E-Titling
Proof of Concept
Definition
Version 1.0
March 16, 2012

This document and associated work products were produced by Clerus Solutions, LLC as Program Manager to the American Association of Motor Vehicle Administrators (AAMVA) E-Titling Task Force under contract to AAMVA.
# E-Titling Proof of Concept Definition

## Version 1.0

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DOCUMENT PURPOSE

This document provides the definition for the E-Titling Proof of Concept. The contents are based on information collected by Clerus Solutions from the American Association of Motor Vehicle Administrators (AAMVA), the E-Titling Proof of Concept Task Force, and additional stakeholders involved in the stages of a vehicle lifecycle.

1.1 Document Status

Table 1 Document Status

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<td>Primary Contact, Organization</td>
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</tr>
<tr>
<td>Secondary Contact, Organization</td>
<td>Deb Hillmer, South Dakota</td>
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1.2 Document Revision History

Table 2 Document Revision History

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2 PARTICIPANTS AND ROLES

This section identifies the participants and their roles as they relate to the E-Titling Proof of Concept. Participants in this effort provided invaluable insight to defining the requirements for this document. Contributions from state motor vehicle administrators (MVAs), AAMVA, automobile manufacturers and dealers, lien holders, fleets and federal resources are identified in the tables below.

2.1 AAMVA Project Team

Table 3 identifies AAMVA resources assigned to the E-Titling Proof of Concept. The project manager serves as the primary point of contact (POC).

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Phone</th>
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<tbody>
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2.2 Clerus Solutions Project Team

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<table>
<thead>
<tr>
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<th>Role</th>
<th>Phone</th>
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<tbody>
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</table>
### 2.3 State MVA Task Force

Table 5 identifies the state motor vehicle administrators represented on the E-Titling Proof of Concept Task Force.

<table>
<thead>
<tr>
<th>State</th>
<th>Name</th>
<th>Phone</th>
<th>Email</th>
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<tbody>
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### 2.4 Stakeholder Participation

Table 6 identifies stakeholder groups represented by industry and federal resources on the E-Titling Proof of Concept.

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<th>Industry</th>
<th>Name</th>
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<tr>
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</table>
### Stakeholder Definitions

The following list provides a brief definition of each stakeholder’s role as it relates to the E-Titling Proof of Concept.

- **Manufacturers**
  
  Manufacturer refers to the industry that is engaged in the manufacture and sale of new vehicles. Stakeholder group was represented by David Bright of the Alliance of Automobile Manufacturers.

- **Dealers**
  
  Dealer refers to the industry that buys and sells new and used vehicles to the consuming public and is responsible to create a transfer of ownership from the dealer to the customer either on paper or by electronic means. Stakeholder group was represented at the National level by James Moors of the National Automobile Dealers Association. Bruce Anderson of the Iowa Automobile Dealers Association and Bobbi Sparrow and Tom Fullington of the Arizona Automobile Dealers Association attended the Dallas Task Force meeting. State Dealers will be represented by Myron Rau of the South Dakota Dealers Association.

- **Auctions**
  
  Auction refers to the industry that sells vehicles where the method of sale is through competitive bidding. Auctions provide an avenue for dealers to sell their inventory to other dealers. Auctions are not within the chain of ownership but perform an intermediary process of handling the title paperwork. Stakeholder Group will be represented by Berta Phelps of the National Auto Auction Association.
• **Fleets**
  
  Fleet vehicles are groups of vehicles owned or leased by a business rather than an individual. Fleet vehicles are generally purchased as new vehicles directly from the manufacturers/dealers. Stakeholder group was represented by Michael Miller of LeasePlan USA.

• **Lien Holders**

  Lien Holders refer to the industry that provides financial loans to consumers for the purchase of vehicles. These liens must be perfected with the state database to ensure the lender collateral. Stakeholder group was represented by Connie Anderson-Smith and Mark Zalewski of National Title Solutions Forum.

• **Insurance**

  Insurance refers to the industry that provides insurance for vehicles and becomes part of the history of the vehicle.

• **Federal Resources**

  Federal Resources refer to Federal Agencies that are stakeholders to the vehicle E-titling process. This group includes: National Insurance Crime Bureau (NICB) for the federal data requirements for the Manufacturer Certificate of Origin (MCO) file, National Highway Traffic Safety Administration (NHTSA) for the federal requirements on odometer disclosure, and Department of Justice (DOJ) for the requirements that states provide brand information to the National Motor Vehicle Title Information System (NMVTIS).

3 **DEFINING THE PURPOSE, OBJECTIVES, AND GOALS**

3.1 **Purpose**

The purpose of the E-Titling Proof of Concept is to demonstrate the viability of an electronic titling process that could eventually track a vehicle from “cradle to grave”. The Proof of Concept is an excellent strategy for mitigating risk in the wider implementation of a comprehensive E-titling process because it can help to identify and resolve issues with the conception of the process. Although the Proof of Concept is limited in scope, its success will provide the foundation for the development and widespread implementation of a comprehensive process.

3.2 **Scope**

The scope of this E-Titling Proof of Concept is limited to the titling of new motor vehicles that are being titled for the first time. For the purpose of this Proof of Concept, “new motor vehicles” are defined as new passenger vehicles, SUVs and property carrying vehicles with a GVWR of less than 10,000 pounds. These “new motor vehicles” must be produced by NHSTA approved manufacturers of vehicles available for sale in the U.S.
that conform to the federal motor vehicle standard 17-Digit vehicle identification number. Motorcycles, trucks (GVWR over 10,000 pounds), and trailers are not considered in scope for the pilot.

The scope of the E-Titling Proof of Concept includes implementing a paperless process for all stakeholder groups involved in the first-time titling of motor vehicles. In this context, the stakeholders groups are as follows:

- Vehicle Manufacturers
- Vehicle Dealers
- State Titling Agencies
- Vehicle Lien Holders
- Consumers

### 3.3 Goals

The primary goal of the E-Titling Proof of Concept is to implement technology and procedures to use electronic records to track a new vehicle from its manufacturer until it is titled for the first time, including the perfecting of any liens on the vehicle.

In accomplishing this primary goal, the E-Titling Proof of Concept has the following additional goals:

- Remain a state-initiated and state-controlled program.
- To the extent possible, use or adapt existing tools or systems including those:
  - Under direct state control
  - Provided by industry
  - Controlled by the Federal Government.
- Comply with both State and Federal Regulations.
- Collaborate with industry stakeholders to gain their support.

### 3.4 Objectives

The objectives of the E-Titling Proof of Concept are to produce the following deliverables:

- **Project Plan** describing the participants, scope, tasking, deliverables, schedule, and cost.
- **Roadmap For E-Titling** describing a comprehensive electronic titling process and a plan for phasing in capabilities over time.
- **Standardized Data Definition of E-Titling Record** providing a standard E-Title record that contains a minimum set of data elements that will allow all participants in the Proof of Concept to share information.
- **MCO System Modifications to enable E-Titling** defining the requirements and specifications for any required modifications to the MCO file and/or business processes for the Proof of Concept.
- **AAMVA ELT Service Requirements** reviewing existing ELT functions to develop an updated set of requirements to support a full-scale E-Titling Program.
Return on Investment Analysis participating pilot state will collaborate with state industry partners to collect data for the Proof of Concept based on a spreadsheet template provided by the PMO.

Proof of Concept Evaluation Report documenting lessons learned during the pilot, summarize the ROI reports provided by each participating state, analysis of the data gathered based on the evaluation criteria, and a conclusion on the effectiveness of the Proof of Concept.

Best Practices suggesting ways to address various use case scenarios encountered by participants during the Proof of Concept.

4 PROOF OF CONCEPT DEFINITION

The management of the full lifecycle of a vehicle, from its manufacture until its demise, involves a complex array of data exchanges that are prone to errors and delays. The E-Titling Proof of Concept will develop and evaluate an interactive, electronic data exchange model among stakeholders and existing tool sets. This integration of existing systems includes portions of the full process of vehicle lifecycle management. The Task Force determined that the data exchanges included in this model are fundamental to any improvement of the entire vehicle lifecycle management process.

The Task Force identified eleven processing steps that comprise the data exchanges included in the E-Titling Proof of Concept. These eleven steps track the vehicle from its manufacture until it is titled in the name of the first consumer to own it, including recording any applicable liens. Each processing step represents a complete transaction, and a two-way flow of information is assumed, even if the response is simply to acknowledge receipt of the information. The following eleven steps define the data exchanges that make up the E-Titling Proof of Concept:

1. CREATE MCO - Manufacturer creates a MCO for newly manufactured vehicle and sends MCO data to the MCO file at the NICB.

2. SEND MCO TO DEALER - Manufacturer sends MCO data and an electronic invoice to the dealer to whom the new vehicle is shipped.

3. REASSIGNMENT - If Dealer reassigns¹ the vehicle to another Dealer, the original Dealer electronically sends the Manufacturer the new Dealer identification and odometer reading and the Manufacturer updates the MCO file.

4. VERIFY CONSUMER IDENTITY - Dealers verify the identity of the consumer, whether an individual or an organization. *(This step is Optional.)*

5. TITLE APPLICATION - Dealer submits an application for the first title to the MVA or state titling agency.

6. VERIFY DEALER STANDING - MVA verifies that the Dealer is licensed and in good standing. *(This step is Optional.)*

¹ A reassignment occurs when the Dealer exchanges the vehicle with another Dealer without a title having been issued.
7. **VERIFY TITLE INFORMATION** - MVA verifies information on the title application against the MCO file.

8. **CHECK NMVTIS** - MVA checks NMVTIS to verify that the vehicle is not already titled or stolen, and whether there is any history including brand, junk, salvage or insurance (JSI) reported information. On the date of this documentation, Junk, Salvage and Insurance information is not reportable data via the NMVTIS check.

9. **ACKNOWLEDGE LIEN** - MVA uses an Electronic Lien and Title (ELT) application or other interface to acknowledge the lien with the financial institution.

10. **CREATE TITLE** – If steps 5 through 9 do not indicate any problems, the MVA issues the title and stores the title information in its internal data stores.

11. **NOTIFY CONSUMER** - MVA notifies the consumer that an electronic title was issued and may provide access via a web site application. *(This step is Optional.)*

Figure 1 depicts how these eleven steps fit together. In Figure 1 and the subsequent figures, the following keys will aid in understanding the diagrams:

- **Unidirectional** arrows indicate a processing step in which the sender receives *only* an acknowledgement receipt.
- **Bidirectional** arrows indicate a *two-way flow* of information.
- **Red** arrows indicate those processing steps that are *core* to the E-Titling Proof of Concept.
- **Blue** arrows indicate processing steps that are *optional* for any participant.

After identifying these eleven steps, the Task Force divided them into four modules by grouping the steps that could logically be implemented together. After devising the four modules, the Task Force determined that Module 2 contains the core functions that the E-Titling Proof of Concept should demonstrate. The following sections explain each of the four modules in greater detail.
4.1 **Module 1 – MCO File Maintenance**

*Module 1 – MCO File Maintenance* comprises the processing steps necessary to add MCO data for a newly manufactured vehicle to the MCO file and to update the information about that vehicle until the MVA issues the first title for that vehicle. Figure 2 depicts the relationship of the processing steps in this module. Module 1 includes the following processing steps:

- **Step 1** - CREATE MCO
- **Step 2** - SEND MCO TO DEALER
- **Step 3** - REASSIGNMENT
4.1.1 Create MCO

An MCO can be likened to a birth certificate for a motor vehicle. When a Manufacturer produces a new vehicle, it sends MCO information to NICB, which adds it to the MCO file. The MCO file then becomes the primary means of tracking “ownership” of the vehicle until it is titled for the first time. The MCO information includes data like the manufacturers identification, date of manufacture, and the Vehicle Identification Number (VIN). Currently during this step, some Manufacturers provide the identification of the Dealer to whom the vehicle is shipped.

4.1.2 Send MCO to Dealer

When the Manufacturer ships the vehicle to a dealer, the manufacturer also sends MCO information and an invoice to the dealer. If the Manufacturer has not already done so, it will send an update to the MCO file with the identification of the Dealer to whom the vehicle is shipped.

4.1.3 Reassignment

A Dealer will sometimes exchange a vehicle with another Dealer. This exchange between Dealers is called a “reassignment”. When a reassignment occurs, the MCO
file needs to be updated to reflect identification of the Dealer who has taken possession of the vehicle and the current odometer reading of the vehicle. It was determined through conversations with the NICB that the preferred method to update the MCO file is for the manufacturers to provide the data since this option is already in place today. The Dealers would provide information about the reassignment to the Manufacturer. The Manufacturer then updates the MCO file with the new Dealer identification and current odometer reading.

4.1.4 Participation in Module 1

To goal of the proof of concept for Module 1 is to have a pilot large enough to provide a good evaluation of these processes for maintaining the MCO file. The pilot should have cross-jurisdictional representation and process enough transactions to ensure data collection volumes are sufficient to evaluate outcomes and benefits of the Module 1 Proof of Concept. The Task Force recommended that the Module 1 pilot have the following participation:

- 4-8 MVAs from among the States currently represented in the Task Force
- 3-4 U.S. Manufacturers currently approved by NHTSA
- 3-4 Dealer franchises for each manufacturer participating in the state pilot
- NICB as the operator of the MCO file

4.2 Module 2 – First Title Processing

Module 2 – First Title Processing comprises the steps necessary to issue the first title for the vehicle when ownership passes from the Dealer to the Consumer. The Task Force has determined that this module contains the core processes that the E-Titling Proof of Concept should focus on demonstrating. Figure 3 depicts the steps necessary for the issuance of the title. The four processing steps that make up Module 2 are as follows:

- Step 5 - TITLE APPLICATION
- Step 7 - VERIFY TITLE INFORMATION
- Step 8 - CHECK NMVTIS
- Step 10 - CREATE TITLE
4.2.1 Title Application

When the Dealer transfers ownership of a new vehicle\(^2\) to a Consumer, the Dealer submits an electronic application to the MVA on behalf of the Consumer. Since this is a new vehicle, the MVA will issue the first title for that vehicle. The title application sent from the Dealer to the MVA contains the following categories of information:

- VIN and MCO Data
- Applicant/Owner data, including a unique identifier such as a driver license number
- Lien data, if there is a lien
- Odometer reading\(^3\)

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\(^2\)The E-Titling Proof of Concept is limited to new vehicles that are being titled for the first time.

\(^3\)For the purposes of the E-Titling Proof of Concept, it is assumed that each state participant will request and be granted a waiver from NHTSA regarding the current requirement to provide a paper disclosure.
• Dealer data
• Sales data
• Fees Paid
• Purchase price
• New brand data
• Flag to indicate paper or electronic title

Compliance with federal odometer disclosure regulations currently requires the use of paper forms. The Task Force will research the possibility of handling the odometer disclosure in a more efficient manner.

The method for submitting the title application may differ from MVA to MVA, and possibly from Dealer to Dealer within a given state. In some cases, the dealers have direct access to state information systems, and in other cases, dealers use the services of a third party vendor for submitting title applications. The proof of concept will develop a data exchange standard for this electronic interaction and the resulting E-Title record.

4.2.2 Verify Title Information

Once the MVA receives the application, it begins work on issuance of the title. Much of this work is internal to the MVA, but some actions require interaction with other stakeholders in the titling process. One such action is the need to verify information from the title application with the information in the MCO file. When issuing the title, some states may prefer to use the information from the MCO file rather than the information provided on the application.

The cooperation of the NICB is essential to the development of an automated process to support this processing step. During previous discussions with NICB, access to MVAs could be allowed to access the MCO file through a standalone website operated by a third-party vendor. This would enable a MVA to obtain MCO data either for verification or to provide information to use when titling a vehicle. NICB has agreed to discuss this process in more detail.

4.2.3 Check NMVTIS

Another of the MVA’s key external interactions when issuing a title is to check NMVTIS. The MVA checks NMVTIS to establish that no title has previously been issued for the vehicle, the vehicle has not been reported as stolen, and whether the vehicle has any history including brand, junk, salvage or insurance reported information. At the time of this documentation, JSI information is not reportable data via the NMVTIS check. If the NMVTIS check does not find any problems, then the MVA can issue the title. However, if the NMVTIS check finds any problems, the MVA cannot issue the title until the problem is resolved.

4.2.4 Create Title

While the exact sequence of steps may vary among states, if the verifications and checks do not reveal any problems and all information is available, the MVA creates
the E-Title. The MVA stores the title information in its internal data store of title records. While it may prove difficult to pinpoint the exact point in the process at which the E-Title was “issued”, the key consideration is that it was issued without the printing of a paper document.

4.2.5 Participation in Module 2

Because Module 2 contains the core processes of the E-Titling Proof of Concept, it is especially important to have the right participants in the pilot. The pilot should have cross-jurisdictional representation and process enough transactions to provide data collection volumes sufficient to evaluate outcomes and benefits of the Module 2 Proof of Concept. The Task Force decided that any state participating in Module 2 must perform online updates to NMVTIS or, at a minimum, perform nightly batch updates.

The Task Force recommended that the Module 2 pilot have the following participation:

- 4-8 MVAs from among the States currently represented in the Task Force
- NICB as the operator of the MCO file
- AAMVA as the operator of NMVTIS

4.3 Module 3 – Lien Processing

Module 3 – Lien Processing includes the processing necessary for the MVA to acknowledge the lien to the financial organization holding the lien on the vehicle. Figure 4 provides a graphical representation of this processing. Module 3 has only one processing step, which is the following:

- Step 7 - ACKNOWLEDGE LIEN

Figure 4: Lien Processing
4.3.1 **Acknowledge Lien**

When processing a title for a vehicle, the MVA frequently must record a financial organization’s lien on the vehicle. In some states, the MVA uses the Electronic Lien and Title (ELT) system provided by AAMVA for this purpose. However, the AAMVA ELT solution is not the only option. States have the option to choose the AAMVA ELT or another ELT solution if they wish.

4.3.2 **Participation in Module 3**

The pilot for Module 3 should have cross-jurisdictional representation and process enough transactions to provide data collection volumes sufficient to evaluate outcomes and benefits of the Module 3 Proof of Concept. The Task Force recommended that the Module 3 pilot have the following participation:

- 4-8 MVAs from among the States currently represented in the Task Force.
- Multiple Financial Organizations for each MVA. It is up to each MVA to determine how many and which Financial Organizations to engage for the Proof of Concept.

4.4 **Module 4 - Optional Processes**

*Module 4 – Optional Processes* consists of three processing steps that the Task Force would like to evaluate provided sufficient participation can be achieved. The Task Force made these processing steps optional for at least two reasons. First, it is not clear whether the legislatures of the pilot states would pass the changes in legislation that would be needed. Second, it is difficult to gauge the level of interest and commitment among the stakeholders who would be involved piloting these processing steps. Figure 5 provides a graphical depiction of the three optional processing steps included in Module 4.

The three optional processing steps that make up Module 4 are not inter-related in a way that makes them a coherent subset of the overall titling process. Each of these three could be piloted without the need to pilot the other two. For this reason, the Task Force decided to consider each as an independent subset of Module 4. The optional processing steps are as follows:

- Module 4A (Step 4) - VERIFY CONSUMER IDENTITY
- Module 4B (Step 6) - VERIFY DEALER STANDING
- Module 4C (Step 11) - NOTIFY CONSUMER

4.4.1 **Module 4A (Step 4) - Verify Consumer Identity (Optional)**

In this processing step, the Dealer verifies the identity of the Consumer, whether the Consumer is an individual or an organization. The AAMVA DL/ID Verification application could provide a means for the Dealer to verify the identity of an individual. However, additional research is needed to determine if a Dealer could use an FEIN or some other means to verify the identity of an organization.
4.4.2 Module 4B (Step 6) - Verify Dealer Standing (Optional)

The Verification of a Dealer Standing processing step involves an MVA determining that a Dealer is currently licensed and is in good standing with the state. It is at least conceivable that an MVA can gain access to the necessary information in its own state to verify a Dealer’s license and good standing.

4.4.3 Module 4C (Step 11) - Notify Consumer (Optional)

In this processing step, the MVA would notify the Consumer that an electronic title has been issued for the vehicle. The MVA may provide a web based application that allows the Consumer to access information on the title.

Figure 5: Optional Capabilities
4.4.4 Participation in Module 4

Potentially, Module 4 could have three separate pilots. Each of these pilots should have cross-jurisdictional representation and process enough transactions to provide data collection volumes sufficient to evaluate outcomes and benefits of the Proof of Concept Modules 4A, 4B and 4C. The Task Force recommended that the Module 4 pilots have the following participation:

- 4-8 MVAs from among the States currently represented in the Task Force
- AAMVA as the operator of DL/ID Verification System
- Other participants TBD

4.5 Pilot Participant Definition

A guiding principle for the Proof of Concept is that states Motor Vehicle Administrators lead this effort with participation and support from the industry involved in the vehicle lifecycle administration. The motivation, availability, and participation of entities involved in each function within the vehicle lifecycle are critical to the E-Titling Proof of Concept pilot. Engagement from each of these functional areas will ensure a more effective proof of concept, a more comprehensive evaluation of performance, and a better ability to measure success. Although there may be interaction with federal government agencies and potential benefit gained to them through electronic titling, the state administrators will maintain the control and management of the E-Titling Program ultimately developed.

4.5.1 State Participants

Based on the level of interest from the E-Titling Proof of Concept Task Force, participants in the Proof of Concept pilot will be limited to its members. Cross-jurisdictional representation from these participants will provide significant value to measure the outcome and benefits for the Proof of Concept.

Table 7 indicates, for each module, the potential participants from each state represented on the Task Force.
Table 7 Potential State Participation by Module

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<tr>
<th>State</th>
<th>Module 1</th>
<th>Module 2</th>
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To participate in the pilot modules, a state MVA will need to collaborate with stakeholders to ensure that the necessary online data exchanges required by the module are functional. At a minimum, a pilot state must be able to participate in Module 2 (First Time Title Processing) and verify the title application data with both MCO and NMVTIS of the Proof of Concept. The pilot state must also be online with NMVTIS or, at a minimum be performing nightly batch updates to NMVTIS to prevent a title from being issued by another state in error. The Task Force also determined that a pilot state must either be participating in ELT or have a process to allow the lien holder to come into the MVA and verify their information.

The E-Titling Proof of Concept is a scalable model and that while a state will realize efficiencies and cost savings by implementing the core module there are even greater benefits to be realized by adding modules or implementing the entire model. Data collection measures will be required for each module to demonstrate both efficiency gains and recognize cost savings.
4.5.2 **Industry Participants**

Industry participation in the E-Titling Proof of Concept is essential to realizing the opportunity for a vehicle lifecycle administration process. State MVA’s recognize the importance of the role our industry partner’s bring to the success of the pilot and the voice they carry to encourage broader participation within their respective associations.

State MVA’s participating in the pilot will need to work closely with industry stakeholders to ensure that manufacturer and dealer data exchanges to the MCO file and the MVA are accurate and timely.

5 **EVALUATING THE PROOF OF CONCEPT**

Effective evaluation of the E-Titling Proof of Concept Pilot requires the determination of expected outcomes and finding measures to determine if those outcomes were achieved. Collecting data from all stakeholders rather than only the MVAs will improve the effectiveness of the evaluation. This will require that baseline measurements be determined for each of the expected outcomes listed below:

1. Increased efficiency and accuracy and reduce costs by eliminating paper transactions
2. Improved detection and deterrence of fraud
3. Identification of obstacles to full implementation of electronic titling for a new vehicle.
4. Identify additional benefits from implementation of electronic titling for a new vehicle.

Because different evaluation criteria apply to the four modules, it will be necessary to collect data on each of the Modules to evaluate their success. The overall success of the Proof of Concept will be determined by considering the combined success of the individual modules.

5.1 **Data Collection**

In order to determine overall effectiveness of a module, each stakeholder will collect data pre-pilot, prior to implementing any changes. This data will establish a baseline for the comparison of data collected during and after the pilot. To measure effectiveness of the pilot, data will be collected during the following phases:

- **Pre-Pilot Baseline** – Data will be collected from state and industry participants prior to Pilot use.
- **During Pilot** – Pilot operational data will be collected by the states and the industry service providers during the pilot per evaluation criteria.
- **Post-Pilot Delta** – At the end of the pilot, cumulative operational data will be reviewed against the baseline data as defined by the evaluation criteria.
The data to be collected by stakeholders is ultimately determined by defining the evaluation criteria for each module. It is expected that the data to be collected for any one module may differ from the other modules. As well, industry stakeholders may need to collect different data than MVAs.

5.2 Evaluation Criteria

Because each of the modules defined for the Proof of Concept involve different stakeholders and different transactions, separate evaluation criteria are needed to evaluate each module. The next sections describe the evaluation criteria for each module.

5.2.1 Module 1 - MCO File Maintenance

Manufacturers and Dealers:

Answers to the following questions will assist the Task Force to determine to what extent Manufacturers and Dealers can measure and report if an objective was met. Manufacturers and Dealers, please provide responses to the respective questions listed below in red.

1. Increased efficiency and accuracy and reduce costs by eliminating paper transactions.

   For Dealers:

   If you agree to participate in the E-Titling Proof of Concept:

   - Can you quantify the number of vehicles that did not require a paper MCO during the pilot period?
   - Can you determine the reduction or gain in employee time due to electronically submitting title applications?
   - Did the electronic/paperless process improve time to market?
     - For paperless MCO?
     - For electronic title applications?

   For Manufacturers:

   If you agree to participate in the E-Titling Proof of Concept:

   - Can you quantify the number of vehicles that did not require a paper MCO during the pilot period?
   - Can you quantify the number of electronic dealer reassignments during the pilot period?

   For Dealers:

   Can you determine cost savings attributable to using a paperless process during the pilot period?

   - Personnel?
   - Other?
What did it cost to participate in the pilot?

- Technology Changes?
- Training?
- Other?

For Manufacturers:
Can you determine cost savings attributable to using a paperless process during the pilot period?

- Personnel?
- Secure paper?
- Postage?
- Other?

What did it cost to participate in the pilot?

- Technology Changes?
- Training?
- Other?

2. Improve detection and deterrence of fraud.

Please provide description of how electronic titling could improve the detection and/or deterrence of fraud.

3. Pilot participants will be asked to identify obstacles to full implementation of this module.

4. Pilot participants will be asked to identify additional benefits from implementation of this module.

5.2.2 Module 2 – First Title Processing

1. Increased efficiency and accuracy and reduce costs by eliminating paper transactions

Dealers:

Answers to the following questions will assist the Task Force to determine to what extent Dealers can measure and report if an objective was met. Dealers, please provide responses to the respective questions listed below in red.

If you agree to participate in the E-Titling Proof of Concept:

- Can you quantify the number of title applications that are created electronically during the pilot period?
- Can dealer pilot participants determine the time spent by staff pre-pilot and during pilot to process new vehicle title transactions to determine savings or cost to perform electronic titling transactions?
• Can dealer pilot participants determine the employee wage cost/savings for the electronic new vehicle title documents processed? The time savings will be multiplied by the hourly wage of the respective employees to determine the cost savings or increase.

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• Reduce title application backlogs
  • Pilot Participants will measure the length of the new vehicle title application process pre-pilot and during pilot. The delta will be reported in terms of hours/days gained or hours/days lost.

• Document review process will be eliminated or reduced
  • Pilot Participants will measure employee time for number of documents reviewed pre-pilot and during pilot. The time will be multiplied by number of electronic transactions to determine time savings. The PMO will define the results by the type of processes used by pilot state participants.
  • Pilot Participants will determine the employee wage savings for the reduction in the number of documents reviewed pre-pilot and during pilot. The time determined in the previous measure will be multiplied by the hourly wage of the respective employees to determine a cost savings. The PMO will define the results by the type of processes used by pilot state participants.

• Reduction in the audit process for documents that are submitted electronically.
  • Pilot participants will measure the employee time spent to audit a document pre-pilot and during pilot. The time will be multiplied by the number of documents audited pre-pilot and during pilot to determine a time savings.
  • Pilot participants will determine the employee wage savings for the reduction in number of documents audited. The time savings will be multiplied by the hourly wage of the respective employees to determine a cost savings.

• Reduction in the scanning and microfilming of documents that are submitted electronically.
  • Pilot participants will measure the employee time spent to scan or microfilm a document pre-pilot and during pilot. The time will be multiplied by the number of documents scanned/filmed pre-pilot and during pilot to determine a time savings.
  • Pilot participants will determine the employee wage savings for the reduction in number of documents scanned/filmed. The time savings will be multiplied by the hourly wage of the respective employees to determine a cost savings.
  • Pilot participants will determine the cost of paper and storage space for documents. This number will be multiplied by number of electronic transactions submitted to determine savings.
• Reduction in mail room processing of paper documents.
  o Pilot participants will measure the employee time spent in the mail room or mail process to sort/route/handle the paper documents pre-pilot and during pilot. The time will be multiplied by the number of new vehicle title documents handled pre-pilot to determine a time savings. If new vehicle document totals are not easily obtained, the reduction in the number of mail items could also be used for this factor.
  o Pilot participants will determine the employee wage savings for the reduction in number of documents processed in the mail room. The time savings will be multiplied by the hourly wage of the respective employees to determine a cost savings.

• Dealer Employee vs. State Employee Processing
  o Dealer pilot participants can determine the time spent by staff pre-pilot and during pilot to process new vehicle title transactions to determine savings or cost to perform electronic titling transactions.
  o Dealer pilot participants will determine the employee wage cost/savings for the electronic titles documents processed. The time savings will be multiplied by the hourly wage of the respective employees to determine the cost savings or increase.

• Electronic records access by dealers and other stakeholders reduces customer support by the MVA.
  o Pilot participants will measure the employee time spent for customer support (phone calls, correspondence, and emails) to respond to questions on new vehicle titles. The time will be multiplied by the number customer contacts handled pre-pilot to determine a time savings.
  o Pilot participants will determine the employee wage savings for the reduction in number of customer contacts. The time savings will be multiplied by the hourly wage of the respective employees to determine a cost savings.

• Operating Expense Savings
  o Pilot participants will determine the pre-pilot cost for the following items required for first time titles. This number will be multiplied by the number of electronic titles issued during pilot to determine the cost savings.
    ▪ Cost of Forms - title applications and certificates of title
    ▪ Cost of Printing
    ▪ Cost of Imaging (and storage)
    ▪ Elimination of Paperwork
    ▪ Postage Savings

2. Pilot participants will be asked to identify how the Proof of Concept improved the detection and deterrence of fraud. *The Task Force has identified the following as expected benefits however, realizes these are subjective criteria and difficult to measure:*
Online, real time update to MVA Record of ownership and lien information
24/7 access to more current MVA record by Law Enforcement
Increased security of online processing
User logs and history to pinpoint specific user when fraud committed
History of reassignments and odometer readings upon transfers
Online logbook to identify where vehicle is currently located
Fees are accurately calculated and collected
Data entry screens are prepopulated with vehicle information reducing errors and fraud
Payment to MVA is made by ACH reducing the number of bad checks
Tie-in with NMVTIS means better history of vehicle across state lines
Prevent dealers from altering applications and/or pocketing fees collected by reporting a lower than actual sales price and paying to the treasurer fees lower than the fees collected from the customer
• Pilot time period an issue
• Quantifying something that doesn’t happen is difficult
• Can track dealers that are not compliant in their reporting.

3. Pilot participants will be asked to identify obstacles to full implementation of this module.

4. Pilot participants will be asked to identify additional benefits from full implementation of this module.

5.2.3 Module 3 - Lien Processing

1. Increased efficiency and accuracy and reduce costs by eliminating paper transactions

• Reduce process time/backlogs in lien perfections, lien releases, and other lien updates.
  • Pilot participants will measure the length of the new vehicle lien perfection, lien release and lien update process pre-pilot and during pilot. The delta will be reported in terms of hours/days gained or hours/days lost. This determination will be reported by states that have not implemented ELT.
  • Pilot participants will determine the cost of issuing paper documents for lien perfections, lien releases, and lien updates. This cost will be multiplied by the number of electronic lien transactions processed.

• Direct access by lienholders will ensure timely and accurate updating of MVA record and therefore reduce the number of contacts to the MVA.
  • Pilot participants will determine the number of calls accepted pre-pilot regarding lien transactions to compare with the number of calls accepted during pilot to determine if there is a reduction or gain in the contacts made to the MVA regarding lien transactions.

• Electronic Titling will reduce the time/cost of preparing titles for mailing.
Pilot Participants will measure employee time for preparing titles for mailing pre-pilot and during pilot. The time will be multiplied by number of electronic transactions to determine time savings.

Pilot Participants will determine the employee wage savings for preparing titles for mailing pre-pilot and during pilot. The time determined will be multiplied by the hourly wage of the respective employees to determine a cost savings.

- Operating Expense Savings
  - Pilot participants will determine the pre-pilot cost for the following items required for electronic liens. This number will be multiplied by the number of electronic liens issued during pilot to determine the cost savings.
    - Elimination of paper lien releases and paper title/lien applications
    - Postage for mailing of title and lien documents
    - Imaging of paper documents eliminated or reduced
    - Storage of documents reduced

2. Pilot participants will be asked to identify how the Proof of Concept improved the detection and deterrence of fraud. The Task Force has identified the following as expected benefits however, realizes these are subjective criteria and difficult to measure:
   - Direct and secure access by lienholders will reduce both errors and fraud with liens
   - Timely updates of record and fewer paper titles will reduce or eliminate fraud involving duplicate titles, paper title alterations, and changing of MVA record by unauthorized persons
   - Prevent fraudulent release of liens through forgery
   - Reduction in paper title sent to customer when a lien is on the vehicle.
   - Reduction of subsequent liens recorded before initial lien.

3. Pilot participants will be asked to identify obstacles to full implementation of this module.

4. Pilot participants will be asked to identify additional benefits from full implementation of this module.

5.2.4 Module 4 – Optional Capabilities

For the following objectives, the measurement of success is often subjective and unique to each participating stakeholder therefore; surveys of stakeholder participants will be utilized to make some of the determinations as to whether the objective was met. The lessons learned from implementation of these modules will provide an assessment of benefits gained and obstacles encountered.

5.2.4.1 Module 4A - Verify Consumer Identity

1. MVA pilot participants will be asked to answer Post-pilot survey questions such as:
• Did your agency implement additional access to other state databases (i.e. driver license) to query records for verification of consumer identity?
  If yes:
  o Did this access result in increased accuracy in the data entry processes?
  o Did this access decrease the creation of duplicate customers?
  o If accuracy increased, did this increase in accuracy result in cost/time savings?
  o Was the cost/time invested to train personnel on access to a verification system worth the long term benefit by increased accuracy?
  o If a verification process was created for Dealers to access customer information, was there a fee collected for the verification process?
    ▪ If so, was there a revenue increase realized?
• Did the verification of consumer identification reduce and/or deter fraud?
  If no:
  o Is there legislation preventing dealer access to DL/ID information?
  o Were there other obstacles to verifying consumer identity?

2. Dealer pilot participants will be asked to answer Post-pilot survey questions such as:

• Did your state allow you to implement access to state databases (i.e. driver license) to query records for verification of consumer identity?
  If yes:
  • Did this access result in increased accuracy in the data entry processes?
  • Did this access decrease the creation of duplicate customers?
  • If accuracy increased, did this increase in accuracy result in cost/time savings?
  • Was the cost/time invested to train personnel on access to a verification system worth the long term benefit by increased accuracy?
  • Was there a fee collected for the verification process?
  • Did you pass this fee on to the consumer?
  • Will the verification of consumer identification reduce and/or deter fraud?
    If no:
    • Were there other obstacles to verifying consumer identity?

5.2.4.2 Modify 4B - Verify Dealer Standing

1. MVA pilot participants will be asked to answer Post-pilot survey questions such as:

• Do you have the ability to verify the identity and status of a dealer in your state?
• Do you have the ability to verify the identity and status of a dealer in another state?
Will the verification of dealer standing ensure that franchise laws are enforced to prevent suspended/revoked dealers from doing business?

Will the verification of dealer standing ensure that franchise laws are enforced to prevent used car dealers from selling new cars?

Can you determine the percentage of transactions that are rejected due to the dealer verification process?

Is there a time savings to the state when the dealer verification process rejects the dealer therefore stopping an electronic application for title?

Have you realized a reduction in out of trust claims for suspended or out of business dealers?

Can you determine the number of rejected transactions based on failed dealer verification transactions?

What are the obstacles to implementation of a dealer verification module?

What are the benefits gained by implementation of a dealer verification module?

2. Dealer pilot participants will be asked to answer Post-pilot survey questions such as:

- Do you have the ability to add consumer data to the data base in multiple states, based upon the license within those states?
- What are the obstacles to implementation of a dealer verification module?
- What are the benefits gained by implementation of a dealer verification module?

5.2.4.3 Modify 4C – Notify Consumer

1. MVA pilot participants will be asked to answer Post-pilot survey questions such as:

- Did you implement a process whereby consumers can access and/or manage their own records?
  - If yes:
    - What is the benefit of this access?
      - Did this access reduce or eliminate consumer contacts to the MVA?
      - Did you require consumers to update their email contact information?
      - If you required updated email information, did you verify the updated email information?
  - What are the obstacles to implementation of a consumer notification module?
  - What are the benefits gained by implementation of a consumer notification module?
6 PROOF OF CONCEPT DELIVERABLES

The E-Titling Proof of Concept will use this definition document and evaluation criteria to execute the Proof of Concept with a limited set of stakeholders. The execution of the Proof of Concept will result in the development of the following deliverables:

1. Project Plan
2. Roadmap for E-Titling
3. Standardized Data Definition of E-Titling Record
4. MCO System Modifications to enable E-Titling
5. AAMVA ELT Service Requirements
6. Return on Investment Analysis
7. Proof of Concept Evaluation Report
8. Best Practices

All deliverables will be reviewed and approved by participants in the state E-Titling Proof of Concept Task Force. Industry stakeholder groups will be engaged in the Proof of Concept pilot and be given the opportunity to develop and review deliverables.

Every attempt will be made to ensure that each deliverable will be reviewed at least twice with consideration for completing the work in a reasonable timeframe. The initial draft of each deliverable will be reviewed by the state led E-Titling Proof of Concept Task Force. Any edits resulting from this review will be incorporated into the document and the second draft will be provided simultaneously to the Task Force and industry and other stakeholders for review. Any additional comments will be reviewed by the Task Force and those accepted will be incorporated into a final draft. Upon approval of the final draft by the Task Force, the deliverables will then follow the applicable contract acceptance process within AAMVA.

The following sections describe the deliverables in more detail.

6.1 Project Plan

The PMO will deliver a detailed project plan and work breakdown structure for the E-Titling Proof of Concept. The project plan will describe the participants, scope, tasking, deliverables and sub plans for management and control of the Proof of Concept pilot. The Project Plan will also define the schedule and cost of the project and will be submitted for approval to the state E-Titling Proof of Concept Task Force.

6.2 Roadmap For E-Titling

The Task Force Business Team will work with the stakeholders to develop a Roadmap for E-Titling. The roadmap will identify the full program and a plan for phasing in capabilities over time. An important component of the roadmap will be when the E-
Titling project can begin to increase in scope to include used vehicles. When states make a commitment to E-titling for new vehicles they will need to know when and how used vehicles will be addressed. The Task Force discussed working on this Roadmap deliverable early within the Proof of Concept so that requirements for used vehicles could be addressed prior to the end of the Proof of Concept.

The roadmap will describe both short-term and long-term goals with specific technology solutions to take the next step towards a complete E-Titling Program. The roadmap will provide a mechanism to help forecast technology developments and provide a framework to help plan and coordinate technology developments. This deliverable will be submitted for approval to the state E-Titling Proof of Concept Task Force.

### 6.3 Standardized Data Definition of E-Titling Record

The Task Force Technical Team will deliver standardized data definition of the E-Title record that will be used within the E-Titling Proof of Concept. The Proof of Concept consists of data exchanges between a set of existing systems operated by a diverse set of participants. The success of the E-Titling Proof of Concept will depend greatly on the ability for participants to effectively exchange data between the existing systems. Many of the participants will have existing data exchange definitions and methods for data transfer. This deliverable will focus on the data definition and not the method for transmission. The deliverable will be a standard E-Title record that contains a minimum set of data elements that will allow all participants in the pilot. This deliverable will be submitted for approval to the state E-Titling Proof of Concept Task Force.

### 6.4 MCO System Modifications to enable E-Titling

The Task Force Technical Team will work with NICB and the Task Force to define the requirements and specifications for any required modifications to the MCO file and/or business processes for pilot participants. AAMVA staff will lead the development of the requirements and specifications as well as the development, testing and deployment of the system components. The PMO will coordinate the system changes with NICB and any other stakeholder involved in the use of the MCO file. This deliverable will require approval by NICB and the state E-Titling Proof of Concept Task Force.

### 6.5 AAMVA ELT Service Requirements

The Task Force Technical Team will lead the effort to review the existing AAMVA ELT Service requirements to develop an updated set of requirements containing any modifications necessary for ELT to support a full-scale E-Titling Program. The Technical Team will work with stakeholders to gather their input to develop the requirements. AAMVA staff will lead the development of the ELT requirements and specifications. This deliverable will be submitted for approval to the state E-Titling Proof of Concept Task Force.
6.6 **Return on Investment Analysis**

Each state participating in the Proof of Concept will collect cost information to calculate a return on investment (ROI) for the state participant. This effort will require the pilot state to collaborate with their state-industry partners to collect essential data to complete the ROI. Each state will document demographic information, costs associated with paper title operations, costs for implementing the E-Title Proof of Concept pilot, and cost associated with electronic title operations. The PMO will develop a template spreadsheet that will aid the states in the documentation of such information as well as the calculation of ROI. The ROI analysis will take place within a single state. Due to differences in laws, cost drivers and implementations, cost will not be compared across states.

6.7 **Proof of Concept Evaluation Report**

Using the pre-defined evaluation criteria, the PMO will use the information collected by participants to produce a Proof of Concept evaluation report. This deliverable will document lessons learned during the pilot, summarize the ROI reports provided by each participating state, provide analysis of the data gathered based on the evaluation criteria and draw a conclusion on the effectiveness of the pilot.

6.8 **Best Practices**

The PMO will work with each participant to develop a best practices document for the E-Titling Proof of Concept. The deliverable will suggest ways to address various use case scenarios encountered by participants during the Proof of Concept pilot. The best practices will help additional states implement E-titling to minimize challenges that pilot states faced during the Proof of Concept pilot. This deliverable will be submitted for approval to the state E-Titling Proof of Concept Task Force.