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**State of Kansas**  
**Kansas Criminal Justice Information System**  
**eCitation Cost-Benefit Study**

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Version 4.0



[sooscreekconsulting.com](http://sooscreekconsulting.com)

P.O. Box 1998  
AUBURN, WA 98071-1998  
253-740-2330

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## I. INTRODUCTION

This document encapsulates the overall costs and benefits of implementing a new eCitation information system. The eCitation Initiative’s key benefits have been identified, reviewed, and are presented in this document, along with an explanation of the approach utilized to identify the benefits. A benefit can be tangible (measurable) or intangible (provides value, but is not directly measurable). Descriptions, detailed calculations, and proposed future measures are provided for tangible benefits, as well as descriptions for those benefits determined to be intangible.

### A. Approach

The Value Measuring Methodology was employed to determine the overall benefits of the eCitation Program. The Value Measuring Methodology is a tool developed by the Federal Government to assess the relative value and viability of different information technology efforts. Since government entities are not motivated solely by economic factors, the Value Measuring Methodology not only provides an evaluation model that includes classic components such as operational efficiency and cost-effectiveness, but also considers other, less tangible components of the technology effort. A complete explanation of the Value Measuring Methodology is available at:

[www.cio.gov/documents/ValueMeasuring\\_Methodology\\_HowToGuide\\_Oct\\_2002.pdf](http://www.cio.gov/documents/ValueMeasuring_Methodology_HowToGuide_Oct_2002.pdf)

The table below describes the five value factors in the Value Measuring Methodology.

Value Factor	Definition	Examples
Government Operational	Benefits that are related to improving operational efficiency or enabling future initiatives.	Reduced time for Officer to make stop and issue citation allowing both driver and Officer to get back on their way quicker.
Government Financial	Direct financial benefits to government agencies.	Reduced time spent processing traffic citations. Cost savings from the reduction of paper.
Direct Customer	Benefits to individuals or groups that result from the implementation of the system.	Reduced time for traffic stops allows drivers to return on their way quicker.



Value Factor	Definition	Examples
Social	Benefits that apply to society as a whole.	Improved highway safety.
Strategic	Benefits realized through attainment of organizational or agency strategic objectives.	Improved accuracy, speed, and completeness of information from traffic citations.



## II. PROGRAM BENEFITS

The table below summarizes the eCitation Program benefits by type and provides a view of who will realize these improvements. The benefits are grouped by the Value Measuring Methodology categories. The order of the benefits is not an indication of their overall value or importance to KCJIS, KHP, KDOT, KDOR/DMV, KBI, OJA, or the citizens of Kansas.

eCitation Program Expected Benefit	Stakeholders	Tangible/ Intangible	Value Factor
<b>Benefit # 1</b> - Reduced time for Officers to make traffic stop and issue citations by streamlining preparation of citations.	Drivers, Public, Law Enforcement Officers.	Tangible	Government Operational, Government Financial
<b>Benefit # 2</b> – Improved validation of driver’s license and vehicle information by verification information from KHP, KDOR/DMV, and NCIC.	Law Enforcement Agencies, Public, Courts, Prosecutors, KDOR/DMV, OJA	Intangible	Government Operational, Government Financial
<b>Benefit # 3</b> – Improved accuracy and access to information on drivers and vehicles available to Officers during traffic stops.	Law Enforcement Agencies, Public, Law Enforcement Officers	Intangible	Government Operational
<b>Benefit # 4</b> – Improved accuracy and legibility of traffic citations.	Public, Law Enforcement Officers, Law Enforcement Agencies, Courts, Prosecutors, Office of Judicial Administration, Division of Motor Vehicles, Department of Transportation	Tangible	Government Operational, Government Financial, Direct Customer
<b>Benefit # 5</b> – Improved efficiency in the administration of justice from improved access to information for judicial decision making.	Public, Law Enforcement Agencies, Courts, Prosecutors	Tangible	Government Operational
<b>Benefit # 6</b> – Compatibility with stakeholders existing computer systems so existing systems do not need to be replaced to communicate with central repository.	Law Enforcement Agencies, Courts, Prosecutors, KDOR/DMV, KHP, KBI, KDOT, KBEMS	Tangible	Government Operational, Government Financial



eCitation Program Expected Benefit	Stakeholders	Tangible/ Intangible	Value Factor
<b>Benefit # 7</b> – Improved access to traffic citation data through a central repository.	Public, Law Enforcement Agencies, Courts, Department of Revenue/Division of Motor Vehicles, Office of Judicial Administration, Department of Transportation, Kansas Highway Patrol, and other State and Federal Agencies, KBI	Intangible	Government Operational, Direct Customer
<b>Benefit # 8</b> – Improved analysis of traffic citation data.	Law Enforcement Agencies, Courts, Department of Revenue/Division of Motor Vehicles, Office of Judicial Administration, Department of Transportation, Kansas Highway Patrol, and other State and Federal Agencies, KBI	Tangible	Government Operational, Government Financial, Direct Customer
<b>Benefit # 9</b> – Reduced the amount of storage space necessary to maintain the traffic citation records.	Law Enforcement Agencies, Courts, Prosecutors' Offices	Tangible	Government Financial
<b>Benefit # 10</b> – Improved efficiency of Law Enforcement Supervisor review of traffic citations.	Law Enforcement Officers, Law Enforcement Agencies	Tangible	Government Operational, Government Financial
<b>Benefit # 11</b> – Reduced time in correcting illegible or erroneous citations.	Law Enforcement Agencies, Law Enforcement Officers, Courts, Prosecutors.	Tangible	Government Operational, Government Financial, Direct Customer
<b>Benefit # 12</b> – Reduction in number of drivers contacting Law Enforcement Agencies and Courts with questions about their citations and hearing dates, and corresponding reduction in LEA and Court time.	Drivers, Law Enforcement Agencies, Courts	Tangible	Government Operational, Governmental Financial, Direct Customer



eCitation Program Expected Benefit	Stakeholders	Tangible/ Intangible	Value Factor
<b>Benefit # 13</b> – Reduced time in entering traffic citation data into records management systems of Law Enforcement Agencies, Courts, and Prosecutors’ Offices by eliminating the redundancy of entering the same data into the three different records management systems.	Law Enforcement Agencies, Courts, Prosecutors	Tangible	Government Operational, Government Financial, Direct Customer
<b>Benefit # 14</b> – Improved accuracy of traffic citation data entered into the records management systems of Law Enforcement Agencies, Courts, and Prosecutors’ Offices.	Law Enforcement Agencies, Courts, Prosecutors	Tangible	Government Operational, Government Financial, Direct Customer
<b>Benefit # 15</b> – Improved overall flow of traffic citation data by eliminating need for physical delivery of paper citations from the Officer to the Law Enforcement Agency, then from the Law Enforcement Agency to the Court, and then from the Court to the Prosecutor.	Law Enforcement Agencies, Courts, Prosecutors	Tangible	Government Operational, Government Financial, Direct Customer
<b>Benefit # 16</b> – Reduction in use of paper.	Public, Law Enforcement Agencies, Courts, Prosecutors	Tangible	Social, Government Financial
<b>Benefit # 17</b> – Improved Officer safety	Law Enforcement Officers, Law Enforcement Agencies, Public	Intangible	Direct Customer
<b>Benefit # 18</b> – Possible immediate upload of traffic citation information to local court’s RMS and/or central repository to allow immediate payment of traffic fines.	Public, Courts	Intangible	Direct Customer, Government Operational
<b>Benefit # 19</b> – Improved public safety	Public	Intangible	Social
<b>Benefit # 20</b> – Improved public relations and attitude because traffic stops take less time and less confusion about traffic citations, violations, and court hearings due to improved legibility and fewer errors.	Public, Law Enforcement Agencies, Courts, Law Enforcement Officers	Intangible	Social
<b>Benefit # 21</b> – Improved overall homeland security.	Law Enforcement Agencies, Public	Intangible	Social



eCitation Program Expected Benefit	Stakeholders	Tangible/ Intangible	Value Factor
<b>Benefit #22</b> – Improved accuracy and consistency in applying policies.	Public, Law Enforcement, Attorneys, Business Partners	Intangible	Strategic
<b>Benefit #23</b> – Reduced time to implement new policies and processes.	Public, Law Enforcement, Attorneys, Business Partners	Intangible	Strategic
<b>Benefit #24</b> – Improved responsiveness to changes in political direction.	Public, Law Enforcement, Attorneys, Business Partners	Intangible	Strategic
<b>Benefit #25</b> – Ability to track traffic diversions and enforce current statutes.	Public, Law Enforcement, Attorneys, Business Partners	Intangible	Strategic

It should be noted that the benefits included in this business case will not be fully achieved until complete implementation of the eCitation Program. Further, the calculations include not only state or agency benefits, but also county and city benefits.

The details for each of the benefits listed in the above summary are provided below. For those benefits that have been identified as tangible, a financial calculation of potential cost avoidance, cost savings, or resource redistribution has been outlined.

### A. Government Operational Value Benefits

Government Operational Value benefits are order-of-magnitude improvements realized in current government operations and processes and in laying the groundwork for future initiatives.

#### 1. Benefit # 1 - Reduced time for Officers to make traffic stops and issue citations by stream-lining preparation of citations.

Benefit Type – Tangible

Stakeholders – Drivers, Public, Law Enforcement Officers.

This is accomplished because the driver and vehicle information is automatically populated into the electronic ticket form either from scanning the bar code or magnetic



stripe on the driver's license and vehicle registration or from an external source such as the KDMV, KBI, a central repository server, NCIC, etc. The officer no longer has to write or type in the information. Certain information can be set as defaults by the officer at the start of the officer's shift such as the officer's name, identifying number, and electronic signature; the name and location information for the Court; and the court date and time. When the officer brings up the citation form at a stop, the default information is automatically inserted into the citation form. The violation location can be input by using drop down menus or word searches. Also, violations can be recorded using drop down menus, and when selected, the code number and fine can be auto-populated into the form. Information can also be automatically populated into the form from third-party sources, such as the stop location from an integrated GPS program. Further, third-party diagramming programs can be incorporated into the system allowing for electronic diagramming of the scene. Hand held scanners can also be used to take pictures of the driver, the vehicle, the driver's license, the vehicle's license, etc., which are automatically inputted into the computer citation file.

#### Benefit Calculation:

The average time in Kansas for an Officer to make a stop and issue a hand written traffic citation is approximately 10 minutes. Other states and municipalities who have implemented eCitation systems have experienced reductions of 1/3<sup>rd</sup> or more in the amount of time for an Officer to make a stop and issue an electronic traffic citation. A 1/3<sup>rd</sup> reduction amounts to just over 3 minutes. Assuming 1 million traffic citations are issued in Kansas in a year, the implementation of a state wide eCitation system would reduce the overall time of Officers making stops and issuing traffic citations by 3 million minutes, which is 50,000 hours. Assuming an Officer works 1880 hours in a year (52 weeks x 40 hours per week – 80 hours (vacation) – 80 hours (holidays) – 40 hours (sick leave)); the time of approximately 27 full-time officers is saved. Assuming the cost of an Officer, including salary, benefits, equipment, and equipment maintenance is \$80,000 per year, then the overall cost savings would be \$2,160,000. This time could then be spent on further patrolling.

The timeline bench mark of the Indiana State Police with their eCitation system for a traffic stop and issuance of a ticket is 4 minutes. Their eCitation system has reduced their average field stop time by 2/3rds. Other jurisdictions estimate an approximate 1/3<sup>rd</sup> reduction (3 minutes) in the time to make a stop and issue a citation.



2. Benefit # 2 - Improved validation of driver's license and vehicle information by verification information from KHP, KDOR/DMV, and NCIC.

Benefit Type – Intangible

Stakeholders – Law Enforcement Officers, Law Enforcement Agencies, Public, Courts, Prosecutors, KDOR/DMV, OJA

Once the driver's identity and vehicle information are entered into the MDT and eCitation file, either by scanning the magnetic stripe or barcode on the driver's license and vehicle registration or by typing the information into the computer, the information can be checked against the information in the KHP, KDOR/DMV, and/or NCIC files. This could aid in the discovery of fake or altered driver's licenses and identity theft.

3. Benefit # 3 - Improved accuracy and access to information on drivers and vehicles available to Officers during stops.

Benefit Type – Intangible

Stakeholders – Law Enforcement Officers, Law Enforcement Agencies, Public

By providing Officers with real-time information during the traffic stops quickly and accurately, this will increase the likelihood of apprehending criminals and discovering stolen vehicles during traffic stops who might otherwise have gone unnoticed.

4. Benefit # 4 - Improved accuracy and legibility of traffic citations.

Benefit Type: Tangible

Stakeholders: Public, Law Enforcement Officers, Law Enforcement Agencies, Courts, Prosecutors, Office of Judicial Administration, Division of Motor Vehicles, Department of Transportation

This is accomplished because the Officer is no longer handwriting tickets and most all of the information is either auto-populated into the form or inputted through the use of drop down menus or word searches. Illegible and erroneous written entries are a serious problem in Kansas. A significant amount of time is spent at the law enforcement, court, and prosecutor levels correcting illegible or erroneous entries. While in some other states



the courts regularly dismiss illegible and erroneous citations, the Kansas Municipal and District Courts liberally allow the amending of traffic citations so very few are dismissed. However, a significant amount of time is spent correcting and amending the citations. An eCitation system should virtually eliminate this issue. Law enforcement agency staff, court staff, and prosecutor staff will not have to waste precious time dealing with illegible or erroneous entries in citations.

Improved accuracy of information entered on citations is accomplished from the auto-population of information on the driver and vehicle from the scanned driver's license and vehicle registration or an external source such as the KDMV, KBI, a central repository server, NCIC, etc. This minimizes possible errors by the officer that plague hand-written citations. For entries that must be affirmatively made by the officer, such as the location and violation(s), the eCitation systems use drop down menus which can be easily selected by a single key stroke or a word search. Location information can also be auto-populated through the use of integrated GPS software. Thus, there is very little the Officer has to actually type into the form. The systems also contain verification functions which check for errors or inconsistent entries, and if found will take the Officer to the field where the error exists, highlight the error, and will not allow the ticket to be printed until the error is corrected or overridden. This should substantially reduce the need to correct citations because of illegible or erroneous entries.

Because the system automatically uploads the citation information to either a central repository or the LEA server, which then automatically uploads it to different stakeholders, such as the Courts and prosecutors, the same citation information does not have to be re-typed or re-entered into the court's and prosecutor's records management systems. This eliminates the redundancy of having to enter the same information up to three times in the LEA's RMS, the Court's RMS, and the Prosecutor's RMS, which will dramatically reduce data entry time and errors.

#### Benefit Calculation:

While the separate jurisdictions in Kansas interviewed could not quantify the number or percentage of traffic citations that are illegible or contain errors, 5% will be assumed to calculate the benefit. If 5% of citations issued have illegible or erroneous parts requiring additional time correcting, the overall time spent by the Officer, Supervisor, Court Clerk, and/or Prosecutor's Office to correct a citation is 15 minutes. If 1 million citations are issued in Kansas in a year, then 12,500 hours are spent correcting citations. Assume an 1880 hour work year, which is approximately 7 full-time individuals. Also, assume that the average costs are \$70,000 per individual per year (salary and benefits), since the



individuals involved include data entry personnel, court clerk staff, law enforcement supervisors, and prosecutor's office personnel. Based on these assumptions, the costs savings would be approximately \$490,000 per year.

5. **Benefit #5 - Improved efficiency in the administration of justice from improved access to information for judicial decision making.**

Benefit Type: Tangible

Stakeholders: Law Enforcement Agencies, Courts, Prosecutors, Public

Through an eCitation system there will be fewer errors in issuing citations and in entering citation information into the various RMSs. There will be an improvement in the accuracy and timeliness of information on drivers available to Judges at the time of trial and disposition. With more accurate and up to the minute information, Judges can make better informed decisions. Easily accessible electronic information will be readily available in preparation for trial and in the court room for use during trial, such as the traffic citation, the Officer's notes, and the driver's criminal and driving history. eCitation systems save a significant amount of Officer and administrative time formerly spent on paper filing and tracking. This, together with the savings inherent in moving away from paper documentation, should result in substantial cost savings.

Benefit Calculation:

Assume 2% of traffic citations go to a trial or court hearing, which would be approximately 20,000 per year (2% of 1 million traffic citations). Assume the Officer has to physically obtain and review the traffic citation and the Officer's notes prior to trial versus accessing the information electronically. Assume the prosecutor's office had to run a driver and criminal history of the driver, either initially to determine if the driver is correctly charged, and/or in preparation for trial by checking multiple sources (versus one central repository source). Assume the court clerk's office scanned the traffic citations and/or made copies for the prosecutor's office or the prosecutor's office made their own copies and/or scanned the citations (versus being able to access them electronically from one source). Assume the court clerk's office had to provide the original paper citation to the Judge for trial (versus accessing the citation electronically and attaching it to a court file so the Judge or Judge's clerk can access it electronically from the bench). Assume that the total amount of time saved of all these individuals involved in the process is ½ hour over the present systems. The hours saved would be approximately 10,000 hours per year, which amounts to the cost of approximately 5.5



individuals. Assume an average cost per individual of approximately \$60,000 (salary and benefits), and that is an annual savings of \$330,000.

6. **Benefit #6 - Compatibility with stakeholders existing computer systems so existing systems do not need to be replaced to communicate with the central repository.**

Benefit Type: Tangible

Stakeholders: Law Enforcement Agencies, Courts, Prosecutors, KDOR/DMV, KHP, KBI, KDOT, KBEMS

The Kansas Traffic Records System (TRS) has an XML schema already built into it which allows it to communicate with computer languages that are XML compatible. XML compatibility is the current norm and is commonly used. Consequently, a central repository server should be able to communicate with and translate the computer languages of the various stakeholders using their existing computer systems and languages.

Benefit Calculation:

The savings is from stakeholders not incurring expenses for their existing systems to communicate with the central traffic citation repository. Assume \$10,000 savings per year for the 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> years when it is presumed that the counties and municipalities may be brought into the eCitation system, for a total savings of \$30,000.

7. **Benefit #7 - Improved access to traffic citation data through a central repository.**

Benefit Type: Intangible

Stakeholders: Public, Law Enforcement Agencies, Courts, Department of Revenue/Division of Motor Vehicles, Office of Judicial Administration, Department of Transportation, Kansas Highway Patrol, Kansas Bureau of Investigation., and other State and Federal Agencies

By use of a central repository, all Kansas traffic citation information will be maintained and accessible from one place versus the separate law enforcement agencies, courts, and



state agencies. Any local, state, or federal agency entitled to access traffic citation information would only need to go to one source, the central repository, to acquire that information. Using a central repository will also make it easier for traffic citation information to be kept more up to date. If a revision or addition to a traffic citation file is made, it can be made once through the central repository and be immediately available to or automatically sent to other stakeholders. A central repository does not have to replace a local law enforcement agency's RMS. The central repository need only be able to communicate with the local RMS. Traffic citation information can be electronically uploaded to, or manually entered into, a local LEA's RMS first and then is automatically and electronically uploaded to the central repository.

#### 8. Benefit #8 - Improved analysis of traffic citation data.

Benefit Type: Tangible

Stakeholders: Law Enforcement Agencies, Courts, Department of Revenue/Division of Motor Vehicles, Office of Judicial Administration, Department of Transportation, Kansas Highway Patrol, Kansas Bureau of Investigation, and other State and Federal Agencies

Through an eCitation system with a central repository, statistical analysis can be performed easily and quickly. Any field of information in the eCitation can be queried and analyzed electronically by the computer system.

##### Benefit Calculation:

Through use of the eCitation system and central repository of traffic citation data, it will be much easier and cost effective to run a multitude of analysis queries electronically, including preparing charts of data. Assume savings may be \$5,000 per year.

#### 9. Benefit #9 - Reduced storage space necessary to maintain the traffic citation records.

Benefit Type: Tangible

Stakeholders: Law Enforcement Agencies, Courts, and Prosecutors

Since a fully operational eCitation system is near paperless, the need for law enforcement agencies, courts, and prosecutor's offices to store paper traffic citations is significantly



reduced to near elimination. The traffic citation information will be stored electronically in the local RMSs and/or the central repository. Local RMSs should have a records back-up system in place which may use CDs/DVDs to store electronic information. Some minimal storage would be necessary to store these back-up CDs/DVDs.

Benefit Calculation:

Since the eCitation system can be virtually paperless, with the only paper being the citation given to the driver, there will be a reduction in the need for physical storage space to store paper citations at the law enforcement agencies, courts, and prosecutors' offices. There are 105 counties and approximately 450 municipalities. Assume on average \$100 per month storage costs for each jurisdiction, which includes the law enforcement agencies, courts, and prosecutors' offices (less populated jurisdictions are probably not incurring any storage costs related to traffic citations, some law enforcement agencies do not store copies, and prosecutor's office may only get copies of those set for court hearing and may not store copies after disposition), then there would be a savings of \$666,000 annually ((105 counties + 450 municipalities) x \$1,200 per year).

## **B. Government Financial Value Benefits**

Benefits in the Government Financial Value category (e.g., cost savings, cost avoidance) are those realized by the government, including financial benefits received by the managing or sponsor agency, as well as other agencies.

### **1. Benefit #10 - Improved efficiency of Law Enforcement Supervisor review of traffic citations.**

Benefit Type: Tangible

Stakeholders: Law Enforcement Agencies, Law Enforcement Officers

With an eCitation system, LE Supervisors can be notified electronically when there are traffic citations that need to be reviewed, and then review the citations electronically from their desktop or mobile computers. If a citation needs correcting, the Supervisor can electronically notify the Officer who issued the ticket, who can review and if necessary correct the citation. If the citation is acceptable, the Supervisor, with a simple key stroke, can approve the citation and then the approval is attached to the eCitation file in the LEA's RMS, Court's RMS, and/or central repository. It is anticipated that there will be



some time savings in the Supervisor review process with the implementation of an eCitation system.

Benefit Calculation:

Assume that the eCitation system allows Supervisors to review the citations electronically and approve or reject with a key stroke (versus manually reviewing the paper citations and routing them to staff who return them to the Officers for correction or forwarding to the courts) will save the Supervisor 15 seconds per citation, then there would be an annual savings of 4,167 hours. This is approximately 2.22 full-time Supervisors. Assume an annual cost per Supervisor of \$80,000 (salary and benefits), this would result in an annual savings of about \$177,600.

2. **Benefit #11 - Reduced time in correcting illegible or erroneous citations.**

Benefit Type: Tangible

Stakeholders: Law Enforcement Officers, Law Enforcement Agencies, Courts, Prosecutors' Offices

Illegible and erroneous written entries are a serious problem in Kansas. A significant amount of time is spent at the law enforcement, court, and prosecutor levels correcting illegible or erroneous entries. An eCitation system should virtually eliminate this issue. Law enforcement agency staff, court staff, and prosecutor staff will not have to waste precious time dealing with illegible or erroneous entries in citations.

Benefit Calculation:

While the separate jurisdictions in Kansas interviewed could not quantify the number or percentage of traffic citations that are illegible or contain errors, 5% will be assumed to calculate the benefit. If 5% of citations issued have illegible or erroneous parts requiring additional time correcting, if the overall time spent by the Officer, Supervisor, Court Clerk, and/or Prosecutor's Office to correct a citation is 15 minutes, and if 1 million citations are issued in Kansas in a year, then 12,500 hours are spent correcting citations. Assuming an 1880 work hour year, this would be about 6.5 full-time individuals. Assume an average cost per individual of \$70,000 per year (salary and benefits), then approximately \$455,000 is being spent annually on these activities.



3. Benefit #12 - Reduction in number of drivers contacting Law Enforcement Agencies and Courts with questions about their citations and hearing dates, and corresponding reduction in LEA and Court time.

Benefit Type: Tangible

Stakeholders: Drivers, Law Enforcement Agencies, Courts

Currently, LEAs and the Courts receive calls from drivers regarding their citations because they are not legible, contain erroneous information, or information is missing. An eCitation system should virtually eliminate illegible, erroneous, and missing information on the citations, which in turn should substantially reduce the number of calls from drivers with questions about their citations and correspondingly reduce the time LEAs and the Courts spend in handling these calls. Additionally, with the ability for drivers to pay their fines and judgments from traffic citations on-line, this should substantially reduce the time Courts spend in handling payments made personally to the court or through the mail.

Benefit Calculation:

Assuming on average a 1/2 hour a day is spent by each county or municipality handling calls from drivers who cannot read their citations and/or payments of fines. Assume the courts are open 250 days a year (52 weeks x 5 days per week – 10 holidays). With 105 counties and 450 municipalities, that amounts to 69,375 hours per year which could be nearly eliminated with an eCitation system. That is approximately 37 full-time law enforcement and court clerk staff annually. Assuming on average \$40,000 annual cost per individual (salary and benefits), then \$1,480,000 is spent annually on these activities.

4. Benefit #13 - Reduced time in entering traffic citation data into records management systems of Law Enforcement Agencies, Courts, and Prosecutors' Offices by eliminating the redundancy of entering the same data into the three different records management systems.

Benefit Type: Tangible

Stakeholders: Law Enforcement Agencies, Courts, Prosecutors

In jurisdictions issuing hand written citations, the same traffic citation information may be manually entered up to 4 times; (1) by the Officer when filling out the citation, (2) by



a data entry person in the LEA, (3) by a data entry person in the court, and (4) by a data entry person in the prosecutor's office. An eCitation system transmits traffic citation information electronically from the Officer's computer to the LEA's RMS, then to the court's RMS and the Prosecutor's RMS, and/or the central repository within a relatively short time after they are issued. This eliminates the redundancy of data entry personnel at the law enforcement agencies, the courts, and prosecutor's offices having to enter the same data into their separate systems.

Benefit Calculation:

While it is difficult to quantify the number of hours that the elimination of the redundancy of entering the same citation information into the 3 separate RMSs will save through an eCitation system, assume the county law enforcement agencies spend on average 1 hour a day entering traffic citation information into their records management systems, the District Courts spend on average 1 hour a day entering the same information into their RMSs, and the District Attorney's/County Attorney's Offices spend on average a ½ hour per day entering citation information into their RMSs. Assume a 250 day work year for the government agencies (52 weeks x 5 days per week – 10 holiday days), and considering there are 105 counties, then 65,625 hours are spent just by the counties in entering traffic citation information.

If the same analysis applied for the approximate 450 municipalities, then 281,250 hours are spent annually on redundant data entry. With the counties and municipalities combined, it is 346,875 hours. Assuming a 1,880 hour work year for one individual, then 184.5 full-time individuals' time is spent annually on redundant entries of traffic citation information. Assuming an average of \$40,000 annual cost per individual (salary and benefits), then \$7,380,000 is spent annually on redundant entries of citation information.

5. **Benefit #14 - Improved accuracy of traffic citation data entered into the records management systems of Law Enforcement Agencies, Courts, and Prosecutors' Offices.**

Benefit Type: Tangible

Stakeholders: Law Enforcement Agencies, Courts, Prosecutors

Following disposition of traffic citation cases, whether by payment of the fine, dismissal of the citation, or judgment entered after trial, the information about the traffic citations



are sent electronically to the KDOR/DMV and the OJA. If the information is not accurate or is incomplete, the KDOR/DMV and/or OJA send notices to the courts requesting corrected information. The courts spend a significant amount of time responding to these requests. It is anticipated that an eCitation system would reduce the amount of inaccurate and incomplete information from the start and thereby reduce the amount of inaccurate and incomplete information on the back end, which should reduce the time spent by the courts responding to such requests by the KDOR/DM and/or OJA.

Benefit Calculation:

Assume each court spends 2 hours a week on these activities, and a 50 week year (10 holidays = 2 weeks), then 100 hours are spent annually on these activities. Assume the eCitation system may eliminate 50% of the correction issues, then each court spends approximately 50 hours a year which may be eliminated. The accumulate result for all courts is 27,750 hours, which is approximately 15 full-time individuals annually and at \$40,000 cost annually (salary and benefits) per individual, the cost is \$600,000 annually.

6. **Benefit #15 - Improved overall flow of traffic citation data by eliminating need for physical delivery of paper citations from the Officer to the Law Enforcement Agency, then from the Law Enforcement Agency to the Court, and then from the Court to the Prosecutor.**

Benefit Type: Tangible

Stakeholders: Law Enforcement Officers, Courts, Prosecutors

Currently, paper traffic citations are delivered by the Officer after his/her shift to the Law Enforcement Agency. Once the LEA completes its internal processing, the paper citations are delivered either to the court or prosecutor's office. If delivered to the court first, the court generally provides paper copies to the prosecutor's office. If delivered to the prosecutor's office first, then generally the prosecutor's office makes paper copies at some point and delivers the originals to the court.

Benefit Calculation:

An eCitation system should provide time savings from eliminating the manual transfer of traffic citations from the law enforcement agencies to the Courts, and from the courts to the District Attorney's/ Prosecutor's offices. Assuming a ½ hour a day, 105 counties and approximately 450 municipalities, this amounts to 69,375 hours per year, which is



approximately 37 full-time individuals. Assuming on average a \$40,000 cost per individual (salary and benefits), then \$1,480,000 is spent on these activities.

#### 7. Benefit #16 - Reduction in use of paper.

Benefit Type: Tangible

Stakeholders: Law Enforcement Agencies, Courts, Prosecutors' Offices, Public

eCitation systems contemplate a nearly paperless process, with the only paper document being the citation issued to the driver. The citation information is stored and processed either through a central repository server or local servers. The necessary information from the citation is electronically sent to or accessed by the separate stakeholders based on their individual needs, including the LEAs, Courts, Prosecutors, OJA, KDOR/DMV, KDOT, and KBI, in a form each can read and use electronically. This eliminates the need for the separate stakeholders from having to re-type or re-enter the information into their own systems.

##### Benefits Calculation:

Assume \$25,000 annually statewide.

### C. Direct Customer Value Benefits

Direct Customer Value Benefits are those benefits directly realized by users or multiple user groups. Users may include, but are not limited to, employees, other agencies, and citizens. While Direct Customer Value Benefits may have some tangible values, there are limited data sources to develop a reasonable tangible cost for these benefits. Due to the limited data sources or an inability to accurately calculate a benefit value, the State of Kansas has chosen to reflect these benefits in more general terms.

#### 1. Benefit #17 - Improved Officer safety

Benefit Type: Intangible

Stakeholders: Law Enforcement Officers, Law Enforcement Agencies, Public

By reducing the traffic stop time for issuing citations there is improved Officer safety because the Officers spend less time on the side of the roadway exposed to possibly being



hit by approaching traffic. Additionally, improved access through the eCitation system and central repository to real-time information on drivers' criminal and driving histories and vehicles provides Officers with better information to prepare and protect themselves from potential dangers. This real-time information may also lead to easier apprehension of criminals with outstanding warrants, discovering identity theft, and recovering stolen vehicles.

## 2. Benefit #18 - Possible immediate upload of traffic citation information to local court's RMS and/or central repository to allow immediate payment of traffic fines.

Benefit Type: Intangible

Stakeholders: Public, Courts

Currently, in jurisdictions issuing hand written citations, it may take about 4 days or longer for a traffic citation to get to the court and entered into the court's RMS system so the court clerk can coordinate a payment with the citation. Most of those courts will not accept payment of the traffic fine until the citation is in the court's RMS. Some courts will accept payment of the fine if the driver has a copy of the citation. In those instances, the court clerk makes a copy of the citation, and holds the payment until the citation information is entered in the court's RMS and can be matched up with the copy. If an eCitation system is capable of uploading the traffic citation immediately after issuance or shortly thereafter into the local court's RMS and/or a central repository, the court clerks have immediate access to the citation information and can accept payment of the fine.

### D. Social Value Benefits

Benefits in the Social Value category are those not related to direct users (e.g., society as a whole). Social Value Benefits may have the most value to the entire KCJIS Program and the citizens of Kansas.

While Social Value Benefits may have some tangible values, there are limited data sources to develop a reasonable tangible cost for these benefits. Due to the limited data sources or an inability to accurately calculate a benefit value, the State of Kansas has chosen to reflect these benefits in more general terms.



1. Benefit #19 - Improved Public Safety

Benefit Type: Intangible

Stakeholders: Public

By reducing the traffic stop time for issuing citations which allows drivers to return to the roadway quicker, drivers are less likely to be hit by approaching motorists while they wait on the side of the road, are more likely to have an improved attitude, and are less likely to try and recoup the lost time by speeding. Additionally, with Officers spending less time at traffic stops and processing paper citations, and more time patrolling and issuing citations, their increased presence on the roadways will naturally reduce overall traffic violations. Also, by providing the Officers with improved access to real-time information on drivers and vehicles, it improves the Officers' chances of identifying and apprehending criminals and returning stolen vehicles to their owners.

Also, because Officers will spend less time during traffic stops, they will spend more time patrolling. The increased patrolling time will reduce the overall number of traffic violations by the mere increased presence of patrolling Officers on the roadways and by an increase in traffic stops and tickets issued.

2. Benefit #20 - Improve public relations and attitude because traffic stops take less time and less confusion about traffic citations, violations, and court hearings due to improved legibility and fewer errors.

Benefit Type: Intangible

Stakeholders: Public, Law Enforcement Officers, Law Enforcement Agencies, Courts

By reducing the time it takes for a traffic stop and issuing a citation, drivers are back on the road quicker. While no one likes receiving a traffic citation, drivers will generally appreciate spending less time at the stop and minimizing the effect on their busy lives. This should generally reduce the hostility of some drivers and thereby reduce the stress experienced by officers making the stops.



3. **Benefit #21 - Improved overall homeland security.**

Benefit Type: Intangible

Stakeholders: Public, Law Enforcement Agencies

Traffic citation information can place a stopped driver and a vehicle in a particular place at a particular time. This type of information may be desirable in determining the activities of suspected terrorists.

**E. Strategic Value Benefits**

Strategic Value Benefits move organizations closer to achieving their strategic goals, the priorities established by the governor, and legislative mandates. While Strategic Value Benefits may have some tangible values, there are limited data sources to develop a reasonable tangible cost for these benefits. Due to the limited data sources or an inability to accurately calculate a benefit value, the State of Kansas has chosen to reflect these benefits in more general terms.

1. **Benefit #22 - Improved accuracy and consistency in applying policies.**

Benefit Type: Intangible

Stakeholders: Public, Law Enforcement, Attorneys, Business Partners

Automation of standardized processes will ensure that procedures are applied uniformly across the state, as well as help to ensure that exceptions to the consistent application of policies are tracked and appropriately approved.

2. **Benefit #23 - Reduced time to implement new policies and processes.**

Benefit Type: Intangible

Stakeholders: Public, Law Enforcement, Attorneys, Business Partners

A modern, flexible, work flow-based system will enable the Kansas stakeholders to more rapidly implement changes to policies and processes by reducing the need for lengthy development, testing, and implementation cycles required for systems with hard-coded processes.



3. **Benefit #24 - Improved responsiveness to changes in political direction.**

Benefit Type: Intangible

Stakeholders: Public, Law Enforcement, Attorneys, Business Partners

A readily configurable and flexible system will provide the state with the ability to react more quickly to changes in political priorities. Such changes may include alterations of fee schedules and distributions or changes to case management processes due to legislative mandate.

4. **Benefit #25 - Ability to track traffic diversions and enforce current statutes.**

Benefit Type: Intangible

Stakeholders: Public, Law Enforcement, Attorneys, Business Partners

The electronic capture and reporting of citations to a central repository will allow for the implementation of reporting mechanisms from either the prosecutor or the court on diversions. This will allow officers, prosecutors and the court to know about a diversion in place at a subsequent traffic enforcement event and will close a hole in the system in Kansas.

\* \* \* \* \*

These benefits demonstrate that the eCitation program would provide numerous tactical and strategic benefits to the state and to local agencies. The achievement of these benefits will be based on the speed of implementation and the amount of commitment toward a paperless system.



**KANSAS CRIMINAL JUSTICE INFORMATION SYSTEM  
eCITATION COST-BENEFIT STUDY  
COST-BENEFIT AND CASH FLOW ANALYSIS**

	Program Implementation			Program Maintenance							
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	TOTAL
<b>Total Outflows</b>	\$ 971,934	\$ 634,887	\$ 521,137	\$ 521,137	\$ 37,387	\$ 37,387	\$ 37,387	\$ 37,387	\$ 37,387	\$ 37,387	\$ 2,873,417
<b>Total Inflows</b>	0	762,930	1,220,688	2,288,790	3,814,650	5,340,510	7,629,300	11,443,950	14,495,670	15,258,600	62,255,088
<b>Net Cash Flow</b>	\$ (971,934)	\$ 128,043	\$ 699,551	\$ 1,767,653	\$ 3,777,263	\$ 5,303,123	\$ 7,591,913	\$ 11,406,563	\$ 14,458,283	\$ 15,221,213	\$ 59,381,671
<b>NPV</b>	(\$934,552)	(\$816,169)	(\$194,271)	\$1,316,727	\$4,421,361	\$8,612,497	\$14,381,726	\$22,716,390	\$32,874,588	\$43,157,494	\$43,157,494
<b>Cumulative Costs</b>	\$ 971,934	\$1,606,821	\$2,127,958	\$2,649,095	\$2,686,482	\$2,723,869	\$2,761,256	\$2,798,643	\$2,836,030	\$2,873,417	\$2,873,417
<b>Cumulative Benefits</b>	\$0	\$762,930	\$1,983,618	\$4,272,408	\$8,087,058	\$13,427,568	\$21,056,868	\$32,500,818	\$46,996,488	\$62,255,088	\$62,255,088

Cost of Capital	Breakeven Period (years)	
	Nondiscounted	NPV \$
4.00%	3	\$43,157,494

Notes: *Does not include local agency costs. Only includes information sharing environment.  
Nondiscounted represents breakeven period for cumulative costs and benefits (no consideration of time value of money).*



**KANSAS CRIMINAL JUSTICE INFORMATION SYSTEM**  
**eCITATION COST-BENEFIT STUDY**  
**TOTAL PROJECT COSTS**

Project Costs	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	TOTAL
<b>DIRECT COSTS</b>											
<b>PROGRAM DEVELOPMENT</b>											
Personal Services – Consulting	445,000	300,000	250,000	250,000	-	-	-	-	-	-	1,245,000
Hardware – Capitalized	64,000	-	-	-	-	-	-	-	-	-	64,000
Software – Capitalized	122,934	-	-	-	-	-	-	-	-	-	122,934
											\$ 1,431,934
<b>PROGRAM MAINTENANCE</b>											
Hardware Refresh	-	\$ 12,800	\$ 12,800	\$ 12,800	\$ 12,800	\$ 12,800	\$ 12,800	\$ 12,800	\$ 12,800	\$ 12,800	\$ 115,200
Software Licensing	-	24,587	24,587	24,587	24,587	24,587	24,587	24,587	24,587	24,587	221,283
Software Maintenance	-	-	-	-	-	-	-	-	-	-	0
											\$ 336,483
Total Direct Costs	\$ 631,934	\$ 337,387	\$ 287,387	\$ 287,387	\$ 37,387	\$ 37,387	\$ 37,387	\$ 37,387	\$ 37,387	\$ 37,387	\$ 1,768,417
<b>INDIRECT COSTS</b>											
<b>STATE PERSONNEL</b>											
Internal Base Budget FTEs	4.00	3.50	2.75	2.19	2.00	2.00	2.00	2.00	2.00	2.00	24.44
Internal Base Budget FTE Costs	340,000	297,500	233,750	185,938	170,000	170,000	170,000	170,000	170,000	170,000	\$ 2,077,188
<b>TOTAL OUTFLOWS</b>	<b>\$ 971,934</b>	<b>\$ 634,887</b>	<b>\$ 521,137</b>	<b>\$ 473,325</b>	<b>\$ 207,387</b>	<b>\$ 207,387</b>	<b>\$ 207,387</b>	<b>\$ 207,387</b>	<b>\$ 207,387</b>	<b>\$ 207,387</b>	<b>\$ 3,845,605</b>
<b>CUMULATIVE COSTS</b>	<b>\$ 971,934</b>	<b>\$ 1,606,821</b>	<b>\$ 2,127,958</b>	<b>\$ 2,601,283</b>	<b>\$ 2,808,670</b>	<b>\$ 3,016,057</b>	<b>\$ 3,223,444</b>	<b>\$ 3,430,831</b>	<b>\$ 3,638,218</b>	<b>\$ 3,845,605</b>	



### III. SYSTEM COSTS AND ANALYSIS

Realization of the eCitation Program will require significant investment, both in terms of fiscal and human resources. In order to understand the scope of this investment, budget and resource planning-level estimates have been developed for the program and are presented in the eCitation Tactical Implementation Plan document.

It is important to note that planning-level estimates will vary based on the prevailing influences at the time individual projects are initiated, such as market rates for goods and services; the ability of the state to negotiate financially attractive relationships with partner agencies, vendors, and service providers; and the actual investment required to complete projects once a more detailed analysis is undertaken for each project.

It is expected that the planning-level estimates and associated project tasks will be evaluated and updated periodically in order to ensure suitable implementation management and monitoring.

#### A. Cost-Benefit Analysis

EXHIBIT I – Cost-Benefit and Cash Flow Analysis, presents the total estimated budget for development and implementation of the eCitation Strategic Plan. The table identifies the total outflows for the plan based on costs and the total inflows for the plan based on estimated benefits. The total costs are estimated to be \$2.8 million in capital development and \$2.95 million in operating costs over the 10 fiscal years budgeted in the plan, and the total benefits are estimated to be over \$81 million. The last seven fiscal years are included in the plan to demonstrate the resulting positive cash flow that is achieved via this plan as the future cost of operations is exceeded by the associated benefits. Positive cash flow is estimated to be at upwards of \$14 million per fiscal year at full implementation. This does not include any acquisition implementation or operating costs for local agency systems to capture and report eCitations.

#### B. Cost Detail

EXHIBIT II – Total Project Costs, presents the estimated budget requirements for expenditure categories, initiatives, implementation phases, and each tactical project in the plan. Project expenditures have been broken into five categories for summary presentations.

- *Program Development* – These expenditures are for goods or services that can be directly associated with a project and that do not extend beyond project implementation (i.e., onetime costs). The following areas of onetime capital costs are detailed:



- » *Personal Services – Contractor.* Includes the use of specialized contract personnel to assist the TRCC and KCJIS with the implementation of the projects. Example services include systems design, data conversion, and implementation assistance. It is assumed that KCJIS will bring in contractor personnel to assist when internal resources are either not available or do not have the required expertise.
- » *Personal Services – Consulting.* Encompasses the use of specialized management consultant personnel to assist KCJIS with the management of the selected projects and the program. Example services include program management, system acquisition, project management, communications, training, and quality assurance.
- » *Hardware – Capitalized.* Includes such items as equipment, networking infrastructure, computers, and servers.
- » *Software – Capitalized.* Encompasses licensing costs associated with various software types, such as the analytical tools.

The program development costs are estimated at over \$2.8 million to develop and implement the state eCitation environment.

- *Program Maintenance* – These expenditures include costs that are ongoing in nature, such as software or hardware annual maintenance and/or replacement costs and software licensing. The plan assumes a \$2.9 million cost for program maintenance over the 9 years after initial component implementation.
- *State Personnel* – These expenditure savings are for the commitment of internal resources that are already identified in the base agency budgets, and would be applied to the plan. A maximum resource commitment has been established for each resource category, and only the labor costs up to the maximum are included in these estimates. Over the life of the plan, more than \$1.5 million in internal resource costs will be directed to the implementation of the plan.

## C. Benefits Detail

EXHIBIT III – Benefit Analysis, presents the estimated positive financial benefits associated with benefits defined above for the implementation of the strategic plan. All of the 29 benefits are identified in the analysis, but only those tangible benefits are calculated based on percentage of implementation estimates. The calculations of the estimates for each tangible benefit are documented earlier in this document.



**KANSAS CRIMINAL JUSTICE INFORMATION SYSTEM**  
**eCITATION COST-BENEFIT STUDY**  
**PROGRAM BENEFITS**

BENEFITS	Baseline Yearly	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	TOTAL
<b>Implementation Benefit Percentage</b>		0%	5%	8%	15%	25%	35%	50%	75%	95%	100%	
<b><i>Tangible Dollars</i></b>												
1 Reduce time for Officers to make traffic stop	2,160,000	\$ -	\$ 108,000	\$ 172,800	\$ 324,000	\$ 540,000	\$ 756,000	\$ 1,080,000	\$ 1,620,000	\$ 2,052,000	\$ 2,160,000	\$ 8,812,800
4 Improve accuracy and legibility of citations	490,000	-	24,500	39,200	73,500	122,500	171,500	245,000	367,500	465,500	490,000	1,999,200
5 Improve efficiency in the administration of justice	330,000	-	16,500	26,400	49,500	82,500	115,500	165,000	247,500	313,500	330,000	1,346,400
6 Compatibility with stakeholders existing systems	10,000	-	500	800	1,500	2,500	3,500	5,000	7,500	9,500	10,000	40,800
8 Improve analysis of traffic citation data	5,000	-	250	400	750	1,250	1,750	2,500	3,750	4,750	5,000	20,400
9 Reduce the amount of storage space	666,000	-	33,300	53,280	99,900	166,500	233,100	333,000	499,500	632,700	666,000	2,717,280
10 Improve efficiency of Supervisor review	177,600	-	8,880	14,208	26,640	44,400	62,160	88,800	133,200	168,720	177,600	724,608
11 Reduce time in correcting erroneous citations	455,000	-	22,750	36,400	68,250	113,750	159,250	227,500	341,250	432,250	455,000	1,856,400
12 Reduction in number of drivers with questions	1,480,000	-	74,000	118,400	222,000	370,000	518,000	740,000	1,110,000	1,406,000	1,480,000	6,038,400
13 Reduction in entering citation data into records	7,380,000	-	369,000	590,400	1,107,000	1,845,000	2,583,000	3,690,000	5,535,000	7,011,000	7,380,000	30,110,400
14 Improved accuracy of traffic citation data	600,000	-	30,000	48,000	90,000	150,000	210,000	300,000	450,000	570,000	600,000	2,448,000
15 Improved overall flow of traffic citation data	1,480,000	-	74,000	118,400	222,000	370,000	518,000	740,000	1,110,000	1,406,000	1,480,000	6,038,400
16 Reduction in use of paper	25,000	-	1,250	2,000	3,750	6,250	8,750	12,500	18,750	23,750	25,000	102,000
<b><i>Intangible Dollars</i></b>												
2 Improve validation of license and vehicle information		0	0	0	0	0	0	0	0	0	0	0
3 Improve accuracy and access available to Officers		0	0	0	0	0	0	0	0	0	0	0
7 Improve access to traffic citation data		0	0	0	0	0	0	0	0	0	0	0
18 Immediate upload of citation information to local court		0	0	0	0	0	0	0	0	0	0	0
20 Improve public relations and attitude		0	0	0	0	0	0	0	0	0	0	0
19 Improve public safety		0	0	0	0	0	0	0	0	0	0	0
17 Improve Officer safety		0	0	0	0	0	0	0	0	0	0	0
21 Improve overall homeland security		0	0	0	0	0	0	0	0	0	0	0
22 Improved accuracy and consistency in applying policies		0	0	0	0	0	0	0	0	0	0	0
23 Reduced time to implement new policies and processes		0	0	0	0	0	0	0	0	0	0	0
24 Improved responsiveness to changes in political direction		0	0	0	0	0	0	0	0	0	0	0
25 Ability to track traffic diversions and enforce statutes		0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL INFLOWS</b>		\$ -	\$ 762,930	\$ 1,220,688	\$ 2,288,790	\$ 3,814,650	\$ 5,340,510	\$ 7,629,300	\$ 11,443,950	\$ 14,495,670	\$ 15,258,600	\$ 62,255,088
<b>CUMULATIVE BENEFITS</b>		\$ -	\$ 762,930	\$ 1,983,618	\$ 4,272,408	\$ 8,087,058	\$ 13,427,568	\$ 21,056,868	\$ 32,500,818	\$ 46,996,488	\$ 62,255,088	

<sup>1</sup> Reflects all cost reduction benefits except operations reductions (which are reflected in operational costs).

<sup>2</sup> Total inflows carried to Form 1.

