



PERFORMANCE AUDIT REPORT

**State Inspection Functions:
A K-GOAL Audit Determining the
Cost Savings or Efficiencies from
Automating Inspection Processes**

**A Report to the Legislative Post Audit Committee
By the Legislative Division of Post Audit
State of Kansas
March 2009**

Legislative Post Audit Committee

Legislative Division of Post Audit

THE LEGISLATIVE POST Audit Committee and its audit agency, the Legislative Division of Post Audit, are the audit arm of Kansas government. The programs and activities of State government now cost about \$13 billion a year. As legislators and administrators try increasingly to allocate tax dollars effectively and make government work more efficiently, they need information to evaluate the work of governmental agencies. The audit work performed by Legislative Post Audit helps provide that information.

We conduct our audit work in accordance with applicable government auditing standards set forth by the U.S. Government Accountability Office. These standards pertain to the auditor's professional qualifications, the quality of the audit work, and the characteristics of professional and meaningful reports. The standards also have been endorsed by the American Institute of Certified Public Accountants and adopted by the Legislative Post Audit Committee.

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DO YOU HAVE AN IDEA FOR IMPROVED GOVERNMENT EFFICIENCY OR COST SAVINGS?

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March 13, 2009

To: Members, Legislative Post Audit Committee

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Representative Peggy Mast	Senator Chris Steineger
Representative Tom Sawyer	Senator Dwayne Umbarger

This report contains the findings, conclusions, and recommendations from our completed performance audit, *State Inspection Functions: A K-GOAL Audit Determining the Cost Savings or Efficiencies From Automating Inspection Processes*.

The report includes several recommendations for Department of Health and Environment officials to develop a multi-year plan for automating its inspection processes, to ensure all staff are using currently available technology, and to explore the benefits and costs of completing work on the CLARIS database.

We would be happy to discuss these recommendations or any other items in the report with any legislative committees, individual legislators, or other State officials.

Barbara J. Hinton
Legislative Post Auditor

READER'S GUIDE

<i>The Big Picture</i>		<i>The Details</i>	
Executive Summary	Provides an overview of the questions we asked and the answers we found	“At-a-Glance Box”	Used to describe key aspects of the audited agency; generally appears in the first few pages of the main report
Conclusions and Recommendations	Located at the end of the report sections, and referenced in the Executive Summary	Side Headings	Point out key issues and findings
Agency Response	Included as the last Appendix in the report	Charts, Tables, and Graphs	Visually help tell the story of what we found
List of Figures	Lists all figures used in the report and their location (as shown at the end of the Executive Summary)	Narrative Text Boxes	Highlight interesting information or provide detailed examples

This audit was conducted by Lisa Hoopes, Dan Bryan, Allan Foster, and Justin Stowe. Chris Clarke was the audit manager. If you need any additional information about the audit's findings, please contact Lisa Hoopes at the Division's offices.

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State Inspection Functions: A K-GOAL Audit Determining the Cost Savings or Efficiencies from Automating Inspection Processes

The Kansas Governmental Operations Accountability Law (K-GOAL) subjects any State agency or program to audits, reviews, and evaluations as determined by the Legislative Post Audit Committee. Through this process, the Legislature can, in the words of the Act, “retain and maintain appropriate and effective governmental operations, remediate defective governmental operations, and terminate inappropriate or obsolete governmental operations.” The Committee is required to direct at least four audits each year under the law; it has chosen to focus these audits on efficiency and cost savings issues. The law states that each audit may determine whether the agency is still needed, whether another agency could effectively perform the functions of the agency or program, whether the agency or program could be operated more efficiently and still fulfill its intended purpose, and other factors as determined by the Legislative Post Audit Committee. The Committee has designated this audit of automation of KDHE inspection processes as a K-GOAL audit.

A number of State agencies regulate certain professions or business enterprises in Kansas. As part of those regulatory activities, many of those agencies have staff whose job is to inspect businesses around the State.

In recent years, there hasn’t been a Statewide look across all the State’s inspection functions. As things like the price of fuel continue to increase, it’s becoming more and more important to look for ways to streamline inspection functions wherever possible, so that they can be conducted as efficiently and cost effectively as possible.

Recently, legislators have raised questions about whether there are ways to operate State inspection functions more efficiently. In order to provide the Legislature with timely information during the 2009 legislative session, we decided to focus our review on several of the Department of Health and Environment’s inspection functions and programs, and how automated those programs are.

This performance audit answers the following question:

Could savings be achieved by more fully automating the Department of Health and Environment’s processes related to preparing, storing, and retrieving inspection reports?

To answer this question, we selected a sample of programs that conduct routine inspections within the Department of Health and Environment based on funding source and staffing levels. We collected detailed information about each inspection process within these programs and compared it to a fully automated inspection process model. Based on this comparison, we estimated the cost and time savings that could be achieved if each inspection process were fully automated. Finally, we talked with agency information technology staff to determine whether they had the expertise to design and implement the types of automated systems we had suggested.

A copy of the original scope statement for this audit approved by the Legislative Post Audit Committee is included in *Appendix A*. For this audit, we focused specifically on the potential cost benefits of automating the Department of Health and Environment's inspection processes.

We conducted this performance audit in accordance with generally accepted government auditing standards with certain exceptions. Specifically, because of time constraints, we didn't test agency data regarding the number of entities inspected, which we used to estimate cost savings.

Government auditing standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. Except for the limitation described above, we believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Nevertheless, the savings presented in the report are based on a number of assumptions and estimates, and should be viewed with that in mind. Our findings begin on page 7, following a brief overview.

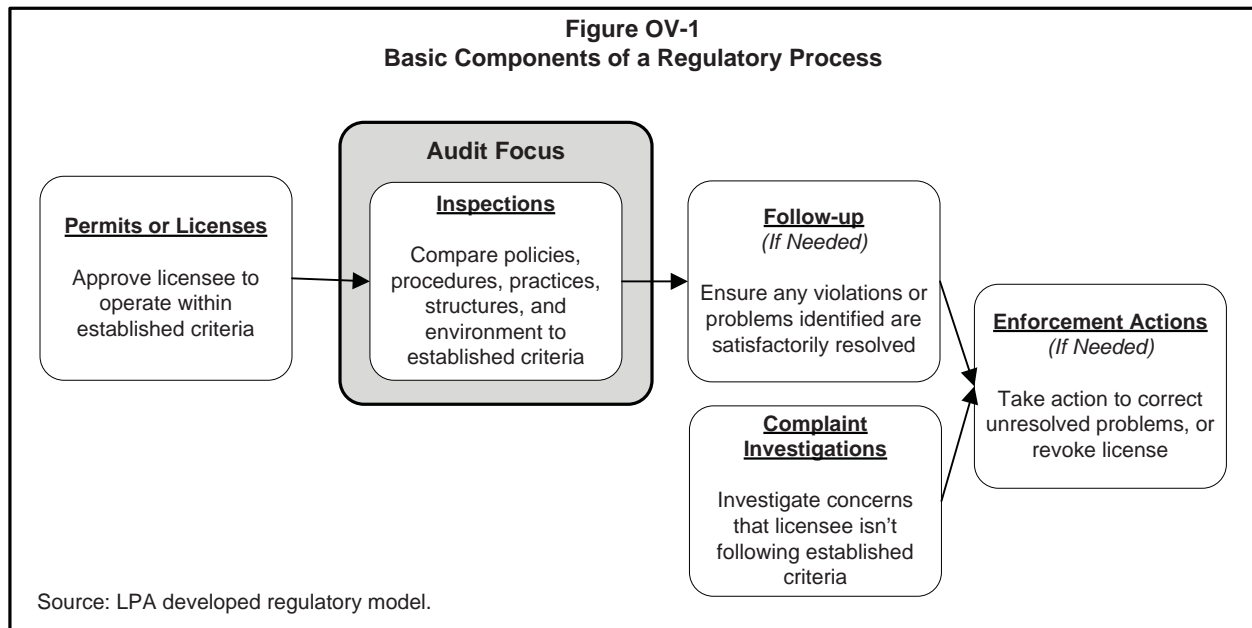
Overview of Efficiency Issues Related to the Regulatory Process

This Audit Was Approved As Part of an Initiative to Focus More Of Our Audit Work On Efficiency And Cost-Savings Issues In April 2008, the Legislative Post Audit Committee unanimously backed an initiative to focus up to half of our regular performance audit work on issues related to efficiency and cost savings. Although most performance audits tend to evaluate how well government programs are working, oversight bodies and citizens are increasingly becoming more interested in how efficiently agencies are operating their programs—particularly in light of the budget shortfalls that are facing governments at all levels.

Efficiency audits focus on ways in which agencies can change the way they currently operate to *essentially accomplish the same thing using fewer resources, or to allow their existing resources to become more productive*. If fewer resources are needed to maintain the services and protections agencies provide, policymakers can use the savings either to reduce costs, or to redirect those resources to other activities.

This Audit Focused On The Potential Efficiencies Related To Automating The Inspection Reporting Process Requirements for regulated industries often are set by State statute or regulation, and State agencies ensure those requirements are met through the regulatory programs they operate. The primary purpose of a regulatory program is to safeguard the public’s health or general welfare. As shown in **Figure OV-1** on page 4, a typical regulatory program has many stages:

- **Permits and Licenses** – Requiring individuals and organizations to get and maintain a current license or permit. This is the first step in ensuring that certain standards, laws, and regulations are met within a regulated industry.
- **Inspections** – Monitoring the activities of regulated individuals and organizations. This is necessary to ensure compliance with all applicable requirements, and to ensure that the public is adequately protected.
- **Follow-up** – Following-up with the inspected entities when problems are found to ensure they have taken the necessary steps to correct noted deficiencies or violations.
- **Complaint Investigations** – Investigating complaints as needed to determine whether problems exist, and how severe they are. Complaints are an important source of information for determining whether individuals or organizations are in compliance with all applicable requirements, and whether vulnerable citizens are safe.
- **Enforcement Actions** – Taking action to compel regulated entities to comply, or to stop operating when they aren’t in compliance with all applicable requirements and won’t voluntarily come into compliance.



For each stage, agencies have developed processes for recording, storing, and retrieving information related to the inspected entities. For example, under the licensing and permitting function, agencies have developed processes for such things as receiving applications, reviewing them for approval, recording payments of any fees, and storing and retrieving applicant and license/permit data.

The focus of this audit was on potential efficiencies and cost savings that could be achieved from automating the processes relating to preparing, storing, and retrieving inspection reports, which represent just one facet of the regulatory process. The reader should be aware that the efficiencies identified in this audit are likely to represent only a small part of what could be achieved if the entire regulatory process were fully automated within an agency.

At Least 23 State Agencies Operate Routine Inspection Programs As Part of Their Regulatory Responsibilities

Kansas has nine fee-funded regulatory agencies whose purpose includes routine inspections of certain practitioners or entities operating in Kansas, such as barbers and cosmetologists, banks and credit unions, and real estate brokers.

In addition, at least 14 other agencies in Kansas operate an inspection process as part of their broader responsibilities relating to providing services to Kansas citizens. These agencies include the Departments of Revenue, Agriculture, Social and Rehabilitation Services (SRS), Health and Environment (KDHE), and Labor, the Kansas Corporation Commission, and the Fire Marshal's Office. These inspection programs can be funded with federal dollars, State dollars, fee funds, or a combination of these moneys. **Appendix B** shows a list of all the agencies we identified that operate routine inspection programs.

For this audit, we focused our review on a sample of inspection programs administered by the Department of Health and Environment. The purpose of this audit was to look at the potential efficiencies and cost savings to the State from automating inspection processes. Only three of the agencies we identified operate inspection programs that are funded at least in part with State funding: KDHE and the Departments of Agriculture and Aging.

We focused our review on KDHE because it administers 47 inspection processes within its Divisions of Health and Environment, 22 of which are funded at least in part with State dollars. The types of inspections performed vary significantly, from dry cleaning facility inspections to evaluations of hospital compliance with licensing and Medicare requirements.

From the 22 State-funded inspection processes in KDHE, we selected 14 processes within seven programs. Based on the information KDHE reported to us, these 14 generally appeared to have the highest percentages of State funding. *Figure OV-2* on page 6 provides some basic information about these seven programs such as types of entities inspected and funding sources.

Although we focused on KDHE in this audit, the reader should understand that the broad issues related to operating an automated inspection process would apply to other agencies as well.

**Figure OV-2
Information on Department of Health and Environment
Inspection Programs Selected for Review During This Audit**

Program	Inspection Funding Source			Types of Entities Inspected	Staff FTE Involved in Routine Inspections	Inspection Purpose
	State	Federal	Other			
Bureau of Water Programs						
Confined Animal Feeding Operations	100%	0%	0%	Federal- and State-sized confined animal feeding operations	5.6	To ensure that animal wastewater held in lagoons and similar structures doesn't contaminate public water supplies.
Drinking Water (a)	35%	65%	0%	Public water supply facilities	4.3	To provide safe and potable water to Kansans.
Wastewater (a)	35%	65%	0%	Industrial, commercial, and public wastewater facilities	3.7	To ensure that facilities generating wastewater dispose or treat that water in a way that doesn't contaminate public water supplies.
Underground Injection Wells	25%	75%	0%	Industrial waste disposal wells, salt solution mining wells, and other non-hazardous wells	0.4	To ensure that industrial waste and other nonhazardous fluids injected below the land's surface don't hurt the environment or the general public.
Bureau of Environmental Remediation						
Underground Storage Tanks	25%	75%	0%	Underground storage tanks for gasoline and diesel fuels	1.6	To prevent gasoline, diesel, or other fuels from being released into the environment.
Bureau of Child Care and Health Facilities						
Child Care and Licensing	50%	50%	0%	Residential child care facilities; foster homes; child placing agencies; maternity centers; and children's State institutions	2.7	To reduce the risk of children being harmed while in foster homes and child care facilities.
Bureau of Air and Radiation						
Asbestos Projects (b)	100%	0%	0%	Construction or demolition projects requiring asbestos removal	3.0	To ensure that asbestos is safely removed from construction and demolition projects.

(a) These two programs share 13 staff members who are cross-trained to perform inspections for both programs.

(b) Excludes 150 projects inspected through local contracts in Wyandotte, Johnson, and Sedgwick counties.

Source: Kansas Department of Health and Environment reported funding sources, staffing and inspection levels. These figures were self-reported and weren't verified by LPA staff.

Could Savings Be Achieved by More Fully Automating KDHE's Processes Related to Preparing, Storing, and Retrieving Inspection Reports?

ANSWER IN BRIEF:

A fully automated inspection process can increase an agency's efficiency levels through cost savings and time savings. Only two of the seven inspection programs we reviewed—Confined Animal Feeding Operations and Drinking Water—are fully automated. By fully automating the reviewed programs, KDHE could achieve annual net savings of about \$28,600 in staff and postage costs. In addition to eliminating a half-time position within the Wastewater Program, we also identified 1,770 hours of staff time across programs that could be freed-up to conduct other needed work. Automating KDHE's inspection processes also can improve its data integrity and use of management information. These and other findings are described in the sections that follow.

A Fully Automated Inspection Process Can Increase an Agency's Efficiency Levels

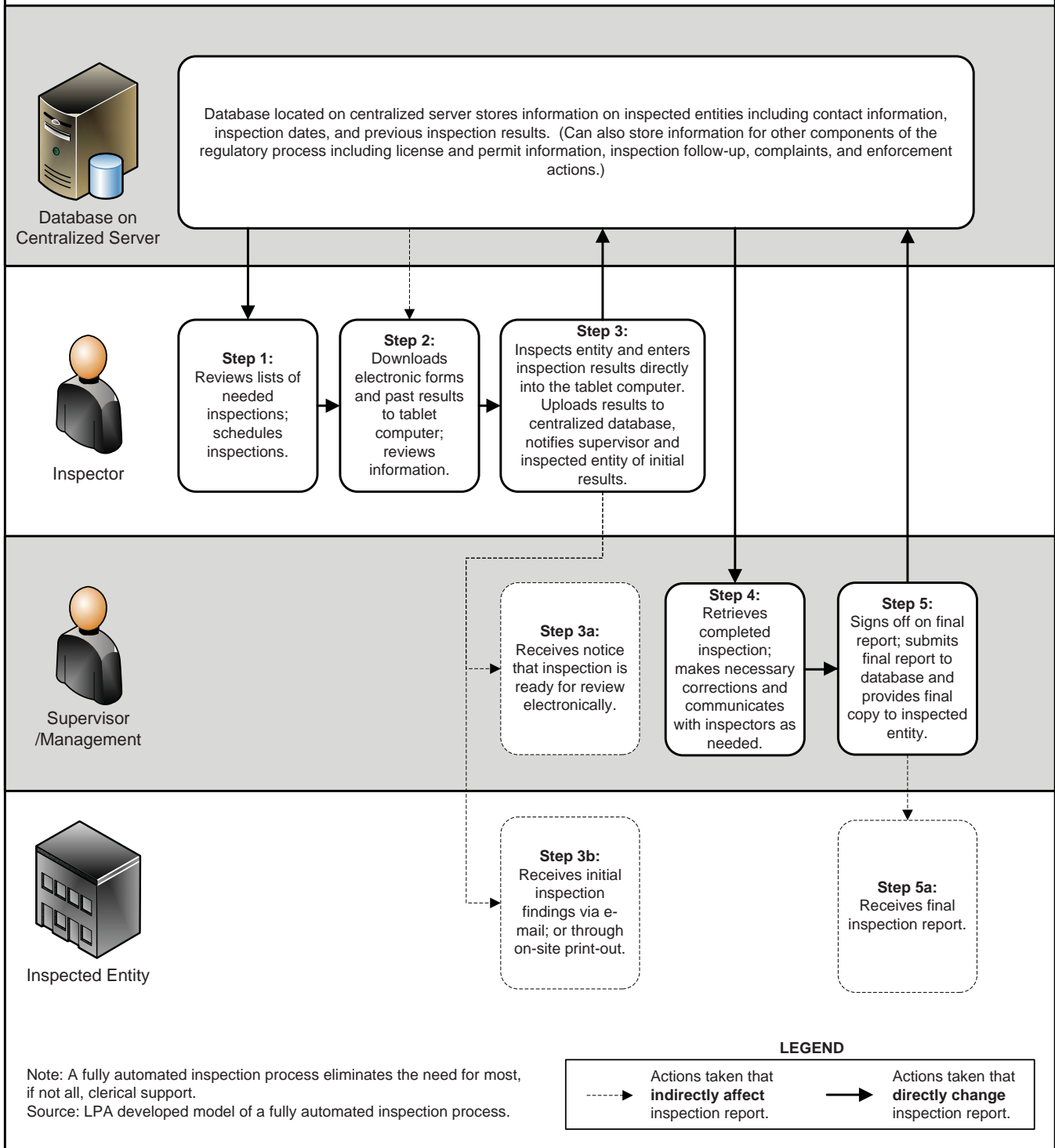
Based on our knowledge and experience in auditing regulatory programs and on a review of best practices in this area, we developed a model of what an automated inspection process could look like. Regulatory programs lend themselves to automation because they typically are standardized, form-based processes that don't vary much over time. **Figure 1-1** on page 8 shows how an automated inspection process would work.

As the figure shows, a fully automated inspection process involves forms that are generated, completed, stored, and retrieved electronically.

Numerous efficiencies can be gained from having a fully automated process for preparing, storing and retrieving inspection reports. The most significant efficiencies relate to cost savings and improvements in staff productivity, including the following:

- Reducing the number of support staff needed to handle the same number of inspection reports (tasks like typing, filing, copying, and mailing inspection reports could be eliminated), **or** freeing up some of their time to handle other needed work
- Reducing the number of inspectors needed to conduct the same number of inspections (tasks like re-keying hand-written inspection results could be eliminated), **or** freeing up some of their time to conduct other needed work
- Reducing postage costs by eliminating field staff mailing of inspection reports to the central office, **and** potentially reducing record-storage costs by storing inspection results electronically, rather than in file cabinets

**Figure 1-1
Simplified Model of a Fully Automated Inspection Process**



As described later in this section, other benefits of automation include improving the integrity of an agency’s data by decreasing the likelihood of data-entry errors, and improving the management information available to the agency, such as trends in inspection results.

Only Two of the Seven Inspection Programs We Reviewed Have Been Fully Automated

We compared KDHE’s current processes with the “automated” inspection model described earlier. We also interviewed staff and administrators with each of the seven programs to learn how the inspection process is carried out from the time a routine inspection begins until the final inspection results are filed. **Figure 1-2** shows the extent to which the seven programs we reviewed are automated.

Figure 1-2
Comparison of Selected KDHE Inspection Programs to LPA Automation Criteria

Basic Automation Criteria	Confined Animal Feeding Operations	Drinking Water	Wastewater	Underground Injection Wells	Underground Storage Tanks	Child Care and Licensing	Asbestos Projects
Staff can....							
Generate a list of entities due for inspection from a centralized database	✓	✓	✓	✓	✓	✓	✓
Generate electronic forms from a centralized database that can be electronically filled in on-site and have all criteria available	✓	✓					
Directly upload inspection report to a centralized database without re-entry	✓	✓					
Store complete inspection results on a centralized database for electronic review	✓	✓			✓		✓
Track and follow up on violations using a centralized database	✓	✓				✓	

Source: Summary of how selected Department of Health and Environment programs meet LPA’s automation criteria.

Two inspection programs—the Confined Animal Feeding Operations Program and the Drinking Water Program —used federal funds to fully automate their inspection processes. Both programs are within the Department’s Bureau of Water. The Confined Animal Feeding Operations Program has been automated since 2006; the Drinking Water Program was automated in 2008. The federal funding was used to purchase the tablet computers and software needed to automate the programs.

In both programs, inspectors use electronic forms to enter inspection data on-site, which is then automatically uploaded into a database which and stored on the agency’s main server. Inspectors or other KDHE staff can use that information to track any necessary follow-up action required, access prior inspection results, and run management information reports.

As **Figure 1-2** shows, for the other five inspection programs, the only process that is widely automated is the generation of a list of entities due for inspections. Staff currently use information stored in a database to prepare a list of entities for the upcoming inspection, with information such as entity name, identification number, date of next needed inspection, and overall result of the previous inspection.

KDHE Could Save Money and Increase Its Staff Productivity by Fully Automating Most Of the Other Inspection Processes We Reviewed

To determine whether there was the potential for KDHE to accomplish *the same number of routine inspections using fewer staff resources*—and either reduce staff costs or free up staff time for other tasks—we performed what’s called a “process evaluation” on each inspection process. Our analysis involved the following steps:

- Developing a flow chart for each step of the inspection process that showed what action was occurring, which staff were doing it, and on average how long the action took to complete
- Identifying which steps could be eliminated or what time requirements could be reduced significantly if the process were fully automated
- Determining how many hours could be saved by automating the inspection process (by eliminating or reducing the time needed to carry out certain steps)

According to KDHE officials, the 21 full-time equivalent staff directly involved in routine inspections for these sample programs spend approximately 27,700 hours per year on the inspection process. As summarized in **Figure 1-3** on the following page, our analyses showed that automating these inspection processes would free-up an estimated 2,600 hours of staff time, or about 10% of the total time currently spent on the inspection process.

The staff positions shown in the figure represent only the full-time-equivalent number of staff who are involved in routine inspections. Although KDHE reported to us that a total of 67 inspectors are involved, the rest of their time is spent on such things as follow-up and enforcement work, complaint investigations, and technical assistance.

As the figure shows, about one-third of the time savings would be in the Wastewater Program. By automating that Program, we estimate 870 hours of inspectors’ time could be eliminated. That’s the equivalent of the actual work time for a half-time inspector position. Currently, that time is spent re-entering data recorded on paper inspection reports during the actual inspection.

The remaining 1,770 hours were spread among different programs and different staff types. For example, in the inspection of foster homes, about 420 hours of inspector time and 270 hours of clerical time could be freed-up by fully automating the program. These time savings would come mainly from eliminating the need for inspectors to re-write inspection findings for the inspected entity because the results would be entered in an electronic format, and eliminating clerical time spent mailing and filing copies of inspection reports or related documents.

**Figure 1-3
Estimated Staff Hours Saved Through Automating Seven Selected Inspection Programs within KDHE**

Bureau	Program	Inspection	Number of Entities Inspected in Previous Year	Staff FTE Involved in Routine Inspections	Staff Position	Estimated Staff Hours Currently Spent on Inspections (rounded)	Estimated Staff Hours Saved Through Automation (rounded)		
	Confined Animal Feeding Operations	Federal-Sized Feeding Lots	331	5.6	Inspector	6,320	140 (a)		
		State-Sized Feeding Lots	853						
		Swine Facilities	39		Clerk / Supervisor	360	--		
Water	Drinking Water	Drinking Water	296	4.3	Inspector	4,340	--		
					Clerk / Supervisor	20	--		
		Wastewater	Wastewater	400	3.7	Inspector	4,430	870	
					Clerk / Supervisor	170	100		
Environmental Remediation	Underground Injection Wells	Underground Injection Wells	111	0.4	Inspector	460	160		
					Clerk / Supervisor	--	--		
		Underground Storage Tanks	Underground Storage Tanks	1097	1.6	Inspector	2,380	460	
					Clerk / Supervisor	80	--		
Child Care and Health Facilities	Residential Child Care Facilities	Residential Child Care Facilities	88	2.7	Inspector	480	90		
						Clerk / Supervisor	--	--	
	Foster Care Homes	Foster Care Homes	907		Inspector	2,230	420		
						Clerk / Supervisor	260	270	
	Child Care and Licensing	Child Placing Agencies	Child Placing Agencies		136	Inspector	990	110	
							Clerk / Supervisor	70	10
							Inspector	10	--
	Maternity Centers	Maternity Centers	3	Clerk / Supervisor	10	--			
				Inspector	10	--			
	Children's State Institutions	Children's State Institutions	5	Inspector	40	10			
				Clerk / Supervisor	20	--			
Air and Radiation	Asbestos Projects	Asbestos	313	3.0	Inspector	3,310	--		
		Contract Asbestos	150		Clerk / Supervisor	1,680	--		
Totals			4,729	21.3	Inspector	24,990	2,260		
					Clerk / Supervisor	2,670	380		
					Total	27,660	2,640		

(a) These time savings are achieved by requiring inspectors to use the tablet computers already available to them, and not through additional automation steps. Source: LPA analysis of seven selected KDHE inspection programs.

KDHE could achieve net savings of about \$28,600 a year in staff and postage costs and free-up about 44 weeks of additional staff time by automating the inspection processes for most of the programs we reviewed. To estimate the cost savings from automating the inspection reporting process for the programs we reviewed, we calculated the number of full-time equivalent staff positions that could be eliminated. We also worked with KDHE staff to determine the average length of reports or related documents typically mailed either to or from the central office and the inspectors, and estimated how much postage could be eliminated if the inspection process were fully automated.

Several other factors the reader should be aware of related to estimating the potential for cost savings:

- We didn't include any additional costs for developing the software applications and database designs that would be needed to fully automate the inspection processes, because KDHE officials told us current staff have the expertise to develop those things in-house. However, dedicating staff time to developing those applications would require KDHE to shift priorities.
- Where applicable, we also estimated certain offsetting costs of automation, including the difference in costs between laptop computers and tablet computers over a four-year replacement cycle, and the purchase of mobile printers so inspectors can provide inspection findings in the field, when needed.
- KDHE already owns the imaging/document management software that would be necessary to bring all past documentation into an electronic system after an inspection process is automated. That makes a newly automated system effective much sooner by giving staff access to all past records electronically.
- Finally, it's important to keep in mind that, if an agency chooses to automate an inspection program, it would be beneficial for the agency to automate the entire regulatory process for that program, not just the inspection process. Thus, what's described below represents only a portion of the potential savings and increased efficiencies we think the agency could realize.

The results of our review are presented in *Figure 1-4* on page 13. The key points from that figure are described below:

- **By fully automating its Wastewater Program inspection process, KDHE could save an estimated \$28,450 per year in staffing costs, or \$113,800 over four years.** The estimated 870 hours of inspectors' time that could be saved through automation is the equivalent of one half-time inspector position. In addition, these same inspectors also are responsible for conducting inspections for the Drinking Water Program. Because the Drinking Water Program already is fully automated, almost all inspectors have tablet computers and have been trained in using electronic inspection forms. Although fully automating the inspection reporting process for the Wastewater Program would involve some information technology staff programming time, it would involve very little additional out-of-pocket cost. Based on average salaries for an

**Figure 1-4
Estimated Compensation, Postage, and Time Savings Achieved Through Automation**

Program	Savings and Efficiencies Gained			Annualized Costs Related to Purchase of Tablet Computers	
	Estimated Annual Compensation Savings (a)	Estimated Annual Postage Savings (rounded)	<u>Additional</u> Staff Time Freed Up for Other Work (in weeks)		
Confined Animal Feeding Operations	\$ -	\$ 730	Inspector	3.4 (b)	\$ -
			Clerk / Supervisor	0.0	
Drinking Water	\$ -	\$ -	Inspector	0.0	\$ -
			Clerk / Supervisor	0.0	
Wastewater	\$ 28,442	\$ 400	Inspector	0.0	\$ (160)
			Clerk / Supervisor	2.5	
Underground Injection Wells	\$ -	\$ -	Inspector	3.9	\$ (330)
			Clerk / Supervisor	0.0	
Underground Storage Tanks	\$ -	\$ 460	Inspector	11.4	\$ (2,940)
			Clerk / Supervisor	0.0	
Child Care and Licensing	\$ -	\$ 4,970	Inspector	15.6	\$ (2,940)
			Clerk / Supervisor	7.0	
Asbestos	\$ -	\$ -	Inspector	0.0	\$ -
			Clerk / Supervisor	0.0	
Totals	\$ 28,442	\$ 6,560	N/A	43.8	\$ (6,370)

(a) Currently, only 24% of the estimated compensation savings are funded through State General Fund money.

(b) These time savings are achieved by requiring inspectors to use the tablet computers already available to them, and not through additional automation steps.

Source: LPA estimated cost and time savings achieved through inspection process automation.

inspector position, we estimated that eliminating a half-time inspector position would save about \$28,450 per year. Currently, the inspector positions in the Wastewater Program are funded by 24% with State General Fund moneys. As a result, savings to the State would be about \$6,800 per year.

- **Fully automating these inspection processes could result in about \$6,600 in postage savings a year.** Staff from many of the inspection processes spend both time and money mailing copies of the inspection results from six district offices across the State into the central office in Topeka. The reports that are mailed to the Topeka range from 1 page to 32 pages. The longest reports mailed are from the Child Care and Licensing Program, which inspects about 1,100 entities per year.
- **Fully automating the inspection reporting processes for most other programs in our sample could free up at least 44 weeks of additional staff time to carry out other needed work.** As noted earlier, this time savings was spread out among different programs and different staff types, so it wouldn't account for even half a position in any of the programs we reviewed. However, the amount of time being freed up still is fairly significant within several programs—up to 16 weeks of inspector time in the Child Care and Licensing Program. KDHE could redirect those resources to meet other unmet needs.
- **About 140 hours of the time savings were found in the Confined Animal Feeding Operation Program, which already is fully automated.** We learned that 5 of 13 inspectors involved in the Program

have decided not to use their tablet computers to enter inspection results, and have continued to record the inspection results manually, then re-key them later into the computer. This negates the efficiencies of the tablet computers and the automated process.

- **For several reasons, the Asbestos Program inspection process isn't a likely candidate for automation.** These inspections typically are conducted at construction or demolition sites, and oftentimes in tiny crawl spaces or small areas. Asbestos removed at these sites must remain wet at all times to prevent it from becoming airborne, and safety standards require all people and equipment that are on-site to be decontaminated. Electronic equipment like tablet computers can't be readily operated under these circumstances.

In addition, federal regulations require the initial project requests that licensed contractors submit to the State to be submitted in paper form. An official we talked with at the Environmental Protection Agency told us they enforce the paper-only rule. KDHE officials estimate one staff position spends about 80% of his time reviewing and correcting these paper requests.

We identified two other issues that relate to the efficiency of certain program operations. During the course of this audit, we interviewed numerous program officials to understand the details of a complete inspection process. Through this work, we identified two issues regarding the efficiency of the operations of some of the programs. These include the following:

- **The Child Care and Licensing Program has built a central database, but it isn't fully completed and it's not used for inspection automation.** The Child Care and Licensing Program developed a comprehensive plan to automate its inspection process. In 2001, the Program received federal funding through the Early Childhood Development block grant to develop the first phase of the plan, which was the creation of a central database. Once the central database was finished in 2004, KDHE didn't request additional funding to fully automate the inspection process. The Child Care and Licensing Director said funding wasn't requested because staff thought the database needed to be tested and improved before switching to automated inspections. Currently, Program staff use the database to store limited information, such as inspection date, overall inspection results, and time taken to inspect. However, the system doesn't store complete inspections results and can't be used to generate management information. As noted earlier, we identified almost 16 weeks of inspector time that could be freed-up through full automation of this Program.
- **Staff in the Foster Care Program currently redact certain confidential information using White-Out, rather than electronically.** Information about the Foster Care Home Inspection Program currently is stored only on paper-based documents. When the public asks for information about these homes' inspection results, some of that information has to be redacted because it is confidential. To handle these requests, staff currently pull the paper form, make a copy, use White-Out to redact the information, and make another copy to send to the requestor. Staff estimate they handle about 1,000 such requests per year. If this inspection Program were automated, a copy

of these forms could be created and stored electronically; staff could simply call up the needed documents on-line, electronically delete or hide the necessary information, and print a copy of the redacted form and mail it to the requestor.

***Automation Also
Can Improve KDHE's
Ability To Manage and
Use Program Data***

In addition to achieving cost and time savings, automating inspection processes also can have a significant impact on an agency's effectiveness in a number of areas, including the following:

- **Improving the integrity of the agency's data.** With an automated process, data are stored electronically the first time they are recorded. That not only eliminates duplicate data entry, but it also decreases the chance of data-entry errors. In addition, when inspection results are maintained in a database, administrators have much greater control over the data and can limit the risk that confidential data will be released accidentally. At the same time, public data can easily be made available to the public on a web page.
- **Providing information for managing programs and the resources assigned to them.** Most KDHE inspection staff aren't re-keying all information from the hard-copy inspection reports inspectors filled out into an electronic format. Having mostly paper-based documents for these programs significantly hampers management's ability to review and analyze even basic management information on either a program-wide or individual basis. For example, if inspection results were entered into a database electronically—even after the fact—management could rank entities based on their relative risk, identify entities with numerous past problems, identify a particular entity's past problems so inspectors could focus on those areas in the current inspection, analyze the types of violations most entities have, analyze inspection trends across time or by region, and the like.

**The Department of Health and Environment Has a Central Data Repository,
And Current Information Technology Staff Likely Could Handle
Automating the Department's Inspection Processes**

We worked with KDHE's Chief Information Officer to identify any obvious inefficiencies or potential technology-based roadblocks to automating the Department's inspection processes. We found that KDHE has been taking steps over the last five years to make its information technology operations more efficient.

- KDHE management staff have made information technology more centralized by bringing all servers into the data center, so they can be used more efficiently and storage space can be shared more easily.
- KDHE management has brought all information technology staff into one department, so their time can be used more efficiently.
- The information technology staff have migrated many of the small databases developed by users within various programs into larger, more centralized databases. Such databases are much more stable and secure, and can be administered more efficiently by the information technology staff. The Chief Information Officer estimated that KDHE has converted about 70% of such applications so far.

In addition, there don't appear to be any roadblocks to automating the inspection programs. According to the Chief Information Officer, current programming staff have the knowledge and skills necessary to automate the inspection processes. Six programmers work on the Environment side, one works on the Health side, and two other programmers maintain one of the major health applications. The Chief Information Officer told us they wouldn't have the capacity to automate all the processes at once, but could easily do them over time.

Conclusion:

Technology is a staple of operating any agency, and its importance continues to expand. Automation of agency processes can yield cost and staff time savings while improving the availability and quality of program information, all of which becomes increasingly important in light of shrinking government revenues. An agency likely will achieve the most benefit from fully automating its entire regulatory process—from licensing through enforcement and complaint investigations. Automating any program will take time and money and may require shifts in staff duties, but given the potential savings and efficiencies gained from automation, it would be an effective use of resources. Although this audit looked only at the inspection processes within a sample of KDHE programs, this conclusion is universal and should be a blueprint for all State agencies.

Recommendations for Executive Action:

1. To improve the efficiency of its agency's regulatory operations, KDHE officials should develop a multi-year plan for automating its inspection processes, and consider the benefits and costs of fully automating its entire regulatory process. Officials should give priority to those programs that are partially automated, and should include tentative plans for either reducing staff resources as appropriate, or redirecting freed-up staff time for other important work. That plan should be provided to the Legislative Post Audit Committee by July 1, 2009.
2. To gain the most efficiency from the fully automated Confined Animal Feeding Operations program, KDHE officials should require all inspectors to use the available tablet computers instead of re-entering information from paper-based documents.
3. To achieve the benefits and efficiencies possible from automating the Child Care and Licensing Program, KDHE officials should explore the benefits and costs of completing work on the CLARIS database.

APPENDIX A

Scope Statement

This appendix contains the scope statement approved by the Legislative Post Audit Committee for this audit on November 18, 2008. The audit was requested by Senator Umbarger on behalf of the Senate Ways and Means Committee.

State Inspection Functions: Determining Whether There Are Ways To Combine, or Otherwise Restructure Some Functions To Reduce Costs

A number of State agencies regulate certain professions or business enterprises in Kansas. As part of those regulatory activities, many of those agencies have staff whose job is to inspect businesses around the State. Examples of agencies that conduct inspections and the types of inspections they conduct are; the Department of Health and Environment (daycare facilities and food service establishments), the Department of Agriculture (grocery stores and meat processing facilities), the Board of Cosmetology (beauty salons and schools), the Department on Aging (nursing homes), and the Fire Marshal's Office (buildings for compliance with fire codes).

In 2003, Legislative Post Audit looked at the possibility of combining food safety inspection programs in Kansas and found the system was inefficient. Inspectors from more than one agency or program were conducting food safety inspections of the same businesses, some businesses were inspected more frequently than they needed to be, and similar businesses were regulated inconsistently. The audit estimated \$680,000 in annual savings. About \$90,000 of that amount was attributed to combining certain inspections. The bulk of the savings was attributable to changing inspections to a risk-based approach.

In recent years, there hasn't been a Statewide look across all the State's inspection functions. As things like the price of fuel continue to increase, it is becoming more and more important to look for ways to streamline inspection functions wherever possible, so that they can be conducted as efficiently and cost effectively as possible.

Recently, legislators have raised questions about whether there are ways to combine some of these inspection functions or better coordinate them to eliminate duplicate or unnecessary inspections to achieve cost savings.

A performance audit of this topic would address the following question:

- 1. Could the State of Kansas restructure some inspection functions to save money and still adequately protect the public?** To answer this question, we would put together an inventory of the various agencies that conduct inspections, and the types of inspections they conduct. We would look across agency lines to identify inspection functions that potentially could be consolidated to save time and money, or inspections that may not need to be done at all. We would look at statutory requirements for inspections to determine whether the statutes may impose unnecessary requirements that may lead to inefficient use of inspection resources. In addition, we would look at how individual agencies are carrying out their inspections to determine whether they could benefit from using more cost-effective inspection processes, such as using a risk-based inspection model. We would conduct additional work as needed.

Estimated completion time: 20-25 weeks

**Appendix B
List of State Agencies that Perform Routine Inspections (a)**

Agency	Examples of Inspected Entities
Kansas Fee-Funded Agencies	
Board of Barbering	Barber shops and salons
Board of Cosmetology	Tanning facilities; schools of cosmetology
Board of Mortuary Arts	Funeral establishments; crematories
Board of Pharmacy	Pharmacies
Board of Veterinary Examiners	Veterinary facilities
Department of Credit Unions	State-chartered credit unions
Kansas Real Estate Commission	Real estate transaction files and trust account records
Office of the State Bank Commissioner	Trust companies and departments; state-chartered banks, savings and loans
Securities Commissioner	Investment advisors and broker-dealers
Other Kansas Government Agencies	
Adjutant General	Military regiments and battalions
Animal Health Department	Buildings and equipment related to animal carcass transportation; livestock transported to Kansas from other states; pet stores and breeders; and livestock markets
Department of Agriculture	Facilities storing anhydrous ammonia; commercial feed; commercial fertilizers; weights and measures; petroleum products; livestock and poultry; grain warehouses; groceries; and restaurants
Department of Corrections	State correctional facilities
Department of Health and Environment	Dry cleaning facilities; child care facilities; underground storage tanks; underground injection wells; asbestos projects; confined animal feeding operations; foster homes; water facilities; hospitals; State children's institutions; landfills; tire retailers; and laboratories
Department of Labor	Public job sites; boiler facilities
Department of Revenue	Vehicle dealers and salvage yards; distributors of alcohol and tobacco
Department of Social and Rehabilitation Services	Food warehouses and distribution facilities that store goods; substance abuse facilities; and foster homes
Department of Transportation	All materials, supplies, equipment, and machinery used for state highway purposes.
Fire Marshal	Schools; health care facilities; and State correctional facilities
Kansas Highway Patrol	Motor vehicles
Kansas State University	Dairy herds at State institutions
Kansas Corporation Commission	Gas pipelines; motor vehicle facilities
Department on Aging	Long-term care facilities such as nursing homes and assisted living facilities
<p>(a) We excluded all fee-funded regulatory agencies that don't perform routine inspections, such as the Board of Healing Arts and the Board of Accountancy. Source: The 2010 Governor Budget Report, LPA review of Kansas statutes, and self-reported information provided by Kansas agencies.</p>	

APPENDIX C

Agency Response

On March 4, 2009, we provided copies of the draft audit report to the Department of Health and Environment. Its response is included as this Appendix.

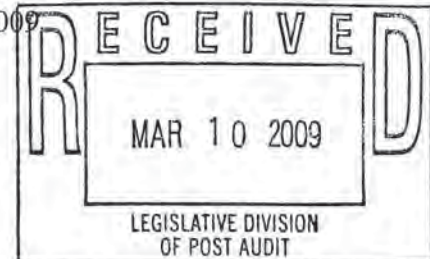
The Department generally concurred with the report's findings, conclusions, and recommendations.

In its response, the Department indicated it would cost a minimum of \$150,000 in its computer programming staff time to automate the inspection processes for the five programs we reviewed, plus additional costs for computers and printers. We wanted to clarify the following information for the reader:

- The net cost savings presented in the report already include estimated hardware costs for tablet computers and portable printers.
- The \$150,000 cost cited for programming staff time doesn't represent an additional out-of-pocket cost to the Department. Rather, that figure is the Department's estimate of the cost of its existing programmers' time that would be associated with automating the system.
- To help maximize the benefits the Department could realize from automating its inspection processes, our recommendation suggested that the Department focus first on the programs that already are partially automated—the Wastewater and Child Care and Licensing Programs. These programs offered the most immediate benefits in terms of cost or time savings. Phasing in inspection automation efforts over time would minimize the computer programming staff resources the Department would need to assign to such projects in any particular year.

March 10, 2009

Barbara J. Hinton, Legislative Post Auditor
Legislative Division of Post Audit
Mercantile Bank Tower
800 SW Jackson St., Suite 1200
Topeka, KS 66612-2212



Dear Ms. Hinton:

Thank you for the opportunity to provide a written response to the legislative post audit report regarding automation of regulatory operations at KDHE.

We have reviewed the report and found that it generally provides an accurate summary of the processes followed by KDHE in its inspection and regulatory programs as well as the constraints therein.

We concur with your preliminary conclusions that:

- Automation results in improvements in data integrity as well as an enhanced ability to review and analyze data.
- Automation would save real-time dollars as well as free up significant staffing resources that could be re-invested in other service areas.
- The ideal approach to automation is to fully automate regulatory processes rather than automating the inspection components of individual regulatory programs.
- All inspectors should use automation if offered.
- Completing work on the CLARIS database will achieve the optimal benefits and efficiencies for the Child Care and Licensing Program.

We agree that automation is a key component to ensuring efficient, timely services to our stakeholders. Automation has been and will continue to be among our strategic initiatives for KDHE. Identifying funding to purchase the necessary equipment and coordinating staff resources to develop the necessary components are the only hindrances to achieving automation; such efforts must be carefully coordinated with the agency's other priorities and budgetary needs.

To illustrate these cost considerations: The impact for the programming necessary to implement automation for the inspection processes of the programs identified in this

report is a *minimum* cost of approximately \$150,000, representing more than 6,000 programming hours by KDHE staff. Hardware (tablet PCs, portable printers, network cards, etc.) is an additional and significant expense.

Clearly, technology projects like automation represent not only added value but also an upfront investment (i.e. cost) to the organization. Though automation would eventually be cost neutral or even realize cost savings, the lone hurdle remains funding the initial investment in staff time and technology, especially as it vies with equally competitive efficiency projects.

Regardless, our goal will remain identifying funding to support phased automation of regulatory programs as opportunities become available. The federal stimulus package may, in fact, create a possible source of funding, especially as it relates to completing additional work on the CLARIS database. We were pleased to have the opportunity in recent years to fully automate the Drinking Water Program through federal funding and look forward to bringing similar success to our other programs.

Furthermore, we appreciate the opportunity provided by this review to address gaps in automation usage among some of our Confined Animal Feeding Operation (CAFO) inspectors. If further training is required in order to make use of the technology, we support that. If there are gaps in wireless service, especially in rural areas of the state, that impede the use of the equipment, we are interested in exploring opportunities to improve connectivity and/or accommodating this factor as we evaluate and track performance.

In summary, we appreciate the opportunity to work with your team on this critical topic as well as the opportunity to respond. Please let us know if you have questions regarding the information provided in this letter.

Sincerely,



Roderick L. Bremby