2015 Michigan NASCIO Award Nomination

Enterprise Document Management

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Category:

Improving State Operations

Completion Date:

September 1, 2014

Executive Summary

The Michigan Department of Human Services (DHS) is responsible for administering benefits to over 2 million Michigan residents. These benefits include food, medical, day care, cash and energy assistance. Eligibility for benefits and subsequent issuance are determined by over 3,000 workers located in 120 offices throughout Michigan. We also have 600 self-service kiosks at these offices. Online applications are also accepted via our web-based Mi-Bridges system accessible with a PC and web browser. While caseload levels have fluctuated over the years, unduplicated recipient counts across all programs in FY13 stood at 2.4 million, and grew modestly to 2.5 million in FY15. During this same time, eligibility specialists and staffs shrunk from 3,430 to 3,197. A recurring complaint from workers was the paper intensive process that was still inherent within an automated electronic process. For example, DHS has over 75 unique forms used for intake, eligibility, redetermination and on-going case management. DHS also accepts 35 different client documents to verify citizenship, identity, address, financial eligibility and medical need. Each electronic case file was supported with dozens of paper files. With an average caseload of 600 clients per eligibility specialist and 170 for our family independent specialist workers, the back-and-forth between paper and electronic case management was time consuming, error prone and consumed 20% of a workers average time to process – time better used to help families work towards self-sufficiency. In order to improve the operation of state government, DHS partnered with the Michigan Department of Technology, Management and Budget (DTMB) to research options for reducing this paper dependency.   In 2012, DTMB was just getting our enterprise electronic document management system launched. The value proposition for this shared service was to drive down FileNet license costs by aggregating demand, and to share staffing and infrastructure costs across participating agencies. This enterprise solution was chosen to help the DHS better manage the integration of paper documents within their integrated eligibility determination system (Bridges). The primary challenge was to size the environment to accommodate an additional 3,000 users (51% increase) and influx of 40,000 new documents (60% increase) each day. Our other challenge was to build out a central scan and indexing service to handle the bulk of scanning while accommodating scanning needs for each county office. This was necessary to meet the needs of local walk-in traffic. This also introduced bandwidth challenges, as document images are larger files and some offices had limited network capacity to transmit documents back to our central office. As we contemplated undertaking this project in 2012, we brought in technical experts from IBM versed in FileNet and process re-engineering experts from Ricoh to help build a solid plan and implementation strategy. The state-wide deployment was completed in October 2014, but not without challenges, from capacity, to system reliability to end-user training. By all measures, the project has been a success in both worker efficiencies, cost savings and better customer (client) service. Today, we process a monthly average of 375,000 images centrally and 417,000 images locally for DHS. Each document image is one less piece of paper a worker has too manage during their daily routine. The balance of this paper will expound on our challenges and ultimate benefits realized.

Business Problem and Solution

Citizens seeking social service assistance in Michigan have four primary channels to submit their initial application: Face-to-face intake with a case worker and our Bridges integrated eligibility system, completion and submission of a 17 page application form, online application via the Mi-Bridges web system, or assisted use of Mi-Bridges at one of 600 county based Kiosks or via a network of over 700 registered community partners. Regardless of channel used, both state and federal regulations require paper based supporting documents. Initial intake is supported by over 75 agency forms that may need to be completed, including verification of student status, shelter verification, child care provider eligibility, medical examination etc. Preliminary to final verification, the client also has to produce paper documentation such as a birth certificate, driver license, social security card, employee pay stub etc. Over 35 types of client documentation are accepted to establish residency, income and family composition necessary to determine need and benefit amount. All told, each case file can have over 100 unique paper documents necessary for final determination and on-going re-determination. This mountain of paper is the core business problem needing a solution. Each worker may have stored in a file cabinet over 30,000 documents supporting their average caseload of 600 or 170 cases depending on job role. Referencing these documents during routine case management is very time consuming. Loss or misplaced documents stalls eligibility or redetermination, which has a federal standard of promptness of 30 days for food, and 45 days for cash. Asking clients to resubmit further slows redetermination. When a client moves to a new city, the paper has to follow the client. When a client contests a determination, the paper has to follow the client to a hearings officer. This volume of paper is expensive to maintain. DHS estimates annual storage and mailing costs exceed $3 million for active casefiles. In 2011, The DHS engaged The Public Consulting Group to perform a business process review and build a business case for pursuing a full scale electronic document management strategy to minimize this paper dependency. That study concluded that paper cannot be eliminated, but all paper documents associated with a case should be scanned, imaged and associated with a case file. There should be no worker needing to pull a document out of a file cabinet. There should be no mailing of documents between offices or to other state agencies.

The solution to the problem included these key elements:

We established a centralized scanning operation, supplemented with local scanning operations that receives client paper correspondence. Today, central scan and local offices together process an average of 791,000 documents per month. Routine activities include preparation of documents for scanning, Scanning of documents and assignment of a batch number for quality control and document priority. High speed scanners support, single, double sided documents, legal, letter or smaller paper types. All scanned documents are then loaded into a FileNet P8 work queue. This work queue then allows staff to index documents so they can appropriately be associated with the

correct Bridges case file. These indexed documents are then "ingested" into Bridges and workers are automatically notified. Time sensitive documents are "flagged" so the workers waiting on a document receive instant notification. Several index fields are created on the scanned document to support a variety of searches to help workers quickly retrieve documents as needed. This same technology solution is in place at local offices. Both central and local document management is governed by role based security. This Tivoli based identification system invokes audit control measures governing who can view, annotate, update metadata, delete, and search and produce reports. The enterprise solution uses virtual servers built in VMware and SAN for storage needs. The only physical servers are used for the databases. We have established a flat per user rate that includes FileNet 5.2, test, development, production and disaster recovery environments, hosting and shared software (Web sphere application server and Oracle). Dedicated staff resources are also included in the rate. Image storage is billed separately.

This project was state run and managed. Our enterprise project management office coordinated activities across the enterprise EDM team and the Bridges development team who was responsible for building the web services into Bridges to update case files. We also had vendor partners, IBM and Pyramid Solutions who helped with system configuration and tuning. Ricoh provided a business process team to help train end users on change management and what to expect as we migrated to this new solution. Our success was predicated on scope. We implemented in 4 waves, with each wave consisting of a set number of county offices. This approach allowed us to learn and adjust our solution and approach preliminary to launching new waves. Each wave received onsite training prior to implementation. Technical resources were stationed at each local office to answer questions during the first two weeks of implementation. We also had daily call-ins with all participating counties to answer questions and catalog issues needing resolution. These issues and resolution timeline were maintained on a project intranet site to maintain transparency on project successes and challenges.

Significance

Implementation of DHS' statewide electronic document management system began in March 2013, and concluded in September 2014. Our phased approach allowed us to make adjustments as we encountered performance issues. Each deployment included new system improvements. The added volume with each wave required database tuning to decrease index search time and standing up new virtual servers. Bandwidth issues for counties not served by fiber allowed us to test Citrix as an alternative solution. We installed Citrix workstations at each local office for scanning and indexing. Only small files are transferred back to central office via the network. The large I/O processes were executed at our data center – significantly improving local office throughput. These lessons learned are significant as we on-board other large agencies with a presence in rural communities. Over 3,000 DHS employees are using the system. Role

based security definitions are in place for individual job functions covering   scanners, indexers, administrators, assistance workers and citizens uploading documents from local PC's. Since inception, over 10 million documents have been loaded into the Bridges case management system. Government operations has significantly improved. Time savings for case workers are realized in multiple ways:

Documents are presented by priority and date in the workers electronic in-box. Previously, they would need to manually sort documents and self-establish priority and date. This is how case workers spent the first hour of each work-day;

Work is managed and stored in electronic folders by date. This significantly reduces the re-determination process for on-going cases;

Specialists and managers can view tasks in another workers EDM inbox. This makes it easier to shift workload for annual leave and sick days. Previously, this was all manual;

Case transfer to another specialist, another county office or a hearing officer is all electronic. This eliminates mailing time, lost or incomplete files. Automatic receipt verification lets workers know the file has been received.

The solution benefits clients in multiple ways. Our EDM supports document upload from a client PC or from one of our assistive agencies (United Way, faith-based organizations etc.). Local documents can be scanned and sent to caseworkers for ingestion into the solution. This saves travel time to the local office or postage and mailing. Worker's no longer misfile or lose client documents – hastening the time to get benefits to our customers and help DHS meet Federal standards of promptness.

On the surface, electronic document management doesn't appear to be "cutting-edge" technology. Michigan's solution is different from traditional EDM implementations, and hence the significance. Most EDM solutions deal with structured document types, field-based documents that are filled out on pre-printed forms. Michigan's solution accepts all non-structured documents that clients submit to support verification requirements. Pay stubs, receipts, identification cards – all on non-standard paper. We're able to scan, index and associate with the master case file. Significant tuning of our equipment allows us to accept documents of varying quality. This was purposeful so the case worker didn't have to contact clients and ask them to "re-submit". DHS' electronic document management footprint in 130 local offices with 3,000 users is the largest governmental install that we are aware of supporting Human Services.

This project directly supports both NASCIO and the State CIO's emphasis on shared technology solutions. Prior to implementation, our fledging enterprise document management solution supported less than 2,000 users across five agencies. The price point for entry was high, rates had been established for an infrastructure, bought and paid for that was only being utilized at 45%. When the DHS joined the enterprise solution, we infused $1 million in funds to purchase additional capacity. We also added a new product called "Data Cap" that has become our standard for indexing documents

and creating metadata tags for easy document search and retrieval. With DHS as an "anchor tenant" we've been able to establish a per seat rate for FileNet services that is inclusive of all hardware and software support, except image storage. The entry point for on-boarding new agencies has been reduced 20% from previous rates. Our enterprise solution, including Human Services now extends to nine agencies and 6,000 users.

Benefits

The breadth and scope of extending our enterprise document management solution to 3,000 DHS users is unprecedented in State history. The initial phases were met with skepticism by local workers. Having to learn a new IT process on top of their day-to-day workload was daunting to many workers. The deliberate roll-out and change management process was key to earning buy-in. So institutionalized is EDM in their work day, any system outage (98% availability) precipitates a flood of calls to our help desk. DHS estimates that pre-EDM, an average worker would handle 25-50 paper documents during the day. Across all workers, this accounted for 1 million hours of annual paper shuffling. Our initial efficiency return is estimated at 50% savings of time previously handling paper, meaning that 500,000 hours have been returned to the case worker allowing them to help families towards self-sufficiency. As noted earlier, staffing levels have decreased. In March 2014, Michigan launched "Healthy Michigan" which was an expansion of Medicaid eligibility. In the ensuing 12 months, over 500,000 residents applied for and received benefits through this program. A significant portion of this caseload was handled by local DHS workers. It is generally accepted that absent this EDM capability in advance of the expansion, and continuing through final EDM deployment, our case workers would have been buried in additional work exasperated with the companion paper trail that accompanies an application pre-EDM.

Beyond worker benefits, value has been returned to entire offices. EDM has reduced the need for file storage in local offices. Prior to EDM it cost an average of $2 million for space dedicated to active case file storage. As offices are remodeled, workable space has been returned to accommodate case workers, not paper. Casefile transfers between local offices is seamless. No cost or time associated with the physical gathering and shipping of files between offices. This has been particularly useful when caseworkers are moved around geographically to optimize productivity and leverage skills of caseworkers for short-term spikes in distressed communities. Population shifts are usually followed by office closures and relocations. This has become less costly (12% reduction in office move costs) as physical case file movement has been reduced. Electronic files now follow the worker – not paper files.

Benefits are being realized by program administrators. Sample case files are routinely pulled for audit and quality control measures. These "case reads" are used for statistical reporting to our Federal partners administering programs funded in part with Federal

dollars. Gathering sample data no longer requires locating and assembling paper documents. Likewise, DHS has estimated a 20% gain in the accuracy of pulled files – meaning files are sent complete and not missing relevant verification documents as part of the audit process. Administrative hearings officers can now receive all relevant files for a contested benefit hearing well in advance of the hearing. This allows a pre-hearing conference to be held with the client, often resulting in a ruling and negating the need for further action via an administrative law judge.

One of the biggest improvements for our clients has been in our disability determination services program. Medical reviews had to be coordinated between our Federal Disability Determination office and the local DHS office. With EDM, medical documents are immediately available to the medical review team to begin processing. This eliminated the time and cost of shipping documents between offices. We've reduced processing from 75 days to 17 days in part because of EDM. Clients are also seeing benefits in other ways. EDM has assisted with faster resolution of client calls and questions. Anyone with EDM access and proper security roles can respond to client questions with all relevant information in front of them. To ensure clients are receiving timely determination and benefits, managers can monitor workers EDM inbox to view tasks nearing the standard of promptness due date.

In 2014, we made a strategic investment in our infrastructure. Michigan submitted an advance planning document to the feds and secured Federal 90% Medicaid match to upgrade our enterprise environment to FileNet version 5.2. Residual benefits to agencies using this shared service included new scalable environments, mobile capability and disaster recovery. $2 million was invested in one-time costs, with only a $200,000 state investment. With an up-to-date and scalable environment, we were able to publish rates for budget planning purposes, well in advance of our fiscal year 2015 begin date (October 1, 2014). Our flat rate schedule based on full access FileNet user counts is a predictable cost that can be budgeted for and is inclusive of all hardware and software support. In FY15, DHS will spend $1.7 million for all EDM services across 130 offices and 3,000 users. All other state agencies will contribute $1.5 million to support this vital shared enterprise solution.

The "Michigan experience" with EDM has resulted in media stories and multiple inquiries from both state and local governments anxious to hear about our lessons learned. Our EDM shared services group has held four "workshops" for both state and local partners, with an average attendance of 100 participants to "evangelize" about this innovative shared solution.