



**pennsylvania**

DEPARTMENT OF TRANSPORTATION

# Feasibility of Using Email for Renewal Notices

FINAL REPORT

April 1, 2013

By Deloitte Consulting LLP

**Deloitte.**

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF TRANSPORTATION

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16. Abstract The Pennsylvania Department of Transportation (PennDOT) has contracted with Deloitte to conduct a feasibility study to analyze the use of Email for renewal notices for driver license and vehicle registration renewals. The Final Report provides an overview of the key findings identified in the Best Practices Analysis and Cost Benefit Analysis deliverables.					
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# **Feasibility of Using Email for Renewal Notices**

## **Final Report**



Deloitte Consulting LLP

April 1, 2013

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# Key Findings in Brief

Email Feasibility Study

# Implementing an email reminder program in PA may result in cost savings for vehicle registration reminders while being perceived by customers as improved service

## More Financial Reward for Vehicle Registration Renewals

More states offer electronic reminders for vehicle registration than driver license renewal. For PA, the cost benefit for vehicle registration electronic reminders is more favorable than driver license reminders.

## Improved Customer Service and Potential for Cost Savings

Some states such as Virginia, Maryland and Indiana, have a mature electronic notification program and have identified improved customer service as an intangible benefit. The potential for actual cost savings from implementing an email reminder program will depend on decisions regarding how the program is implemented.

## Customer Adoption Rate

States are experiencing growing adoption of online services for vehicle registration and driver license renewals.

## Master Contracts and 3<sup>rd</sup> Party Service Contractors

Some states such as Indiana are utilizing master email service contracts and 3<sup>rd</sup> party contractors to assist with the implementation of the program.

## Spam Concerns

Email reminders can be identified as spam. Some states have had success reducing spam potential through collaboration with Internet Service Providers (ISPs) to avoid spam blockage. For example, Virginia and Maryland reported email delivery rates of 98% and 90-95%, respectively.

## Strategies around spam prevention, email verification and working with ISPs were some of the best practices identified

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### Engage Legal

Engage “legal” in the early stages of the program to ensure the appropriate language is included in customer agreements describing the service, customer responsibilities and that legal protocols are being followed.

### Leverage Opt-in Terms and Conditions

Citizens that “opt-in” should be required to accept the terms and conditions of the agreement (example conditions could be: receive email reminder only, notify PennDOT of email address change, add PennDOT email address to safe sender list, renew credential electronically).

### Consider Master Contracts

If using master contracts for email providers is considered, consider teaming with other Pennsylvania agencies or other states’ agencies to achieve cost reductions based on economies of scale.

### Reduce Email Spam Filter Scenarios

Work closely with Internet Service Providers to reduce the likelihood that email reminders will be deemed spam and delivery stopped.

### Verify Email Addresses Upfront and Periodically

Require customers to enter email address information twice when signing up for the service as it will increase the accuracy of the address.

Consider approaches to periodically use or test email addresses (e.g., semi-annually) to verify the address is still valid.

## Other best practices include PII implications, 3<sup>rd</sup> party contracting, and understanding the customer base prior to implementation

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### Consider Business Process Implications

Consider all of the business process implications on mail room, technology and customer service before implementing an electronic reminder program.

### Discontinue Paper Reminders for Opt-ins

If a customer opts-in to receive reminders via email, consider not sending paper reminders to the individual – this will provide the greatest cost benefit to PennDOT.

### Understand Customer Base

Understand that email notifications should be used to augment other reminder services (e.g., mail) rather than replace them. A significant number of customers prefer the mail reminder and will not be able to handle email notifications.

### Consider PII Implications

Emails to customers must not include any Personally Identifiable Information (PII). It is possible that emails can go to a shared account, or someone provided an incorrect email address that is valid, and PII could be improperly disclosed. Contents should allow customers to know what service is due without providing PII. PennDOT may want to include a privacy statement on the website regarding the collection of information and that the Commonwealth will not disclose or share any information provided by the customer.

### Consider 3<sup>rd</sup> Party Vendor

If using a third party email service provider is considered, explore the possibility of working closely with other states who have implemented electronic reminders to leverage their experience and services and reduce costs on internal IT staff.

# Approach

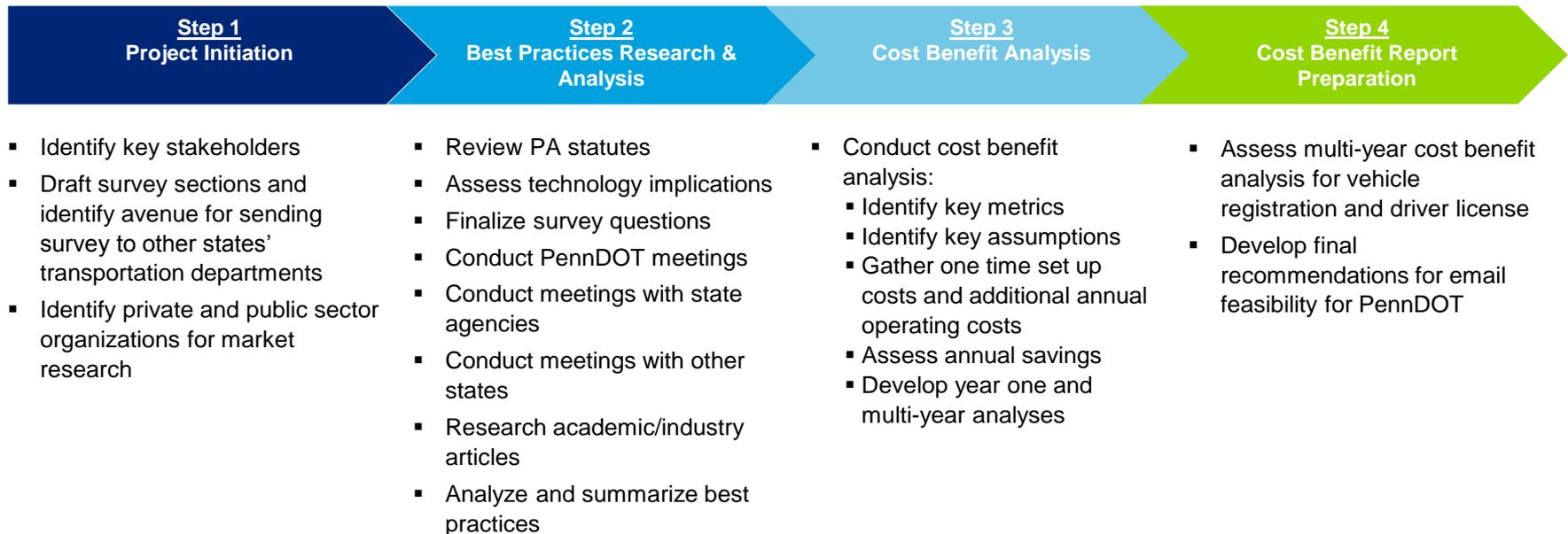
Email Feasibility Study

# The Email Feasibility Study is broken into two main segments: gathering best practices and conducting a cost benefit analysis

## Objective and Scope

The Pennsylvania Department of Transportation (PennDOT) contracted with Deloitte Consulting to conduct a feasibility of adopting email notices for driver license and vehicle registration renewals.

## Approach – Key Activities



# Best Practices Report

Email Feasibility Study

## The Best Practices Report was produced after conducting PennDOT meetings, three PA agency specific meetings, an AAMVA survey, follow-up discussions with three states and other industry research

### PennDOT meetings and focus groups

Deloitte met with over 15 PennDOT employees in the following areas: customer service, legal, technology, mail room operations and other areas to gather information on existing statutes, processes, technologies, costs and potential benefits.

### Pennsylvania State Agencies

Deloitte conducted meetings with the Pennsylvania Department of State, Pennsylvania State Police, and the Department of Public Welfare. In addition, after discussions with the Pennsylvania Department of Revenue and the Pennsylvania Office of the Courts, we determined that their use of email does not correspond with PennDOT's objectives as its use is focused on one time consumer correspondence and one-time programs.

### AAMVA survey

Working with PennDOT and the American Association of Motor Vehicles Administrators (AAMVA), Deloitte conducted a survey open to all jurisdictions active within the AAMVA community. Forty jurisdictions responded to the survey and a summary of those survey responses is included in the Matrix Comparing Methods Used by Various States to Distribute Renewal Notices.

### AAMVA survey follow-up discussions

As a result of the surveys that were received, Deloitte worked with PennDOT to conduct follow up meetings with the following states: Indiana, Maryland and Virginia. Ohio and Washington were also contacted, but attempts to schedule a follow-up interview with these states were unsuccessful.

### Industry best practices

Deloitte conducted additional market research on best practices related to email usage in technology organizations, public/private experiences, market trends and implementation experiences, exploring each domain for industry consensus. One specific focus of research was to identify how frequently email addresses change for the customer population.

## PA law requires an email reminder program to be optional for citizens

### PA Law Impacts

Pennsylvania law (PA Code § 1309. Renewal of registration) requires a 60 day renewal notification for vehicle registration. Reminder notices are currently mailed 90 days in advance of the expiration.

### Legislative Considerations

Without legislative changes (refers to (PA Code § 1309. Renewal of registration) , email renewal notification at PennDOT must be an optional service that requires citizens to agree to receive notifications electronically.

### Volume impacts the decision

PennDOT processes over 1,000,000 notices/month. Approximately 70-80% of the mailings are notices for renewal with 20% being driver license renewals.

### Correspondence Infrastructure

PennDOT uses eight mail machines that send out correspondence/mailings and the equipment is relatively new and cost effective.

### Fees

Due to the efficiency of mail renewal check processing versus the fees charged by the credit card companies it is more cost effective for PennDOT to process payments via check.

PennDOT estimates costs for processing incoming mail renewal is \$0.04 per transaction

PennDOT issues and mails more than 1 million reminders each month

PennDOT estimates it costs \$0.39 to produce distribute mailings (including reminders)

# Separate business cases are needed for vehicle registration and driver license renewal types based on various factors such as credential period and adoption rates

**Technology Implications** PennDOT would implement email reminders using existing technology staff to update existing systems. Due to the age and complexity of the mainframe changes, PennDOT has decided that it will not make significant changes to the current mainframe system.

## Customer Base

As of January, 2013, Approximately 8,800,000 drivers are registered in Pennsylvania with 9,800,000 vehicles. Driver licenses are valid for four years and vehicles are registered for one year.

## Program Adoption Rate

With an optional program, the adoption rate of an optional service will drive the cost benefit analysis. Low adoption rates will not provide much benefit to PennDOT and may actually not provide a cost benefit payback.

## Separate Business Cases

The business case for email reminders will be different for vehicle registration and driver license reminders due to the different costs of each transaction, the length of the credential, the acceptance rates etc. Both types of renewal has been analyzed separately.

## Right to Know

PennDOT would not need to provide customer email addresses as part of a right to know request.

8.8 Million driver licenses

9.8 Million registered vehicles

## Other PA agencies have considered email reminders and similar online programs—few have implemented such programs

### PA Dept. of Public Welfare Child Support

The Department of Public Welfare is using email to send reminders to child support payors about appointments and appearances. The DPW has also adopted a policy to send appointment notifications via text or email to all citizens who have an upcoming child support appointment.

### PA Dept. of State Professional Licenses

The Department of State has not implemented email reminders for professional licenses due to legal concerns that an email may not meet the requirements of notice outlined in the PA statutes. This legal opinion is being revisited but there are no plans to send email reminders at this time.

### PA State Police Sexual Offender Notification

The Pennsylvania State Police (PSP) has established a subscription service open to all citizens to receive an alert when a sexual offender's status has changed. An alert can be established to identify when any offender moves within a certain proximity of an address or to track the status change of a specific person. This was implemented in late 2011 and has over 4,700 citizens subscribed to the service.

### PA Emergency Management Agency Emergency Notification

The Pennsylvania Emergency Management Agency (PEMA) has an existing contract with Cooper Industries for software that generates automated notification to citizens when an emergency is occurring in their community. PSP researched this product for Megan's Law but determined the solution could not meet their requirements. No analysis of this product was completed as part of this study.

Be aware of any legislative needs  
and address quickly if possible

Include legal advisors  
early in the process

# The AAMVA survey received an excellent response rate of 76.5% of all U.S. jurisdictions

## Overview of AAMVA

“The American Association of Motor Vehicle Administrators (AAMVA) is a tax-exempt, nonprofit organization developing model programs in motor vehicle administration, law enforcement and highway safety. The association also serves as an information clearinghouse in these areas, and acts as the international spokesman for these interests.

Founded in 1933, AAMVA represents the state and provincial officials in the United States and Canada who administer and enforce motor vehicle laws. AAMVA’s programs encourage uniformity and reciprocity among the states and provinces.” –AAMVA website

## Overview of Survey

Deloitte, PennDOT and AAMVA worked together to understand the process, develop the questions, construct and distribute the survey, monitor survey responses, and provide survey results. The initial survey included questions (see Appendix A) that were designed to identify jurisdictions that sent reminders to customers in advance of credential and/or registration expirations, and to identify how they sent these reminders.



Number of Respondents:

- **39 of 51 (76.5%)** U.S. jurisdictions (including District of Columbia) responded\*, in addition to 1 Canadian province

\*Based on prior surveys accessible on the AAMVA website, this is an excellent response rate.

# More states allow use of Internet, kiosk and mail renewal channels for vehicle registrations than for driver license renewals

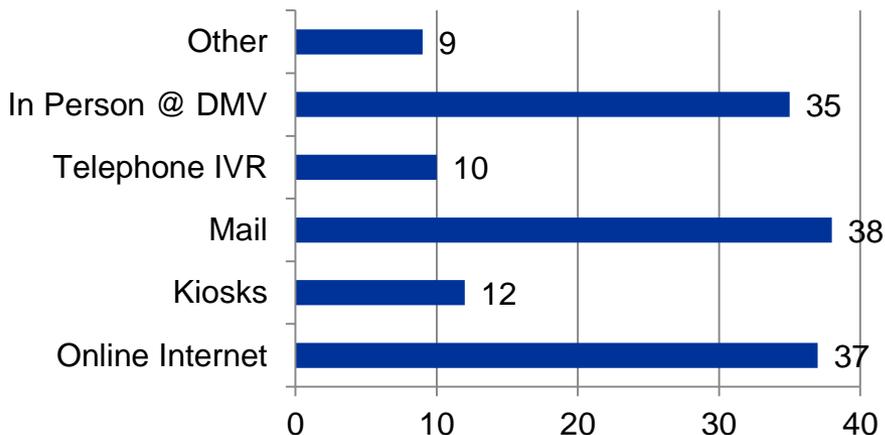
## Vehicle Registration

Of the forty (40) jurisdictions that provided information on vehicle registration service channels:

- **92.5%** (N=37) provide renewal services through the **Internet**
- **95.0%** (N=38) provide renewal services by **mail**
- **87.5%** (N=35) provide renewal services **in person** at DMV offices

More respondents allow use of Internet, kiosk and mail renewal channels for vehicle registrations than for driver license transactions due to more stringent rules for validating identity, capturing new photos, and testing vision associated with the driver's license.

### Vehicle Registration – Totals by Renewal Channel



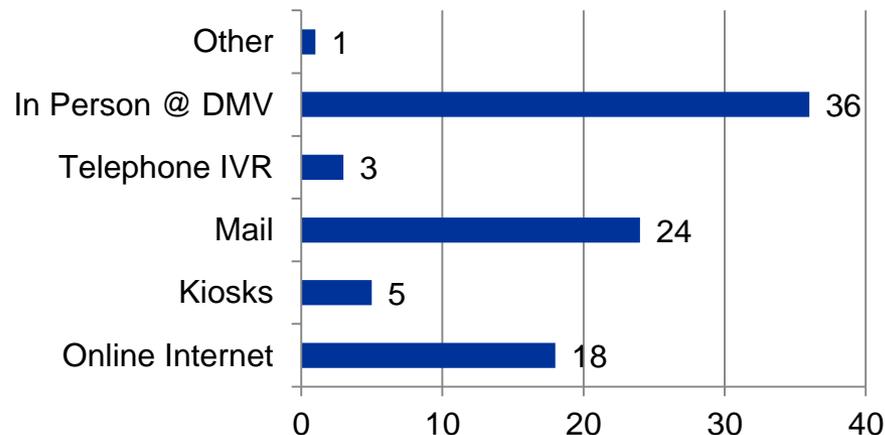
## Driver License Renewal

Of the thirty-eight (38) jurisdictions that provided information on driver licensing:

- **47.4%** (N=18) allow **online** Internet renewals
- **63.2%** (N=24) use **mail** renewals
- **94.7%** (N=36) renew credentials **in person** at DMV offices

Our findings show that states are actively using alternate renewal channels to expand driver license services to their customers.

### Driver License – Totals by Renewal Channel



# More states send email reminders for vehicle registrations than for driver license renewals

## Vehicle Registration

Of the forty (40) jurisdictions that provided vehicle registration information:

- **27.5%** (N=11) use **email** to send reminders
  - Ten (10) send both email and regular mail reminders in some form.
- **92.5%** (N=37) use **regular mail** to send reminders

Alabama indicated they only use the email reminder service. Arizona and New Hampshire were the only respondents that indicated they do not send renewal reminders.

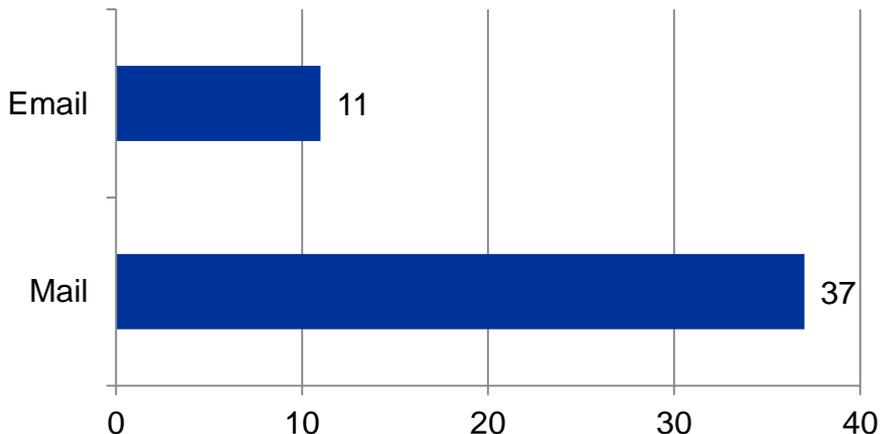
## Driver License Renewal

Of the thirty-eight (38) jurisdictions that provided driver license information:

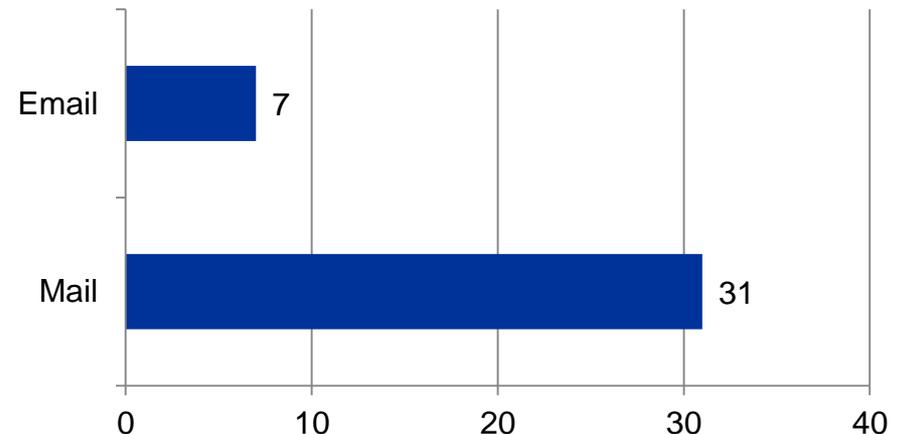
- **18.4%** (N=7) use **email** to send reminders
  - Six (6) use a combination of email and regular mail reminders.
- **81.6%** (N=31) use **regular mail** to send reminders

Iowa indicated they only use the email reminder service. Six (6) of the respondents (Arizona, Hawaii, Idaho, Illinois, New Hampshire, and New Mexico) do not send any form of reminder to their customers.

Vehicle Registration – Totals by Reminder Channel



Driver License – Totals by Reminder Channel



# Follow-up jurisdictional discussions with Indiana, Maryland and Virginia provided insight into mature programs that use email and regular mail for reminder services

## Overview of Follow-up Discussions

Upon completion of the initial jurisdiction survey, the team reviewed the responses to identify the jurisdictions for detailed interview follow-up. The team looked for states that used both email and regular mail for reminder services and that had their programs in place for sufficient time to provide valuable feedback. Based on these criteria, the team held follow-up discussions with the following states:

Indiana



Maryland



Virginia



The detailed follow up interviews were conducted by the study team and included members from both PennDOT and Deloitte. A list of questions was sent to the jurisdiction's point of contact along with the request for a follow-up call. The interviews were conducted by telephone. The questions were designed to gather additional details about the jurisdiction's reminder programs. Results of the initial AAMVA survey were also distributed to the team to allow customization of the follow up questions.

# A follow-up discussion with Indiana found that the cost savings per reminder is substantial and they use a private contractor to manage the email program



## Program Description

Indiana is not required to send renewal notifications and does not mail driver license reminders but does send paper vehicle reminders. Indiana's initial approach to email reminders was an additional reminder – not a replacement for mailed reminders. However, Indiana is now allowing customers to opt out of receiving paper reminders.

Indiana will send up to 3 email reminders for both driver license (45, 21 and 14 days before expiration) and vehicle registrations (60, 21, and 14 days prior).

## Customer Base

There are currently 1.2 million email accounts set up by Indiana customers. Indiana has approximately 4 million active driver licenses and 5 million active vehicles in the system.

## Private Contractor

Indiana uses a private contractor to provide email services including being a liaison with the major Internet Service Providers (ISP). The contractor charges approximately \$23,000 for each 5 million emails generated. The contractor also provides reports on delivery rates and the customer's use of the online applications and they test message formats on a number of mobile devices to ensure they work properly.

## Cost Reduction

Indiana's cost per mailed reminder is calculated at \$3.55. Indiana has reduced mailings by 13,000-15,000 mailings/month for customers that have opted-out of receiving paper reminders by regular mail.

70% of vehicle registrations occur online

Indiana uses a third party email service provider



# Indiana suggests working with ISPs and 3<sup>rd</sup> party contractors in addition to developing spam prevention strategies

## Spam Prevention

Break up mass distribution of emails into smaller groups to avoid having the distribution classified as spam.

## ISP Collaboration

Work with ISPs to be seen as a trusted email provider and avoid being identified as a spammer.

## Master Contract

Leveraging the state's master contract for email services may reduce cost.

## 3<sup>rd</sup> Party Contractor

Contracting with an experienced email marketing service provider is valuable.

ExactTarget fees are based on bulk volume of the emails issued

To encourage customers to submit Renewals online, Indiana offered a \$5 discount

# Maryland's mature email service program experiences a successful email delivery rate of 90-95% to customers



## Use of Email Reminders

Maryland began capturing email addresses several years ago and since 2011 has been sending email reminder notices for vehicle registrations to those customers with email addresses in the system. (They have 1.4 million email addresses for 5 million vehicles). They plan to begin the program for driver licenses in April.

## Customer Base

In Maryland, 40,000 vehicle registration emails are sent per month. If a credential is not renewed within two weeks of the email being sent, it is followed up with a paper reminder. Approximately 15-20% of the 40,000 registrations are renewed during those two weeks so mailing costs are saved. The email reminder process is not available to vehicles that are flagged for a violation and a separate process exists for these cases.

## Email Success in Spam Reduction

Approximately 90-95% of all emails sent are delivered. Customers and ISPs originally did not fully consider the reminders because the emails were not originating from a .gov address. MDOT worked with email carriers to remedy the confusion, which has ultimately led to such a high delivery rate.

## Program Success

Maryland has not experienced the cost savings they projected, but the program is viewed as a success and one that they wish to expand to use with other products and services.

5 Million registered vehicles  
and 4 Million driver licenses

Owners must renew vehicle  
registrations online or using  
kiosks in DMV offices

Voluntary program – customers must  
provide an email address for the service

# Maryland's program has been viewed as successful in improving customer service



## Email Security

Because of security concerns, using a non-.gov domain results in some customers treating messages as phishing emails resulting in calls and service subscription cancellations.

## Improved Service

MDOT may not have realized all the cost savings anticipated; however, the improved service provided to customers can offset the lack of measurable savings.

## ISP Collaboration

Work with ISPs to avoid being identified as a spammer.

## 3<sup>rd</sup> Party Contractor

Consider using a third party service for sending emails – they know the business, provide added capabilities and reduce workload on IT staff.

No special legislation was required to initiate the program

Program is viewed as very successful by state political leaders and their customers



## Virginia has experienced significant cost savings

### Customer Base

In Virginia, 1.3 million out of 6.9 million customers have signed up for electronic notifications -- (88% selected email, 7% text, 5% phone). This is out of a population of 5.5 million drivers and 7 million vehicles. The remainder of customers receive paper notifications.

### Cost Savings Potential

If a customer selects electronic notification, they will not receive a paper reminder. This provided Virginia with estimated savings of \$1.2 million dollars in 2012 by avoiding \$0.59 costs per mailing for 1.98 million mailings.

### Renewal (Dis)Incentives

Late registrations are no longer a problem because Virginia uses several incentives:

- Charges an additional \$5 service fee for an in-person transaction
- Charges a \$10 late fee if registration expires
- Offers a \$1.00 discount for online renewals.

### Email Address Verification

When a citizen elects electronic notification, they must double key their email address or phone number which reduces the number of data entry errors. Virginia experiences about a 98% deliverable rate for email and does not follow up with undelivered emails as it is the customer's responsibility to stay current on email addresses.

### Terms and Conditions

If PennDOT implements an optional email renewal notification program, citizens should be required to accept the terms and conditions of the agreement (i.e. potential conditions could be that they will only receive an email reminder, they must notify the Department of any email address change, they need to add the PennDOT email address to their safe sender list, they must renew their credential electronically, etc.)

No formal cost benefit analysis has been done – Virginia estimates it costs \$.59 for each paper reminder sent for an estimated savings of \$1.2 million in 2012



## Virginia has experienced high adoption rates

### Customer Portal

Require customers visiting the portal to provide email address and sign up for electronic notifications.

### Use of Incentives and Disincentives

A comprehensive service augmented by creative fee structures and discounts will improve alternate channel adoption rates.

### Email Address Verification

Require customers to enter the email address twice when signing up for the service – this will increase the accuracy of email addresses.

Only ~2% of emails Virginia sends are returned as undeliverable

Driver licenses are valid for 8 years and ID cards are valid for 5 years

# Market research was conducted across the public and private sectors

## Overview of Market Research

Deloitte conducted market research on best practices in public/private experience (governmentally-focused academic and transportation organizations), technology experience (technology-focused research organizations), market trends (economic market research firms) and implementation experience (COTS manufacturers/consultants), exploring each domain for industry consensus. See Appendix B for key findings from each of these areas researched.

## Online Market Research Sources

**Conducted online market research of the following sources:**

- National Law Review
- Harvard's Ash Center of Kennedy Business School for Democratic Governance and Innovation
- Transportation Research Board (TRB)
- American Association of State Highway and Transportation Officials (AASHTO)
- American Association of Motor Vehicle Administrators (AAMVA)
- United States Department of Transportation (USDOT)
- J.D. Power and Associates
- Gartner
- CIO/IT (TechTarget publications)
- Constant Contact
- Recon Analytics
- MobileFuture
- eData Scholars

## Research Categories

**Conducted online market research in the following categories:**

- Public/Private Experience
- Technology Experience
- Market Trends
- Private Sector

## Follow-up Interviews

**Conducted online research and follow-up phone interviews with the following electronic marketing COTS vendors:**

- Comm100, Inc.
- Lyris, Inc.

# Cost Benefit Report

Email Feasibility Study

# A cost benefit tool was developed for PennDOT to utilize in determining projected financial outcomes based on a set of assumptions and cost factors

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## Overview of Cost Benefit Methodology

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Deloitte and PennDOT developed cost benefit templates that serve as the basis for the analysis of both vehicle registration and driver license electronic reminders. Key assumptions and process questions were discussed in a work shop of PennDOT and Deloitte staff that developed inputs to the model.

Deloitte has developed a customized, Excel™-based cost benefit tool with variable inputs that allows PennDOT to alter key assumptions. This allows PennDOT to understand how changes to key assumptions and decisions impact the projected benefits. A separate cost benefit template has been created for driver license and vehicle registration since the volumes, renewal time frames and benefits differ for each type of renewal.

## Overview of the Cost Benefit Elements

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The cost benefit models are constructed with the following parameters:

- **Key Metrics**—Allows PennDOT to alter key assumptions for each type of renewal
- **One Time Set Up Costs**—Allows PennDOT to enter one-time costs that are needed for implementing an electronic renewal program
- **Additional Annual Operating Costs**—Provides the ability to capture projected ongoing additional costs from changes to operations expected from implementing an electronic renewal program
- **Annual Savings**—Provides the ability to estimate ongoing annual savings from implementing an electronic renewal program
- **Year One Analysis**—Shows the investment that would be needed or payback recovered in the first year of implementing an electronic renewal program
- **Multi-Year Analysis**—Shows the multi-year impact of implementing an electronic renewal program.

# The cost benefit tool is based on a set of key assumptions developed with input from PennDOT stakeholders

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## Key Metrics and Assumptions

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The following key assumptions are applicable to both the vehicle registration and driver license renewal analyses:

- \$0.39 cost to send reminder notice.
- \$0.04 cost to process a check.
- \$0.57 cost to process a credit card payment.
- 35% of vehicle renewals performed online today with expected increase of approximately 2% per year.
- Model assumes 50% of the customers that renew online will choose to receive renewal reminders by email with a 4% annual growth rate.
- Once an electronic notice is delivered, no paper reminder will follow—however a cost line item in the model exists if PennDOT should opt for a follow up mailing—it should be noted that this will negatively impact the projected benefits unless it is a follow up email reminder.

## Vehicle Registration

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The following key assumptions drive the vehicle registration analysis:

- 9,800,000 registered vehicles with 5%/year growth.
- Annual renewals will continue to be required (not every two years).
- No savings are projected for no longer mailing annual registration stickers or notices—however a line in the model exists.

## Driver License

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The following key assumptions drive the driver license analysis:

- 8,800,000 registered drivers and an annual renewal population of 2,200,000 with 0.5% growth/year.
- Four year renewals will continue to be required (not every six years).

# Based on the cost benefit assumptions, vehicle registration shows the most potential for cost savings after 5 years

## Vehicle Registration

Costs/Savings Type	Costs/Savings in Dollars
Initial Startup Costs	(\$415,500)
Annual Operating Costs*	(\$135,465)
Annual Savings (starting in year 2)	\$695,000
<b>Breakeven Year</b>	<b>By end of Year 2</b>
<b>Cumulative Costs or Savings over 5 Years</b>	<b>\$1,971,622</b>

\*Year 2 estimate—subsequent years include personnel inflation and escalation factors, in addition to credit care fee increase of 2% from a usage perspective

## Driver License Renewal

Costs/Savings Type	Costs/Savings in Dollars
Initial Startup Costs	(\$415,500)
Annual Operating Costs	(\$135,465)
Annual Savings (starting in year 2)	\$156,156
<b>Breakeven Year</b>	<b>By end of Year 13</b>
<b>Cumulative Costs or Savings over 5 Years</b>	<b>(\$319,124)</b>

\*Year 2 estimate—subsequent years include personnel inflation and escalation factors, in addition to credit care fee increase of 2% from a usage perspective

## Intangible Benefits

PennDOT would be perceived as offering a more modern reminder service by providing its customers with another option for receiving the reminder notices. This could result in PennDOT being viewed as providing enhanced customer service.

By capturing email addresses and implementing reminder programs it could be the next step in a more comprehensive modernization effort and reminders could be used for other registrations, permits and other purposes.

# While the anticipated costs are identical for vehicle registration and driver license renewal, the potential savings are significantly higher for vehicle registration

## Summary of VR Costs

Based upon how the program is implemented PennDOT will encounter \$415,500 in the following one-time costs:

- \$375,000 of additional technology changes
- \$40,500 in personnel costs to establish the program.

In addition PennDOT could expect the following annual cost increases of \$135,465 (this figure is for year 1) from personnel and technology support, in addition to increased credit card fees.

## Summary of VR Savings

Based upon how the program is implemented, PennDOT could see:

- Reduced mailing costs in the second year of \$695,000 by not mailing 1,783,000 vehicle registration renewal notices
- Reduced mail processing costs are assumed to be negligible for the same reasoning as credit card payments.

## Summary of DL Costs

Based upon how the program is implemented PennDOT will encounter \$415,500 in the following one-time costs:

- \$375,000 of additional technology changes
- \$40,500 in personnel costs to establish the program.

In addition PennDOT could expect the following annual cost increases of \$135,465 (this figure is for year 1) from personnel and technology support, in addition to increased credit card fees.

## Summary of DL Savings

Based upon how the program is implemented, PennDOT could see:

- Reduced mailing costs of \$156,156 by not mailing 400,400 driver license renewal notices in Year 2
- Reduced mail processing costs are assumed to be negligible for the same reasoning as credit card payments.

# Other Considerations

Email Feasibility Study

## Additional factors that were not included in this feasibility study are still applicable and require due consideration

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There are other factors that were not taken into consideration in this report but may impact PennDOT's decision to implement electronic renewal notices.

- **Commonwealth's NIC Contract**—The Commonwealth has signed a contract with NIC to replace its existing state portal that could impact PennDOT. The NIC contract has not been taken into consideration here as PennDOT's transactional impact at this point is not certain.
- **Pending Legislation**—Governor Corbett's proposed FY2013-14 budget proposed extending the vehicle registration period to two years from one year and the driver license period to six years from four years. Extending the duration of the credential will reduce the benefit of implementing an electronic reminder program projected in this document.
- **Emergence of Text Reminders** —Virginia has implemented text reminder notices in addition to email. No calculations have been included to implement a text option in this report.
- **Partnering with Other States or State Agencies** —Like Indiana DMV, PennDOT could partner with other states or other state agencies to capture email addresses and/or administer an electronic reminder program. No savings from operating a joint renewal program have been included in this analysis
- **Seeking to reduce credit card processing cost**—PennDOT should investigate whether moving to electronic checks or seeking to negotiate lower credit card processing fees is possible.

# Appendices

Email Feasibility Study

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## **Appendix A—AAMVA Survey Questions and Respondents**

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**This appendix lists the survey questions and respondents from the jurisdictional survey.**

## Appendix A—AAMVA Survey Questions

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### AAMVA Survey Questions

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What service delivery channels can be used by your customers to renew their driver license (please check all that apply):

- Online through the Internet
  - Kiosks in field offices or other locations
  - Mail
  - Telephone/IVR
  - In person at a DMV office
  - Other (please specify)
- 

What service delivery channels can be used by your customers to renew their vehicle registrations (please check all that apply):

- Online through the Internet
  - Kiosks in field offices or other locations
  - Mail
  - Telephone/IVR
  - In person at a DMV office
  - Other (please specify)
- 

Can you provide adoption rates for each of service channels used?

Do you send reminders to your customers when it is time to renew a credential? Choose one.

- Yes, for both driver license and vehicle registration renewals
  - Driver license only
  - Vehicle registration only
  - No
- 

If the answer to any part of question 4 is yes, please indicate how these reminders are sent to your customers. If the answers are no, please skip to question 6.

- Mail
  - Email
  - Other automated communication (e.g., text message, phone, etc.-please specify)
  - Combination – email followed up by regular mail (please explain)
- 

Please provide the name and contact information of the person that we may contact for additional information.

## Appendix A—AAMVA Survey Respondents

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### U.S. Jurisdictions

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- Alabama
- Alaska
- Arkansas
- Arizona
- California
- Florida
- Georgia
- Hawaii
- Iowa
- Idaho
- Illinois
- Indiana
- Kansas
- Kentucky
- Louisiana
- Maryland
- Michigan
- Minnesota
- Missouri
- Montana
- North Dakota
- Nebraska
- New Hampshire
- New Jersey
- New Mexico
- Nevada
- New York
- Ohio
- Oklahoma
- Oregon
- Rhode Island
- South Carolina
- South Dakota
- Texas
- Virginia
- Vermont
- Washington
- Wisconsin
- West Virginia

### Canadian Provinces

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- Quebec

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## **Appendix B—Market Research Key Findings**

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**This appendix provides key findings identified from market research.**

## Key Findings—Other Considerations and Market Research Results

### Key Findings from Research on Mobile Use

In September of 2010, J.D. Power and Associates published results of its length of time users keep mobile devices study.

- Average cost of cell phones are decreasing while average monthly service plan increasing
- “Customers are keeping their traditional mobile devices for an average of 20.5 months...tenure does differ by manufacturer brand, with the highest reported ownership tenure at an average of 27.8 months, and the lowest at 17.5 months.”
- In short, mobile devices are ubiquitous and broadband access nearly such. Smart phones that handle ever richer media content are driving increased mobile data usage. Given that, the potential for renewal notification effectiveness can't help but grow.

### Key Findings from Public/Private Sector

Multiple articles from the National Law Review showcase security concerns around email and text messaging. Some key points addressed in these articles include:

- Even though email privacy case law is evolving, organizations are becoming more mature in crafting policy
- Privacy laws surrounding an employers' ability to monitor and act on employees' use of personal text messages are not well-developed and remain relatively unsettled
- Because SMS text messages are highly vulnerable, healthcare industry is particularly sensitive of text usage due to health information privacy regulations.

In July, 2005, The US Department of Transportation (USDOT) Federal Motor Carrier Safety Administration (FMCSA) concluded a Driver Violation Notification (DVN) Service Feasibility Study exploring email notification to private sector motor carriers of change to Commercial Driver License statuses (violations) rather than waiting for the annual Motor Vehicle Record (MVR) pull. The notification method most preferred by employers was electronic notice for changes in a driver history record

## Key Findings—Other Considerations and Market Research Results (continued)

### Key Findings from Research on Email Usage

Industry data reflects that annually customers change their email address about 25-35%. eDataScholars observes that “One in three people change their email address once a year as a lot of people change jobs, move or switch Internet providers (due to server decommission) or just trying to out-run the spammers, being the major reasons. Based on our analysis we found that email addresses are changing at a rate of 34% per year.”

During the AAMVA Region 1 Conference in July of 2011, the District of Columbia Department of Motor Vehicles (DC DOT) presented: “Implementing Alternative Services: The Good, The Bad and The Ugly” in which the subject of email renewal notices was a component. Some of the key areas or lessons learned included:  
In FY2011 District of Columbia had online transactions increase by 40%  
DOTs can incent email renewal notification and online renewal transactions by offering a discounted online rate  
Options exist to require online activity by eliminating in-person vehicle renewals.

Consumer habits are more toward adding addresses rather than changing them. Comm100 asserts that users frequently “add a secondary email address and use their older email address less often or for different purposes.

### Key Findings from Marketing Research

Both Lyris and Comm100 (email COTS companies) drew attention to performance tracking as essential components of effective email campaign execution. Key metrics such as:

- Inbox delivery success rate tracking helps avoid automated blocking.
- Email read-receipt tracking: although it's not foolproof (e.g., Internet Message Access Protocol (IMAP)-based email clients may return a receipt when the message is marked as read even if the recipient does not open the message), automated tracking has a high enough degree of accuracy to be useful.
- “Opt-in/opt-out” permission crucial - for an email renewal notification campaign in the private sector, delivery rate is preeminent; for a public sector campaign, privacy and data security are of even greater importance.
- Keeping high inbox delivery and email open rates via robust list management enhances reputation with Internet Service Providers (ISP)
- Clients with minimal experience implementing email marketing campaigns must perform a deliberate “opt-in” marketing initiative as part of roll-out to preclude SPAM tagging.

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