting the innovation.” When he looks five years ahead, he sees a significant increase of online services, mail transactions and chatbot interactions—to accommodate not only the exploding population in his state but also a department that he says is unlikely to grow.

Distance-Forward Service—a model that encourages customers to use online and digital services at multiple points in the process—was put to the test in a lot of areas during the pandemic and is fully in reach of DMVs within the next decade, according to the Trends report. This model features a website or app that allows customers to verify their identity, upload and sign documents, take a written test, order a license plate or toll tag and view a driving record. When customers need to go to a DMV location, kiosks will mimic the functions of the website and app for those without internet.

Gonzalez agrees that brick-and-mortar interaction should be the last resort but also strongly supports models like the kiosk. “Certain populations are disadvantaged because of technology,” he says. “I still think you have to have multiple doors to access our services.”

With the shift to digital services, many questions remain about privacy and data. Data sharing can

*“We have the pandemic to thank for expediting the innovation.”*  
**ALBERTO GONZALEZ**  
DMV Division Administrator, Idaho Transportation Department, and AAMVA Board Member

## SPARKING INNOVATIVE THINKING

“Operations eats strategy for breakfast.”

Nathan Higgins, principal investigator for AAMVA’s *Trends Impacting the DMV of the Future*, heard this from a DMV executive while he was conducting interviews for the study in 2019, and it stuck with him for the duration of the project.

“Operations eats strategy for breakfast because operations requires immediate attention,” Higgins says of the common perception. “This comment reinforced for us how important it was that we conduct strategy work on [DMV executives’] behalf. We help them peek around the corner and think about what’s next.”

Higgins and his team at Cambridge Systematics, Inc., were contracted to create the report by the Transportation Research Board (TRB) of the National Academies of Sciences, Engineering, and Medicine. TRB, which as of November 2020 has been operating for 100 years, using independent research to promote innovation and progress in transportation. Cambridge



sharply reduce fraud, and it allows, for instance, multiple jurisdictions to know about dangerous drivers. But will DMVs one day need to justify sharing personal data with other agencies? As stewards of social security numbers, addresses and birthdate data, DMVs need to store and secure information carefully. “A single breach at any DMV could undermine the public’s confidence,” the report reads. As a result, data security protocols are top of mind for many DMV members.

Gonzalez stresses the importance of DMV administrators having a strong partnership with their agency’s cybersecurity teams. “Once you digitize your records, you don’t have to pack up all this paperwork, so people can work from home,” says Gonzalez. (His jurisdiction has reached near-100% digitization in the last couple years.) “But you do need to create additional security safeguards and implement tight controls on the access.”

The report also addresses trends around vehicle-sharing companies, such as Uber and Lyft, and how autonomous vehicle systems are tested and licensed.

In 2016, the state of Idaho recorded 260,000 online DMV transactions, and in 2020, that number NEARLY TRIPLED.

The report asks, “What level of comprehensiveness is required in the testing of autonomous systems, and what level of comfort will humans have with the inevitable but rare gaps?”

## A ROAD MAP FOR TOMORROW

Six months after the report was released, members of the technical working group are grateful to have served and to have helped create “DMV of the Future.” Steele says she considers the report an important read not just for DMV administrators but also for staff. “Those who aren’t in management may feel like they don’t have a say in the changes,” she says, “but by seeing what might come down the road, they can be a part of these shifts.”

The authors of the report hope it will serve as a point of reference for DMVs in developing road maps for their post-COVID decade. They expect the research to be used by agencies referring back to trends and plausible futures when mapping their next steps.

In many ways, Ferro says, the timing of the report’s release was perfect. “I certainly heard some administrators say, ‘It really helps me in my conversations with the governor’s office,’ or ‘I’d love to share it with my lead transportation committee over in the general assembly,’” she says. Over the past months, she’s heard anecdotal evidence that the compilation of trends has been valuable. “They’re heartening,” she says of the comments. “And I hope there are many more who will find it useful.” **m**

### *find out more*

DOWNLOAD THE **TRENDS IMPACTING THE DMV OF THE FUTURE** REPORT AT [AAMVA.ORG/TRENDSIMPACTINGTHEDMVOFTHEFUTURE-AUG2020-TRB](http://AAMVA.ORG/TRENDSIMPACTINGTHEDMVOFTHEFUTURE-AUG2020-TRB).

Systematics, which was founded nearly 50 years ago by Massachusetts Institute of Technology professors, is a leader in the transportation industry, working with hundreds of clients on the federal, state, regional and local levels as well as those in the nonprofit, private and international spheres. Higgins says the team at Cambridge enjoys work that involves planning and thinking about the future, so the AAMVA study was a natural fit. The project marked AAMVA’s first time partnering with the firm or TRB.

Cambridge Systematics began in late 2019 by interviewing DMV executives and asking them questions such as, “What keeps you up at night?” and “What are you most interested in learning about that you haven’t had a chance to look into yourself?” Then, it supplemented the material gained from interviews with literature, including academic research from TRB, AAMVA, AAA, trade publications and articles that addressed trends in demographics and technology. It reinterviewed the executives in the spring of 2020 to discuss how trends were advancing through the pandemic and the role of telework.



The research was organized around “scenario planning,” which weaves various pathways together into many plausible futures. “It looks at the full miasma of all the scenarios and different combinations,” says Joe Zissman, the project’s deputy principal investigator. He says one challenge of working on a study that’s supposed to identify a potentially infinite number of trends was knowing when to say when. “How do you know when to stop?” he asks. The interviews, he noted, helped the team orient its research in the right direction, but there’s always the potential for more research.

Zissman says he was impressed by the vision and understanding of all the DMV executives who contributed to the study. “I hope our document triggers these insightful people to think further,” he says. “If we could jog their thinking or inspire a ‘eureka’ moment of things they hadn’t thought about, that’s all you can hope for.”

Listen to a conversation about the DMV of the Future report with Cambridge Systematics in AAMVAcast Episode 44 at [aamvacast.podbean.com](http://aamvacast.podbean.com).

## I'M PROUD OF MY WORK WITH MARSY'S LAW, A VICTIMS' RIGHTS INITIATIVE, WHICH MADD ALSO SUPPORTS.

**Q & A WITH**

# Alex Otte



*NEW MOTHERS AGAINST DRUNK DRIVING (MADD) NATIONAL PRESIDENT SHARES THE STORY OF HOW SHE FIRST BECAME INVOLVED WITH THE ORGANIZATION AND HER GOALS FOR HER TERM*

**Q HOW DID YOU FIRST BECOME INVOLVED WITH MADD?**

I was run over by a drunk driver in a 17-foot bass boat while I was sitting on a jet ski on Lake Harrington in Danville, Kentucky. This was a little over 10 years ago, when I was 13 years old. The man who ran me over was three times over the legal limit. He was charged \$250 and was left to go reoffend. It was his fourth DUI, and I know he's had more since then.

I knew pretty instantaneously when I woke up from a coma after the crash that I wanted to be the last little girl this ever happened to—but I know 10 years later that I'm not.

I first got involved with MADD as a volunteer speaking at schools across Kentucky and working on state legislation. In 2014, I was a National Teen Influencer for MADD along with nine other students from across the country. Then, in 2015, I was named the National Youth Activist of the Year.

**Q WHAT ARE SOME OF THE ACCOMPLISHMENTS YOU'RE MOST PROUD OF BEFORE BECOMING NATIONAL PRESIDENT?**

While I was a senior in high school, we wanted to pass an ignition interlock law in Kentucky. That's something I was hugely involved with. My parents got a truancy letter from my school because I missed so many classes to visit state representatives' offices. But after many years of being shot down, the law passed unanimously in 2015, and that is something I'm incredibly proud of.

Also, I'm proud of my work with Marsy's Law, a victims' rights initiative, which MADD also supports. Marsy's Law was passed in Kentucky in 2018, but due to technicalities it ended up not being added to the state constitution. That kind of fueled the fire for all of us who support it, and it passed again in 2020 and was added to our state constitution.

*From National Youth Activist of the Year to MADD National President, Alex Otte is a passionate advocate for drunk driving prevention.*



Hear more from Alex Otte in Episode 39 of AAMVAcast at [aamvacast.podbean.com](http://aamvacast.podbean.com).

## FAST FACTS

### Alex Otte



#### EDUCATION

Bachelor of Arts in Journalism from the University of Kentucky and a minor in political science (2018)



**WHAT DO YOU DRIVE**  
2015 Jeep Renegade



**FAVORITE FOOD**  
Pizza!



**FAVORITE BOOK**  
Anything by Rachel Hollis, Bob Goff or Lysa TerKeurst



**DREAM VACATION**  
I am going to Aruba on my honeymoon.

Before taking her role at MADD, Alex enjoyed photographing college football at her alma mater, the University of Kentucky.



Alex Otte underwent eight emergency surgeries and spent a week in a coma after a drunk boater struck her while going more than 60 mph.

### Q WHAT DO YOU HOPE TO ACCOMPLISH DURING YOUR TENURE AS MADD NATIONAL PRESIDENT?

Alcohol is the leading known contributing factor of boating fatalities and has been for many years, so it's important to me that our resources for victims reflect that impaired driving happens on many different modes of transportation.

The RIDE Act/HALT Drunk Driving Act is our biggest federal legislative priority right now. This would require drunk driving prevention technology on new vehicles, which would essentially lead to eliminating drunk driving on roadways, saving 9,400 lives a year.

I also want to engage with and train law enforcement on dealing with victims and families in the aftermath of a tragedy. In a previous position, I trained law enforcement on the importance of detailed reporting. I know that officers arriving on a scene have a lot to deal with, but I can say from experience that it didn't help me when they acted like it didn't affect them. So this kind of training is important, I think, for law enforcement and for injury victims.

### Q WHAT ELSE ARE YOU LOOKING FORWARD TO?

I'm getting married in the spring. My fiancé is in law enforcement. We have a pit bull named Sheriff, a German shepherd named Sergeant and a cat named Deputy.

### Q WHAT DO YOU LIKE TO DO IN YOUR SPARE TIME?

I'm a photographer—I spent six years photographing college football. I loved being on the sidelines of a football field every weekend. I don't get to do that much anymore, but I still try and get out there whenever I can. **m**

*"The RIDE Act/HALT Drunk Driving Act is our biggest federal legislative priority right now. This would require drunk driving prevention technology on new vehicles, which would essentially lead to eliminating drunk driving on roadways."*

#### ALEX OTTE

Mothers Against Drunk Driving (MADD) National President

# True DeTECHtives



*LAW ENFORCEMENT AGENCIES ARE USING NEW TECHNOLOGIES TO BETTER MEET THE NEEDS OF THEIR DEPARTMENTS AND THE PEOPLE THEY SERVE*

## TRACKING DOWN TITLES

**DETECTIVE CASEY LANFORD, ARIZONA DEPARTMENT OF TRANSPORTATION – OFFICE OF INSPECTOR GENERAL**

Once had a case where a used-car dealer was suspected of committing odometer fraud. While investigating, I had to manually type 800 vehicle identification numbers (VINs) into our jurisdiction's title database and review each title scan to find the vehicle involved in the fraud scheme.

I knew there had to be a better and more efficient way to go about doing this, as the previous way was a huge amount of work simply entering in all of the data. So, I started playing around with the National Motor Vehicle Title Information System (NMVTIS) Law Enforcement Access Tool. There is a bulk search feature that allows you to search for up to 10,000

individual VINs at a time—and when I received a report back just one day later, I was very surprised with the level of detail. It showed specific data, such as the vehicle make, model and year, along with a complete title history, going back to the manufacturer of origin for each vehicle, with a record of every date and location where a vehicle was titled during its lifetime. This allowed me to easily see any discrepancies in reported mileage, clearly identifying which vehicles and persons were involved in the odometer fraud scheme.

For detectives who investigate vehicle fraud, NMVTIS is a vital tool to increase efficiency and save time. Before we had the Law Enforcement

Access Tool, we often would have to wait up to five weeks in order to receive correspondence back from other jurisdictions on titling information.

For example, I had another case involving a fraudulent title operation where a dealer was essentially renting out their dealer's license to subscribers nationwide. Over 30,000 vehicles across 46 jurisdictions were being falsely titled in Arizona, then being quickly retitled across the U.S. to establish illegal car dealerships. Now, think about all of the time that would be wasted while attempting to sort through thousands of titles across tens of jurisdictions. I don't think it's even measurable how much time we save using NMVTIS.

I encourage everyone in law enforcement who deals with vehicle investigations to use the Law Enforcement Access Tool. Get a login, run some searches and familiarize yourself with how the tool works. Because if you're not using it, frankly, you're behind the times.

# ID GOES DIGITAL

MAJOR DAVID ALDRIDGE, COLORADO STATE PATROL

There's a saying on the force that officers hate things that don't change and hate things that do change—so there's always a struggle when you start adjusting processes and procedures. But our department chief, Matthew Packard, has always pushed for more efficiencies in how we conduct business. And it's been determined that the greatest way to achieve said efficiencies is through the smart implementation of new technologies.

A great example of technology bringing about efficiency is our jurisdiction's use of digital driver licenses. Gov. Jared Polis signed an executive order on October 30, 2019, authorizing the Colorado Digital IDTM as a legal form of personal identification in the state, and Colorado State Patrol (CSP) began accepting the Digital ID in November 2020 after pilot testing was conducted. As of February 2021, State Patrol had engaged with the Digital ID—located in the myColorado™ mobile app—during 1,400 traffic stops.

The benefits are widespread. Coloradans can use their cell phone to conveniently show a secure version of their driver's license to get into a bar, make a transaction at a bank or if they're involved in a traffic stop with a police officer. Because the Digital ID does not need to be exchanged since information is transmitted electronically, both the driver and the officer are safer during the pandemic.

In parking lot traffic stops during our initial pilot testing, we found that there was almost a 50% decrease in roadside time for traffic contacts involving drivers using their Digital ID. We walk up to their car, the driver scans the officer's QR code with their cell phone and agrees to share their ID

*Coloradans can use their cell phone to conveniently show a secure version of their driver's license to get into a bar, make a transaction at a bank or if they're involved in a traffic stop with a police officer.*

information. If they had uploaded their vehicle registration and proof of insurance into the app Wallet, all are transmitted directly to the terminal in the police car.

The next phase is being able to attach an e-citation or a warning to the driver's account on the myColorado app and allow for communication between the police officer and the driver until the contact is complete. Once the officer closes the contact, the link is no longer active—we do not store all of the information, only what we would collect during a routine traffic stop. And we account for any privacy issues with data collection by having everyone consent to

participate when signing up for the app.

The plan is to expand the myColorado program to include additional state services, such as digital fishing licenses (as of April 2021) and updating unemployment information. But it's important to remember the program first had two primary goals: To provide the public with a secure digital ID and to increase officer and public safety by reducing the time spent at traffic stops.

The public seems to be responding well to the myColorado program, as the number of participants has grown to over 112,000 users and 390 business partners. ▶

**VERIDOS**  
IDENTITY SOLUTIONS  
by Giesecke+Devrient  
and Bundesdruckerei

**Eyes on the Horizon –  
Driving Change**

Technology is our major strength.  
Trust is our most valuable asset.

[www.veridosna.com](http://www.veridosna.com)

## ANALYTICAL APPROACH

CHIEF TOM WILSON, CALIFORNIA DMV INVESTIGATIONS DIVISION

When I first started as chief, we were in discussions with several companies about using data analytics to identify anomalies within the DMV database. We wanted to look at things like potentially being able to identify employees that were committing fraud in the system, such as bypassing certain requirements for issuance of a license or a commercial driver's

UP TO 44% of drivers using disabled parking placards were doing so fraudulently.

license, or even fraudulently waiving fees on registration and then taking the money for themselves.

Several months into that discussion, we got a new director at the department, Steve Gordon, who comes from the private sector and has a tech background. With his knowledge and experience, Gordon let us know that there are tools that'll do this for you—we just need to figure out where the data resides and how to get this data to work for us.

We started by investigating internal matters, then had a big push to use this analytic approach to help in investigating other crimes we encounter, with the first one relating to disabled parking placards. We have data showing that during some

investigations, up to 44% of drivers using these placards were doing so fraudulently. We decided to dive deeper into the application process, putting drivers into categories like age groups, medical providers and distance from the doctor to the recipient of the placard to see if there were any anomalies or trends we could find.

Interestingly enough, we found a good amount of people right away who were traveling far from home to certain doctors to issue their placards. Or, there were people in a certain age group where it was pretty obvious the majority were healthy—yet many of them had placards on file, and we were finding that they were all getting through the system with forged doctors' signatures.

Since then, we've expanded our use of analytics to find and shut down unlicensed car dealers and auto body shops, along with helping combat smog emissions fraud.

Originally, there were some members of the department who were all for keeping the same old approach—boots on the ground, working the streets and getting informants. They thought that was the best way to capture criminals. But the more time we spent actually pulling the data, compiling it and merging different sources, our people started to realize the value. We're now getting information in minutes that used to take us weeks to track down. There's no denying the increased efficiency brought on by data analytics has improved our operating procedures and has allowed us to identify more criminal behavior we may have been blind to previously. **m**

*"We've expanded our use of analytics to find and shut down unlicensed car dealers and auto body shops, along with helping combat smog emissions fraud."*

**CHIEF TOM WILSON**  
California DMV Investigations Division

# move

## DIGITAL

---

You can now get all the content you love in a sleek, new digital format! Complete with full articles on policy issues and updates, news, Q&As, crossword puzzles, industry perspectives, statistics, multimedia content, partner resources, and more, the digital version of MOVE is available for you to explore.

---

[movemag.org/current-issue/](https://movemag.org/current-issue/)

---



MOVE is the award-winning flagship publication of the American Association of Motor Vehicle Administrators (AAMVA). MOVE's feature articles and columns keep readers informed of industry news and technological developments throughout the motor vehicle community by offering a wide-range of industry topics.

[movemag.org](https://movemag.org) | [aamva.org](https://aamva.org)



### OUR VISION

*Safe drivers  
Safe vehicles  
Secure identities  
Saving lives!*



# A Digital Future

## DMV BUSINESS SHOULD CONTINUE TO INCLUDE VIRTUAL OFFERINGS AFTER PANDEMIC ENDS

With the arrival of spring and the ongoing vaccination efforts, there is hope for a return to more freedoms. COVID-19 is still with us and unfortunately three of our regions made the tough decision to cancel their annual conferences, which were scheduled to be held in the spring and early summer. As conditions continue to improve, we are excited to bring our community together and hold our Annual International Conference in person in Denver, Colorado. We will be taking recommended precautions to keep everyone safe while together and there will be specific guidance as planning gets underway.

Over the past year, all our members have effectively adapted to the environment under a pandemic. Residents in our jurisdictions have been able to obtain DMV services through highly modified procedures in our offices or virtually. Our collective efforts have been critical to ensuring the viability of economic activity and public safety within our respective

jurisdictions and across the nation. As we effectively fulfilled our duties, we became quite competent in conducting business in the virtual realm.

This edition of *MOVE* continues the conversation regarding technology and the future of how DMVs conduct their business. Conducting our business virtually has been a necessity to operate in a COVID-19-impacted

world. Remote services prior to the pandemic offered customer convenience but are now in demand to reduce exposure. Assessing what the public and stakeholders will expect from DMVs in a post-COVID-19 environment will be an important component in our future planning and strategy work.

The AAMVA-funded study, *Trends Impacting the DMV of the Future*, conducted by Cambridge Systematics, Inc. under contract to the Transportation Research Board (TRB) of the National Academies of Sciences, Engineering, and Medicine, is a wonderful thought piece on societal and technological trends and potential impact on the future delivery of DMV services. Updated in the early months after COVID-19 struck, the study offers information that may assist in strategic planning.

During the first virtual AAMVA Workshop and Law Institute, one of the sessions included a panel discussing the digital future of DMV business. This topic has been of considerable interest among our members. In many respects, the future is now, with much change having already been implemented. The process has started, but there is much more opportunity to leverage current technology and plan for future developments in the months and years to come.

As you contemplate what the future holds for your portion of the DMV business, you can rest assured that it will be an exciting one. In the meantime, let's hope for a quick transition out of this COVID-19 environment and a return to more in-person events! **m**

Mike Dixon  
2020-2021 AAMVA  
Chair of the Board

Download the session recording of "The Digital Future of the DMV Business" at [aamva.org/2021-Virtual-Workshop-and-Law-Institute](https://aamva.org/2021-Virtual-Workshop-and-Law-Institute).





# GET CONTACTLESS ID

## Protect your community with ISO-compliant Mobile IDs

Let **GET Group North America's** highly-qualified team empower you to give citizens a safe, secure mobile driver's license that fully implements **ISO/IEC 18013-5**.

**GET Mobile ID** is built on ISO standards and surpasses AAMVA guidelines, allowing you to issue IDs that can be authenticated with a simple tap - putting the citizen in control.

We've made it simple! To join our cross-state mDL pilot, talk to:  
Scott Vien | +1 (617) 902-8577 | [svien@getgroupna.com](mailto:svien@getgroupna.com)



# The DMV Reimagined

Imagine a world in which DMV services could be accessed as easily and securely as online banking.

## IDEMIA's Mobile ID makes it possible.

The IDEMIA Mobile ID is the key to transforming your business from providing driver license services to enabling residents to access a wide range of government services safely and securely.

Our solution allows customers to securely set up their Mobile ID remotely, and opens up a world of possibilities for streamlining your operations, reducing in-office traffic, and improving customer satisfaction through services such as remote pre-enrollment for REAL ID, remote/at-home driver knowledge tests, and, from next year, remote driver license renewal.

We protect, not sell customers' data, and we can operate on a revenue-sharing model with DMVs to align incentives. Our success is your success.

For more information, contact your IDEMIA sales executive.

