

Application for the  
2011 J. Robert Havlick Award for Innovation in Local Government  
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## **Paperless Office Initiative**

**County of Los Angeles Department of Public Works  
Environmental Programs Division**

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## **Paperless Office Initiative**

In an effort to strive towards environmental sustainability, the County of Los Angeles Department of Public Works (Public Works) embarked on a Paperless Office Initiative (Initiative) beginning in November 2009, which continues today. The Initiative consists of two main components: 1) developing a customized electronic system to manage landfill documents, and 2) converting voluminous landfill documents into digital format. As of December 31, 2010, the document management system (DMS) had been newly developed and implemented, providing for 134,000 pages of documents (or 40 percent of the inventory) being digitized and stored. Benefits of this Initiative include preserving valuable historical records; streamlining records retrieval processes thereby enhancing the quality of public service; maximizing office space by replacing paper documents with digital files; and implementing environmentally sustainable business practices in local government.

## **County of Los Angeles Department of Public Works**

The County of Los Angeles is comprised of 88 incorporated cities and many unincorporated areas. It spans 4,500 square miles and is home to over a quarter of all California residents. One of the essential services, among the many others provided by Public Works for residents and businesses in the County, is solid waste management. The Environmental Programs Division (EPD) within Public Works is responsible for providing fiscal, policy, and technical advice regarding the collection, transportation, recycling, and disposal of solid waste generated in Los Angeles County.

EPD maintains several hundred thousand pages of technical reports, correspondences, and other historical documents pertaining to solid waste management operations in the County. For example, EPD maintains historic documents pertaining to closed landfills, including the types and quantities of materials disposed of at various landfills. Such documents are valuable not only to help determine whether or not the County may be liable for paying cleanup costs associated with contaminated disposal sites even after the sites have long closed, but also serve as a source of valuable historical reference for solid waste professionals. Prior to this Initiative, much of the paper documents were stored in file cabinets, storage rooms, and employee work stations, and were often difficult and time consuming to access.

## **Innovation's Importance, Internal Impact, and Community Benefits**

The importance of the Paperless Office Initiative is not only to preserve valuable environmental resources but to also to demonstrate environmental stewardship through leading by example. Public Works' EPD frequently receives public records request from members of the public, other government agencies, and private law firms for documents related to landfills and other solid waste facilities. On average, EPD receives about 4 records requests per month, which take an average of 6 hours per request to perform records retrieval, reviews, and copying. Some requests take as long as several months to complete due to the sheer volume of paper documents stored throughout various locations. With the newly developed document management system (DMS), access and

retrieval of documents are now convenient and immediate. Additionally, customers are now able to receive electronic documents via e-mail in lieu of having to travel to the public counter to obtain paper copies.

This Initiative has also streamlined the reporting processes for landfills. Prior to the development of the DMS, it could take days or weeks for a report to be delivered from the landfill operators, to the mailroom, and then to staff for review. Staff would then reproduce the documents and route them to other divisions, such as Geotechnical and Materials Engineering, and Water Resources Divisions for further reviews. With DMS, the reports can be promptly delivered electronically to the appropriate reviewers, supervisors, as well as other divisions.

### **Creativity and Process Enhancements**

Public Works took initiative to streamline and improve the digitizing process through coordination and learning from other public entities. Since EPD had limited experience in digital archiving, staff visited and observed the paperless office team at the Los Angeles County/University of Southern California (LAC/USC) Medical Center. Furthermore, the Chief Information Office and Information Technology Division (ITD) were consulted for ways to optimize equipment performance, software allocations, and staffing resources. Through these efforts, Public Works was able to improve the scanning process from a low 40 pages per hour to a high of 245 pages per hour, and the quality control process from 45 pages per hour to 135 pages per hour.

Digitizing documents was a challenge due to the demand on staff time and equipment resources. It necessitated detailed planning to properly allocate staff and equipment usage, while minimizing disruptions to normal operations. The digitizing process entailed document preparation, scanning, quality control, and electronic filing into the newly developed DMS. Before finally establishing a process that worked optimally, several enhancements were made including adjusting equipment usage times to minimize workforce impacts; becoming familiar and proficient with the new DMS; establishing the framework, categories, and protocol for storing documents within DMS; and allocating personnel to maximize scanning opportunities.

### **Benefits Due to the Innovation**

By implementing the Initiative, Public Works dramatically improved document management processes in the workplace. Staff can now conduct searches at their computers, retrieve documents, and send e-mails to customers within minutes, rather than sorting through boxes and shelves. This process has also cut down the need for customers to visit the public counter. Furthermore, the likelihood of misplacing or damaging paper records has been essentially eliminated.

The Project has also strengthened communications between Public Works and its internal and external customers, jurisdictions, other government agencies, and stakeholders in the solid waste industry. We can now promptly respond to inquiries from legal departments,

executive offices, and the general public including residents who live near landfills since documents can be instantaneously accessed in DMS and shared electronically.

An estimated annual cost savings of \$64,000 are realized through these improved operations.

### **How the Innovation was Initiated and Implemented**

The County of Los Angeles Chief Executive Office (CEO) launched the Countywide Efficiency Initiative, encouraging County departments to pursue initiatives that would reduce cost and increase operational efficiency. The DMS Project was selected by the CEO as one of the priority initiatives with a goal of launching DMS and converting twenty percent of landfill documents by July 31, 2010. The DMS was launched ahead of schedule, and the Initiative goal was successfully completed.

### **Risks Associated with Planning and Developing the Innovation**

Since paper documents were being converted and stored in digital format, there were risks associated with system security, data corruption, and system viruses. As a precaution, all the digital files are backed up nightly. Antivirus software is utilized to safeguard the digital files from viruses, worms, and malware. DMS operates on an internal network with access restricted to a limited group of authorized users. A firewall actively protects the internal network from external threats.

Another challenge was to minimize employee reluctance towards changing protocol in moving away from paper documents towards electronically managing files. Accordingly, ITD placed great emphasis in ensuring that the system is user friendly.

### **The Environment in which the Innovation was Created and Sustained**

In May 2009, the Chief Executive Office launched the Countywide Efficiency Initiative to help address the County's serious fiscal situation due to the overall economic downturn and significant funding reductions. In November 2009, the Efficiency Initiative Website was launched to share ideas and projects across departmental boundaries, to monitor the progress of all efficiency projects underway, and to track dollars being saved. With this effort, many departments devised and pursued efficiency initiatives on their own. This Initiative was an opportunity to strategize, plan, and implement the new DMS that would help reduce costs associated with storage and staff time, as well as enhance customer service response times.

### **Execution Costs and Savings**

To implement the Initiative, Public Works incurred a one-time in-house staff cost of approximately \$100,000 for programming, coding, and digitizing from ITD. The project will continuously have an ongoing annual savings of approximately \$60,000 for Public Works, and \$4,000 for customers through the following:

- Eliminating storage costs. After scanning, the paper documents were recycled, and the space that was once filled with cabinets, shelves, and boxes could be converted into cubicles or other uses
- Reducing staff time for managing paper documents on a daily basis. The time to file, retrieve, and share documents has been reduced. The need to re-file documents has been eliminated.
- Reducing resource costs for purchasing paper and toner, mailing, and printer maintenance.
- Reducing service charges to customers by providing information via e-mail rather than as hardcopies.

Furthermore, the enhanced accessibility and search capabilities of the documents may result in additional savings to the County when defending against CERCLA litigations and recovering costs.

### **Lessons Learned Worth Sharing with Other Local Governments**

Public Works learned how best to implement this new Initiative through trials, flexibility, and innovation. Challenges included developing and providing training; adjusting staff schedules in order to accommodate occupying scanning equipment without disrupting other sectors of the workforce; reprioritizing assignments so that deadlines for both high priority and routine assignments were met; and developing detailed and well written systems requirements for ITD to actuate the DMS.

Since Public Works had no prior experience in digital archiving staff researched and found other government entities that had undertaken similar digital archiving initiatives from which to glean. Staff observed similar efforts at the LAC+USC Medical Center and gained tips on how to enhance operations.

### **The Team that Championed this Innovation**

Public Works' Environmental Programs Division (EPD) worked cooperatively with the Information Technology Division (ITD) in developing the Document Management System (DMS). This Paperless Office Initiative demonstrates efforts made by local governments to take advantage of current technologies in improving public service and becoming better stewards of the environment.