Paperless and Web-Based Innovation in the Human Services Agency:

Lessons for an Automated Case Management and Imaging System in San Francisco County

Jose B. Mejia

EXECUTIVE SUMMARY

The City and County of San Francisco—Human Services Agency (CCSF-HSA) needs to automate its case management system because of the fast-growing and ever-expanding demand for records storage space. One of the ways for eliminating the high cost of record-storage space, while maximizing the efficiency and productivity of our caseworkers, for managing their cases, would be by creating a paperless case management process: implement an automated document imaging, storage, and retrieval system that can be integrated with the programs and, at the same time, enhance services that are provided to clients.

The agency already has a robust IT infrastructure in place, which includes some of the technology and resources needed to set up an automated document-imaging system. A Document Imaging, Storage, and Retrieval System with a customer-managed solution similar to the CaseSTAR system described in the paper can be implemented in the agency to address some of the agency's business needs, including:

- **Planned Centralized Call Centers of various HSA Programs** (Food Stamp and Medi-Cal)
- **On-site Storage Space**
- **Off-site Storage Cost**
- **CCSF-HSA Disaster Recovery Plan and Business Continuity**

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Introduction

The City and County of San Francisco—Human Services Agency (CCSF-HSA) needs to automate its case management system because of the fast-growing and ever-expanding demand for records storage space. One of the ways for eliminating the high cost of record-storage space, while maximizing the efficiency and productivity of our caseworkers, for managing their cases, would be by creating a paperless case management process: implement an automated document imaging, storage, and retrieval system that can be integrated with the programs and, at the same time, enhance services that are provided to clients.

The agency already has a robust IT infrastructure in place, which includes some of the technology and resources needed to set up an automated document-imaging system; however, this is something that the CCSF-HSA has never done previously. Therefore, I felt that this would be the perfect project for me, to work on as my BASSC's 15-day internship project. It allow me to learn from other agencies that have already deployed a Document Imaging, Storage, and Retrieval System. This would ensure that the system would meet CCSF-HAS's program/business needs and would be more efficient than the current manual and paper-driven process. At the same time, the new system would enhance case record's security, while avoiding a negative impact on the services provided to clients.

Contra Costa County Employment and Human Services Department (EHSD) and Alameda County Human Services are two of the counties that graciously offered to sponsor my 15-day internship program. I am glad both were selected because I have learned a lot on how they run their business processes, and they have shared very valuable information on lessons learned and what worked best for their programs. All that learning will definitely be put to good use when CCSF-HAS is ready to implement its own document imaging system.

Contra Costa County Employment and Human Services Department (EHSD) recently implemented an electronic case records storage and retrieval system. This system is known as the CaseSTAR (Case Stored Text Automated Retrieval). This system houses EHSD case records. EHSD worked with a vendor by the name of IKON, a "well-known" vendor in the document imaging industry, on implementing the CaseSTAR system for its programs, caseworkers, and the executive management.

The CaseSTAR System

This new system allowed Contra Costa County to consolidate case records for various district operations into a centralized and electronic-based environment for their Client Service Centers (sometimes referred to as Client Service or Call Centers). The following programs are currently using the CaseSTAR system: Medi-Cal, CalWORKS, Food Stamp, General Assistance, Child Care and Foster Care.

System Design and Components

The CaseSTAR system design and services that Contra Costa County decided to go with was what

the industry calls a *Vendor Hosted Service Solution* by IKON, which was integrated with EHSD Network via the Internet.

IKON's Hosted Service Solution included the following professional services and infrastructure components: 1) a team of professionals in document imaging system that were on-site preparing case records for scanning, although the scanning was performed at the IKON Scanning Center in Sacramento, 2) the storage of the electronic case records, and 3) maintenance and services of the application and the infrastructure hardware components.

The system is a Microsoft Server Based and Secured Solution. It takes advantage of Windows Active Directory Services and Storage Area Network Systems. Over 100 scanner workstations were deployed across the agency to support the program's workload of electronic case records.

IKON, also provides a Customer Managed Service Solution which is less expensive because it does not include re-occurring yearly fees for services like the network hardware, network administration and technicians, and the outsource of case imaging/indexing operation. Alameda County chose to go with this solution.

The Business Needs

Contra Costa EHSD had an immediate need for automating its old paper case records process into that of a computer-based system to better support its business process and records storage needs, and maximize staff resources and improved delivery of client services. The caseloads go as high as 450 case records with 100 to 150 document pages per case. The manual process for retrieval and updating of case file information was labor-intensive.

Benefits

The benefits of implementing the Automated Case Records System included the following:

- Significant savings on folder cost, copy costs, case transfer cost, injury-related costs, mail distribution costs, case-filing, case-splitting, shelving furniture, floor space for storage, warehousing costs, consolidated overhead expenses, and increased workload capacity for better use of limited resources. Staff resources were also maximized for efficient use and consistent delivery of services.
- Implementation of an Automated Case Records System assists in the consolidation of infrastructure resources for easy updates and file maintenance.
- Client contact information will be readily accessible and current. Clients will receive immediate response to their inquiries and have greater access to real-time case management. There will be an increase of efficiency in technology. There will be an improvement in reporting case-handling time to open and resolve issues. Reporting will support projections on volume of required work per case and provide trend analysis. There will be ease of training in a group environment because staff will be centralized.

EHSD Actual Budget Spent

See IKON Budget Cost Spreadsheet (Appendix A)

EHSD was permitted to shift budget dollars between categories throughout the project (see attached budget spreadsheet).

When they went to County Board of Supervisors for year two approvals, they were able to amend the year one costs to cover the small over-run of $11,000.

Their cost has gone down for years 2 and 3 because they do not have to cover the huge expense associated with the backfile conversion.

EHSD Proposed Budget

See Table 1 on the following page.

Cost Allocation

See Table 2 on the following page.

Procurement Method

Services and equipment were acquired through a county competitive bid process that met state and federal procurement requirements. Criteria communicated to the vendor community were intended to result in the best value solution. Requirements include a company that has proven experience in im-

TABLE 1
Automated Case Records System Estimated Program Costs

Category of Cost	Estimated Start Up Non-recurring	Recurring Costs Estimated Annual Yearly Ongoing	Total Cost End of First Year	Total Recurring Costs Year Two & Beyond
Document Management System application (including Imaging/Indexing software)	$320,000	$ 34,000	$ 354,000	$ 34,000
Scanning Hardware Expenses (42 scanner position centralized for Continuing Field Units and distributed department wide for Intake Units)	$184,000		$ 184,000	
Active Case File Conversion of approximately 44,000 active cases	$370,000		$ 370,000	
Outsource imaging/indexing for 1,300,000 document pages of US Mail annually		$ 186,000	$ 186,000	$ 186,000
Network Hardware to implement CaseSTAR serving arrangement	$ 56,000	$ 25,000	$ 81,000	$ 25,000
Network Administration five Days per week—Network Technician		$ 109,052	$ 109,052	$ 109,052
Case Imaging/Indexing operation (Labor expense for Intake and in-office document processing	$954,126	$ 954,126	$ 954,126	
Total Costs	**$930,000**	**$1,308,178**	**$2,238,178**	**$1,308,178**

TABLE 2
Automated Case Records System Cost Allocation Plan

	Initial Cost	Percent
State	$ 895,271	40%
Federal	$ 895,271	40%
County	$ 447,636	20%
Total	**$2,238,178**	**100%**

plementing Automated Case Records Systems and with experience in multiple county environments. This experience includes implementation of document management systems, deployment of imaging/indexing applications, large volume (30,000 cases) back file conversions, and the sale and deployment of network and imaging hardware.

Project Duration

It took 12 months for Contra Costa County to complete the project from the moment that the budget was approved and for the contract to be signed by the vendor. The contract year started April 1, 2005 and ran through March 31, 2006. Once the contract was signed on April, 2005, a few weeks had been spent completing the system design and training. At the end of the project, over 50 thousand case records had been scanned and digitalized.

Participation from the programs and the executive management team throughout the project, as well as collaboration and team effort with the vendor, was key to the success of the new document imaging system implementation.

Lessons Learned

EHSD had the immediate need to get the system in place before August 1st, 2005 because of CalWIN going live. This need created significant changes on the proposed budget in a matter of two months from building a network to getting a hosted serving arrangement.

When EHSD decided to re-order the paper into seven CalWIN friendly groups resulting in more cost and more time to complete, the caseworkers had

difficulties finding their documents. The case conversion expenses would have been about 25% lower if they had scanned the paper cases by their original fastener format.

Recommendation for City and County of San Francisco Human Services Agency

A Document Imaging, Storage, and Retrieval System with a customer-managed solution similar to the CaseSTAR can be implemented in the agency to address the business needs listed below:

- **Planned Centralized Call Centers of various HSA Programs**—Food Stamp and Medi-Cal. The document imaging and retrieval system would enable workers with fast, easy and secured access to active client case records via H.S.A. Intranet.
- **On-site Storage Space**—Due to rapid growth, the agency is constantly experiencing shortage of onsite storage space for client case records. The central repository of recently closed cases is currently filled to its maximum capacity, and filing cabinets and shelves are taking over caseworker work areas. We have no more space available for growth. This space can be utilized for new hires and would eliminate the potential need for leasing or purchasing new facilities.
- **Off-site Storage Cost**—This would eliminate the very expensive and rapidly growing cost of warehousing. There are approximately over 16,000 boxes of client case records at an off-site storage facility. Because there is not any more space for on-site storage, the agency is rapidly outgrowing its storage space at the off-site storage facilities.
- **CCSF-HSA Disaster Recovery Plan and Business Continuity**—Scanned case records can now be part of IT—Disaster Recovery Plan. We currently have two avenues for off-site data storage: 1) A professional vendor that takes data tapes off-site – the tapes can be retrieved from the vendor within 4 hours of notice. 2) A Hosted Data Center, which is seismically certified and is securely connected to the production network with a high-speed and high-bandwidth fiber Wide Area Network (WAN) link.

Budget/Funding

IT has a very robust high-speed and high-bandwidth infrastructure in place, running in a Microsoft Windows- and Intel-based platform with a full-blown Storage Area Network (SAN) System and tape library for our backup system.

We also have enough high-speed scanners in-house with a document imaging software that can be utilized to set up a Pilot phase. We have selected Food Stamp as one of the programs to work with and will develop a document imaging system that is driven by the program and/or the program needs rather than being dictated by the technology.

In preparation for the Document Imaging and Retrieval Pilot Program with Food Stamps, IT and key members of the Food Stamps program are already working together with two vendors from the Document Imaging industry. They are comparing the difference between their systems, features, services, and pricing and have completed some preliminary cost-analysis and produced rough estimates on the overall cost of the system for the Food Stamps Program.

The plan is to design the system at the enterprise level with scalability to support the agency's existing and future document imaging and case records growth.

Project Phase Approach

The document imaging and retrieval system would be piloted first before rolling into production with the Food Stamps program in preparation of the Call Center Operation. Then, and depending on next fiscal year's budget, work will start on the next program to be integrated with the system.

Project Duration

From the moment all infrastructure hardware and professional services have been purchased, it is estimated that it will be about a 12-month process to complete the first phase of the project using Food Stamps. A project committee has been put together which includes members of the executive management team, the programs, senior management from IT, and the Infrastructure Project Manager. An

overall budget project cost is also currently being put together, which will soon be submitted to the executive management team for review and approval.

Acknowledgements

I would like to thank my BASSC project hosts in Contra Costa and Alameda Counties for their time and for sharing with me their success, challenges, and lessons learned during and after their document imaging system implementation:

David F. Smith, Manager, EHSD Administrative Systems, Contra Costa County

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Don R. Edwards, Director of Administration & Information Services, Alameda County.

I also would like to thank the following CCSF-HSA members:

Phil Arnold, my deputy director, for giving me the opportunity to participate in the BASSC Executive Development Program. I have gained more in-depth knowledge about what our agency and other human services agencies in the Bay Area are all about and how we can make a difference in the lives of the clients that we serve.

Vakil Kuner, my manager and Chief Information Officer (CIO) of the Human Services Agency, for his support during my BASSC Executive Development Program.

The Information Technology—CalWIN Team, for joining me during my visits to Contra Costa and Alameda County and assisting with the participation of the Food Stamps Program on my research.

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APPENDIX

CaseSTAR Cost Analysis–IKON Contract Cost as of March 31, 2006

	May 5/24 to 5/31/05	June 6/1 to 6/30/05	July 7/1 to 7/31/05	August 8/1 to 8/31/05	September 9/1 to 9/30/05	October 10/1 to 10/31/06	November 11/1 to 11/30/06	December 12/1 to 12/31/06	January 1/1 to 1/31/06	February 2/1 to 2/28/06	March 3/1to 3/31/06	Actual Cost for May thru March	Initial Budget Estimate for the Contract	Difference in Project Expense to Budget
Hosted Services Option from IKON (No EHSD Network Build-out)														
Hosted Services from IKON 12 monthly payments per 3 year contract	$5,526.72	$21,416.00	$22,316.00	$22,316.00	$22,316.00	$21,416.00	$21,416.00	$22,483.00	$22,483.00	$22,483.00	$22,483.00	$226,654.72	$265,000.00	$(38,345.28)
Professional Services														
Professional Services–Installation	$12,600.00	$16,800.00	$5,000.00	$34,400.00	$34,400.00									
Professional Services–Training	$10,500.00	$10,500.00	$10,500.00											
Professional Services–Project Management	$7,200.00	$5,400.00	$1,600.00	$14,200.00	$14,200.00									
Professional Services–Software Development	$3,000.00	$1,416.00	$1,416.00					$14,000.00	$3,200.00	$450.00	$700.00	$24,182.00		$24,182.00
Total Hosted Services with DISC (60 Full Users with Unlimited Inquiry)	**$33,300.00**	**$23,616.00**	**$6,600.00**	**$1,416.00**				**$14,000.00**				**$78,932.00**	**$80,000.00**	**$(1,068.00)**
Scanner Hardware (Using increase to 70 purchased and 30 leased scanners)														
Fujitsu Flat-bed and ADF	$65,450.00	$30,800.00										$96,250.00		$96,250.00
Canon DR3080c	$40,240.00	$40,240.00										$80,480.00		$80,480.00
CCC County Monthly Charge Back in lieu of			$2,000.00									$2,000.00		$2,000.00
Total Scanners 85, with DISC 60 Full Users	$105,690.00	$71,040.00	$2,000.00	$178,730.00	$185,000	$(6,270.00)								
Backfile Conversion (Active Case Imaging/Indexing using 50,000 Case base line)														
Pick and Pull	$2,080.00	$13,445.00	$10,173.00	$6,289.00								$31,987.00		$31,987.00
Pick and Pull Overtime			$405.00	$54.00								$459.00		$459.00
Prepping On-Site	$21,125.00	$86,810.00	$84,725.00	$38,360.00						$265.00		$231,285.00		$231,285.00
Prepping On-Site Overtime				$607.50								$607.50		$607.50
Prepping Sacto Site	$2,080.00	$53,470.00	$32,622.00					$60.00				$88,232.00		$88,232.00
Prepping Sacto Site Overtime			$8,052.75									$8,052.75		$8,052.75
Add'l Supervisor On-site	$1,787.50	$7,437.50	$3,112.50									$12,337.50		$12,337.50
Add'l Supervisor On-site Overtime			$796.25									$796.25		$796.25
Scanned Images	$15,603.70	$120,791.25	$126,215.74	$54,378.75				$141.91		$566.14		$317,697.49		$317,697.49
Scanned Images Overtime	$32,807.32	$32,807.32	$32,807.32											
Scanning Barcodes	$380.73	$4,377.18	$4,838.99	$2,403.13								$12,000.03		$12,000.03
Scanning Barcodes Overtime			$741.46									$741.46		$741.46
Barcode Printing	$27,151.15	$486.89		$723.60								$28,361.64		$28,361.64
Barcode Printing Rush Shipping				$337.84								$337.84		$337.84
Pickup	$1,600.00	$3,000.00	$1,800.00	$2,400.00								$8,800.00		$8,800.00
Pickup, delivery		$1,920.00	$3,200.00	$1,600.00								$6,720.00		$6,720.00
Shredding			$180.00									$180.00		$180.00
Boxes	$4,025.00	$3,500.00										$7,525.00		$7,525.00
Pallets				$693.00								$693.00		$693.00
Equipment Rental of Kodak i660 Scanner			$12,500.00									$12,500.00		$12,500.00
Rubber banding of 50,000 cases	$1,063.72											$1,063.72		$1,063.72
Total Backfile Conversion	**$76,896.80**	**$295,237.82**	**$290,000.00**	**$107,846.82**				**$201.91**				**$770,183.35**	**$520,000.00**	**$250,183.35**
Centralized US Mail Processing by Vendor														
Central US Mail Delivery, preparation and Imaging per page (plus envelop)														
Document Scanning				$2,855.70				$3,818.80	$8,017.80	$5,757.00	$6,072.00	$26,521.30		$26,521.30
Document Indexing (average 3 pages per document)				$1,394.26				$632.80	$990.50	$632.94	$571.73	$4,222.23		$4,222.23
Estimated cost for Postal Box ($845/Yr.)														
Estimated cost for Mail pick-up ($15/DayX240)														
Estimated cost for shredding ($6.00 per box at 4 boxes per day times 240)											$312.00	$312.00		$312.00
Implementation courier pick-up (May thur September)								$1,379.00	$1,773.00	$1,576.00	$1,773.00	$6,501.00		$6,501.00
Total Centralized US Mail Processing using IKON provider				**$4,249.96**				**$5,830.60**	**$10,781.30**	**$7,965.94**	**$8,728.73**	**$37,556.53**	**$250,000.00**	**$(212,443.47)**
CaseSTAR Cost before Taxes	**$221,413.52**	**$411,309.82**	**$320,916.00**	**$135,828.78**	**$22,316.00**	**$21,416.00**	**$21,416.00**	**$42,515.51**	**$33,264.30**	**$30,448.94**	**$31,211.73**	**$1,292,056.60**		**$1,292,056.60**
Taxes at 8.25% (Calculated on scanner hardware of $200,000 with tax of $13,200)	$11,379.22	$6,306.54	$1,031.25	$233.69								$18,950.70		$18,950.70
Total Cost	**$232,792.74**	**$417,616.36**	**$321,947.25**	**$136,062.47**	**$22,316.00**	**$21,416.00**	**$21,416.00**	**$42,515.51**	**$33,264.30**	**$30,448.94**	**$31,211.73**	**$1,311,007.30**	**$1,300,000.00**	**$11,007.30**