

**SOLID WASTE MANAGEMENT
COORDINATING BOARD**

**Office Paper Waste
Reduction Projects in
Ramsey, Washington, and
Anoka Counties**

June 2003



Admin
MINNESOTA

Department of Administration
MANAGEMENT ANALYSIS DIVISION

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Executive Summary

This report documents the process and results of office paper waste reduction demonstration projects in three metro counties. The projects in Ramsey, Washington, and Anoka counties were intended to produce demonstrable office paper waste reduction. Each project involved the use of, or connection with, electronic government services (EGS) including electronic document management systems (EDMS), online forms delivery (“e-docs”), and electronic business transactions. The projects were conducted under the sponsorship of the Solid Waste Management Coordinating Board.

Project Approach and Objectives

The SWMCB's Office Paper Reduction Team asked member counties to submit summary project proposals to the team. From those submitted, proposals for Ramsey, Washington, and Anoka Counties were chosen for demonstration projects. The project budget, \$20,000, was allocated 80 percent to Ramsey County for a countywide effort and 10 percent each to Anoka and Washington for smaller projects. The approach in each instance involved:

- Identifying and evaluating alternatives to reduce office paper waste, including short-term and longer-term opportunities
- Conducting a triage of available opportunities to focus on the most promising ones
- Identifying barriers to adopting and implementing changes
- Providing technical assistance to overcome barriers including, as needed, discussions with state level agencies
- Implementing solutions, either direct actions or pilot projects expected to lead to larger results at a later date
- To the extent practical in this time frame, estimating or measuring office paper waste reduction and additional coincidental benefits such as operating efficiencies and customer service improvements
- Identifying next steps and planning with staff

Overview of the Projects

The six projects in three metro counties are described in detail in the report, including office paper waste reduction and other benefits. In overview, the projects in Ramsey, Washington, and Anoka counties had these objectives:

- The Ramsey County project was intended to find new opportunities for application of electronic document management systems (EDMS) in county departments. As a result of this effort, pilot projects have been initiated in four departments:
 - Budget and Accounting – Warrants (payment vouchers);
 - County Attorney – Adult Criminal Complaints;
 - Public Health – a new HIPAA Library; and
 - Chief Clerk – Board Agenda Packets.
- The Washington County project was intended to improve selected office paper waste reduction practices at the Licensing Center in Forest Lake, and the project included the addition of a networked duplex printing capability for front-office and back-office functions.

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- The Anoka County project was intended to assist the Income Maintenance Department (Community Human Services) offices in Anoka and Blaine. A Print-On-Demand function was initiated in conjunction with state Human Services Department conversion to the use of electronic documents over the Internet. Pilot projects in the Blaine and Anoka offices have been initiated.

Replication of Projects

Counties that wish to conduct a similar effort might choose the approach that was used here. With comparatively limited resources, the focus of this effort was on identifying and evaluating specific high-potential opportunities, identifying what it would take to initiate projects that reduce office paper waste, and focusing on actions to get the higher-value and more practical efforts started.

Assess the Range of Benefits. Technology changes, either adoption or adaptation, can present opportunities for many kinds of organizational benefits. They include process efficiencies, improved customer services, and others, in addition to office paper waste reduction. Although waste reduction would not necessarily be a primary motivator for technology adoption, these strategies can be appropriately incorporated into technology planning.

Jump Start with Pilot Projects. The focus on quick evaluation and project initiation, including pilot projects for major changes, was seen as maximally leveraging available resources. The time lines for projects involving significant organizational changes, like the adoption of EDMS or Print-on-Demand, may be longer than initially expected. These projects, however, are often the ones with greatest longer-term potential for office paper waste reduction. Reduced budgets and staffing levels can greatly extend the planning and implementation time frames, especially for projects involving new technologies. Again, these efforts may be best approached as small pilot projects, just large enough initially to get them going without major expenditure of staff time and budget.

Use Readily Available Technologies. EDMS applications, including those that use COLD (computer output to laser disk) technology and Web-based data collection and access, are especially useful because they eliminate paper use from document origin to capture, use, and storage in the EDMS database. The EDMS technology has potential in small and large applications.

Technology orientation may be required for users to understand potential additional applications. The initial barrier from lack of basic knowledge slows progress. County staff with this knowledge can provide basic information for decision makers to understand new technologies and where opportunities are likely to be present.

Web-based transactions, including those for accessing electronic versions of documents, are an increasing phenomenon in many organizations and across organizational boundaries. Office paper waste reduction strategies for these new tools can be leveraged with Print-On-Demand and duplex printing. Ultimately, purely electronic transactions will continue to reduce paper usage. Even with expanding electronic transactions, however, certain types of paper documents will likely continue to be needed for customer

records and receipts, some signature or authenticating paper documentation, and archival records.

The introduction of networked duplex printing capability is a comparatively easy and small-cost means to leverage both current and likely future office paper waste reduction efforts in conjunction with electronic transactions.

In summary, advances in technology offer many new ways to preserve information content, provide for effective access, minimize storage and handling requirements and costs, streamline processes, and reduce office paper waste. The Office Paper Reduction Team's involvement in decisions about new technologies in departments – reviewing the implications for office paper waste reduction and encouraging actions that support maximum waste reduction consistent with other organizational goals – would support systematic movement toward the SWMCB's waste reduction goals.

The SWMCB's county projects demonstrate the large potential for office paper waste reduction from systematic evaluation of opportunities and adoption (including when appropriate through the use of small initiating pilot projects) of readily available technologies. The potential savings would be further enhanced with adoption of a broad replication strategy.

Introduction

Since 1990, the Solid Waste Management Coordinating Board (SWMCB) has operated to increase efficiency and environmental effectiveness of the Twin Cities metropolitan region's solid waste management system.

The SWMCB is a joint powers board comprised of two county commissioners from the counties of Anoka, Carver, Dakota, Hennepin, Ramsey, and Washington and, as ex-officio members, the Director of the Minnesota Office of Environmental Assistance (OEA) and the Minnesota Pollution Control Agency (MPCA) Metro Division Manager. Staff members from the six counties, the OEA, and the MPCA provide managerial and technical support to the SWMCB board in three focus areas: Communications and Outreach, Regional Policy Development, and Collaborative Activities.

The SWMCB is directed in Minn. Stat. §115A.46 and §473.803 to prepare a long-range Regional Solid Waste Master Plan for managing the six-county metropolitan area's solid waste through the year 2017. The most recent SWMCB short-range work plan covers 2003.

Long-range and short-range plans include specific goals for office paper waste reduction. The six member counties submit status reports to the SWMCB by April 15 each year, showing progress toward achieving negotiated outcomes described in the plans.

Source reduction for office paper waste

In 1999, the SWMCB, OEA, and MPCA conducted a waste composition study to determine the types of waste that comprise the waste stream. The study found that paper comprised the largest single source of solid waste (34 percent). Other large components included organic materials (26 percent), "other waste" (18 percent), and plastic (11 percent).

Source reduction, often called waste reduction or waste prevention, is the highest priority for managing waste at the national, state, and regional levels, according to the Metropolitan Solid Waste Policy Plan. The rationale for reduction is compelling: Waste reduced at the source avoids environmental impacts and waste management costs. Less effective waste reduction results in greater need for recycling and other forms of disposal, including landfills.

To further the goals of solid waste reduction, the SWMCB in 2001 sponsored office paper waste reduction demonstration projects with Cities Management, Inc., and AgriBank. Materials Productivity, LLC, conducted the study. Accomplishments from that effort included electronic distribution of a 100-page employee handbook to nearly 3,000 AgriBank employees and creation of an interactive Website by Cities Management that enabled paperless transactions and information retrieval for property managers,

homeowners, associations, and vendors. The projects demonstrated, among other benefits, the usefulness of electronic services in reducing office paper waste and providing other operational returns.

County demonstration projects

The SWMCB determined that the next demonstration project would identify opportunities and provide technical assistance that results in significantly reducing office paper waste in selected metro county departments. Individual county projects would focus efforts where benefits such as cost savings, operating efficiencies, and improved customer service accompany substantial office paper waste reduction. Demonstration projects that use electronic systems to achieve these benefits would be encouraged. Documentation of projects would include the following:

- Document office paper use
- Identify alternatives to existing methods and operations that result in reduced office paper waste
- Identify barriers to implementing the new methods and how to overcome them
- Conduct interagency discussions when needed to facilitate implementation of new methods
- Provide other technical assistance within available resources
- Document implementation plans and actual and/or expected benefits including office paper waste reduction
- Identify lessons learned and how they might be applied to other departments

The Management Analysis Division from the Minnesota Department of Administration was hired to conduct the project through a SWMCB demonstration project grant. The Management Analysis Division consultant worked with the respective counties' Office Paper Reduction Team (OPRT) members and other county staff. Jan Lucke (Richardson, Richter), Sandra Nussbaum (Hennepin County), and the Office Paper Reduction Team provided overall coordination through periodic meetings and review of the consultant's written updates.

Demonstration Projects Overview

In late 2002, the SWMCB Office Paper Reduction Team made a request to the six member counties for candidate projects, resulting in six project proposal summaries. From these, three were chosen based on an assessment of fit with grant objectives, time frame, and resources for the overall project. The assessment involved discussions with the county sponsors, Office Paper Reduction Team, and the consultant. The projects chosen were:

- Ramsey County – increasing county departments’ use of electronic document management systems
- Anoka County – managing paper forms and adapting to the Minnesota Department of Human Services transition to “e-docs” (online forms for downloading) in the Income Maintenance Department
- Washington County – reducing office paper waste in county licensing centers that conduct online and offline transactions in conjunction with the Minnesota Department of Public Safety’s Driver & Vehicle Services Division

The Office Paper Reduction Team and consultant determined that the project budget would be allocated 80 percent to the Ramsey County project and 10 percent each to the Washington County and Anoka County projects. The two smaller projects would emphasize identification of opportunities and front-end planning, whereas the larger project would have a broader, countywide scope and place greater emphasis on providing technical assistance for implementation. Each project would have a similar framework for development:

- Identify targets for office paper waste reduction, including short-term and long-term opportunities
- Develop criteria to identify the most viable opportunities
- Conduct a triage of opportunities to determine where further efforts would be focused
- Identify barriers to implementation and strategies to reduce or eliminate them
- Engage in dialogues internally and between organizations to identify actions to overcome barriers
- Create action plans for high importance items that include estimates of future office paper waste reduction and, where implementation occurs during the project, actual paper waste reduction

The Office Paper Reduction Team recognized that benefits of the demonstration projects would include more than office paper waste reduction. Indeed, the projects would likely be more successful – cost justifiable and amenable to quicker implementation – if additional benefits could be identified in conjunction with the impacts on office paper waste reduction. For projects involving the adoption of electronic government services, those additional benefits could include increased productivity or efficiencies, better customer service, and other types of cost savings. Project documentation would identify and describe these additional benefits but would describe and quantify only the office paper waste reduction benefits.

Ramsey County – Expansion of County EDMS Applications

SWMCB Office Paper Reduction Team member: Dan Donkers
Document Imaging Manager: Jan Geisen

Electronic Document Management Systems

EDMS provides a database of document images from paper, electronic files, or microfilm that is searchable, including components for collection (scanning and electronic file capture), indexing, and retrieval, and commonly resides on a PC-based network. Access to images via desktop PCs replaces paper for users.

Indications favoring use of EDMS include:

- Active records (high retrieval rate)
- Need for multi-user simultaneous access to records
- Indexed retrieval by multiple criteria
- Multimedia documents (paper and electronic) that need to be integrated
- Need for instant access
- Frequent copies made and sent
- Fit with current systems and practices

Indications that EDMS is not the right solution include:

- Inactive records (low retrieval rate)
- Costs to scan outweigh other savings
- Records are intended to be permanent or archival (there are exceptions, such as the use of archival quality optical media) – however, imaged records can be backed up with paper or microfilm

DocuWare

DocuWare is the county's electronic document management system (EDMS), available to departments through the IS Department. DocuWare has a track record in five departments: Human Services, Budget and Accounting, County Attorney, Corrections, and Human Resources. The system was acquired about four years ago. Currently there are 144 users. Community Human Services is reviewing EDMS and considering its own purchase of DocuWare as a possible option.

DocuWare consists of various functional components. The components now owned by the IS Department include the basic functional modules plus electronic-files-direct-to-imaging (COLD) but does not include Web functionality (intranet or Internet).

Key considerations for new users of DocuWare include: user licensing arrangements, the individual user installation process, and the ease of design and setup for new applications. Costs related to applications include conversion, a monthly user fee, equipment purchase and maintenance (for scanners if imaging is not done by IS's Imaging staff). The Imaging staff bills at a rate of \$42 per hour. Monthly fees for DocuWare, currently \$6.10 per user per month, would be reduced with a larger number of users as new applications become operational. There is no charge currently for image/database storage.

Initial screening for additional EDMS applications

The screening began with an initial invitation and meeting to screen potential projects. Representatives from seven departments (Information Systems, Public Health, Budget and Accounting, County Attorney, and Human Resources, Corrections, and Chief Clerk) attended the meeting. Discussions were held with two other departments (Property and Records and Human Services) that were unable to send representatives to the first meeting. Staff interviews were conducted for additional information to narrow prospects for immediate action.

The criteria used to select projects included:

- Apparent potential office paper waste savings – larger projected long-term benefits instead of short-term actual benefits was regarded as an acceptable tradeoff
- Interest and willingness to participate in a pilot project if appropriate
- Breadth of application, potential replicability, and visibility

Not every county department participated in the screening. However, the results of the initial screening included identification of more than a dozen potential new applications and selection of four higher-potential applications (in terms of office paper waste reduction). A decision was made to focus on the four promising applications.

(Please note that, as a means of uniform measurement for this report, a “page” as used herein is one side of a sheet of paper – the equivalent of a scanned image.)

Four selected projects

1. EDMS for county warrants (payment vouchers): Budget and Accounting Dept. (B&A)

Primary contacts: Peggy Vadnais and Carrie Learn

B&A processes warrants (including invoices and associated documents) for county departments, estimated at 600,000 to 650,000 pages annually (an estimate based on a count from a test-run). The impacts of a system change to EDMS would be countywide.

The large volume of records would require extensive labor for file preparation, scanning, and indexing.

Access to the information is needed for internal county users, the State Auditor, and the media.

Currently all is paper documentation. But in the future some might be electronic. DocuWare integrates the two without difficulty. Electronic signature authority and implementation would simplify some process issues. Currently the Aspen voucher must be printed for signature.

The issues of central scanning in B&A vs. individual department scanning of documents: There are many practical tradeoffs, but it appears that central scanning is preferable. Department scanning requires much more purchased equipment and more complex logistics and controls. If done in B&A after all related documents are accumulated, there would be no issue of having all needed signatures.

Technical issues/assistance

Purchase of an additional DocuWare module would be needed for access via the county intranet or the Internet, or if linking to the Aspen financial system is needed, or to image-enable Aspen. However, this purchase would not be required for the project to move forward. The Internet module would remove the need to install software on every PC and enable remote access. The Internet link to Aspen would improve retrieval and might eliminate some data entry.

Destruction of the records following scanning would require the permission of auditors. Auditors want access to original signatures. Audit issues must be further investigated.

Cost estimates for the project, assuming central scanning at B&A, have been prepared by the IS Imaging staff: \$80,000 to \$90,000 annually, including \$50,000 to \$52,000 for scanning and \$28,000 to \$38,000 for indexing the images (if indexing is done by IS Imaging staff). Since IS Imaging staff would perform scanning, no equipment purchase by B&A is needed for this work. The expenditure is not in the budget.

Benefits

Office paper reduction, estimated potential: Paper savings depends upon departments discontinuing making paper copies for their own records and using DocuWare images instead. Departments now keep one or more paper copies for each warrant (payment voucher) and attachments; in theory, that would be eliminated. Additionally, B&A would seek to eliminate the master paper copy after payment is made and the voucher is scanned.

Other benefits were identified:

- Savings of staff time to retrieve files at B&A.
- Savings of staff time to make, file, and retrieve copies of files in the departments.
- Space savings for file cabinets (estimated at the equivalent of 160-170 boxes annually), now stored in B&A office for one year, then moved to a records center subject to storage costs.
- Additional space savings from copies that would no longer be stored in departments.
- Customer service would improve with more immediate access to the information.

Pilot Project in Process

One department, IS, is currently scanning vouchers into the DocuWare system as a pilot test. This started as a dual (paper along with scanning) system, but the department stopped making internal paper copies almost immediately. Up to three internal paper copies have been eliminated in IS (vendor file, initiator file, accountant file). Originals now go to Imaging staff (in IS) for scanning, then the original paper moves to B&A.

As currently conceived, the countywide procedure would be to have B&A scan all documents the day after payment. Departments would forward documentation without making internal copies. If this arrangement is not practical, departments could do their own scanning. B&A prefers the former solution.

Recommended future actions

Further investigation potential for funding for the larger project.

If needed, additional testing in other departments, especially those already set up with DocuWare access.

Staff training to use DocuWare for the pilot project, as needed.

2. EDMS for Adult Criminal Complaints: County Attorney, Legal Division

Primary contacts: Ester Feldman and Lynn Dexter

Criminal complaints and attachments are distributed in paper copies to people in and out of the County Attorney's Office. Primary access to the documents is needed by CA staff, Corrections Probation staff, and staff of Project Remand (a contracted service provider to Corrections). Additionally, copies are sent to defense attorneys. A paper copy for the County Attorney's case file will continue to be made even if other copies are electronic. Complaints plus attachments average fifteen pages each. Some complaints can be up to 200 pages. The number of complaints is estimated at 45,000 annually.

The document retention period for complaints is generally 10 years, but complaints for serious crimes are never disposed of. The electronic copy, which is a "convenience copy" rather than the official copy subject to a more lengthy retention requirement, will be deleted ninety days after the case is closed.

Juvenile complaints have added confidentiality issues.

It is not clear how many of those with access to DocuWare images would need to print paper copies as well, for example, to take to court.

Although the complaint is always public information, some attachments may not be public information. Access and confidentiality issues need further consideration.

Technical issues/assistance

No additional components for DocuWare are needed for this application.

There would be no additional labor costs for scanning because it replaces photocopying and distribution.

About half of the Corrections Probation employees who would use the new application already have access to DocuWare, so no additional setup – other than the administrative grant of access to the application database – is required for them to use this new application.

Benefits

Office paper reduction, estimated potential: EDMS eliminates need to create and distribute multiple paper copies of each complaint and attachments. If none of the current copies were printed, the paper savings was estimated to be about 135,000 pages annually.

Other benefits were identified:

- Documents, when scanned, can be sent to outside parties by e-mail or fax without creating a paper copy.
- Scanned documents could be imported into a multi-organization EDMS if that happens in the future. This or other configurations would support criminal justice system goals for broader critical information sharing.

Pilot Project in Process

The CA Office, with advice from the IS Imaging manager, has recently purchased a scanner and has ordered three more. Scanning is in process. Four people have been identified to perform the scanning.

In the first phase, access is being provided around June 23 to Corrections and Project Remand, with copies e-mailed or faxed to outside attorneys. In a later phase, access would be made available to users within the department.

Recommended future actions

Additional user training will be needed for those not familiar with DocuWare.

3. EDMS for a New “HIPAA Library”: Public Health Department

Primary contact: Chris Bogut

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) requires actions by county personnel with regard to health data regulation. Documents of many types would be collected and organized in the EDMS for quick availability to all who need the information to comply with HIPAA requirements. This central repository or "library" would include up-to-date information needed by county department heads and staff. The application would integrate paper and electronic documents as well as access to Web resources (via links) in a central repository/database to help ensure and demonstrate compliance with federal and state laws and regulations.

The library contents would include: County-originated information, links to state and federal information, training data, table of vendor contracts, HIPAA steering committee and subcommittee agendas and minutes, policies and procedures for county employees, forms, and contact information.

Technical issues/assistance

Access via intranet would provide for widest potential distribution, but requires purchase of a new DocuWare module that costs about \$13,000. Its use and/or cost can be shared. However, the intranet module is not required for immediate deployment.

Managers and supervisors in Health, Human Services, Corrections, and the Sheriff's Office would need access. In the longer term, access by more people to some of the information is likely to be needed. Some Corrections and Human Services potential users already have DocuWare access established. Others need access established.

It is anticipated that all information would be public. However, DocuWare has a feature that can be used to provide restricted access to nonpublic information. Additionally, department-specific information will have access restricted to the appropriate people.

Funding will be required to convert documents. However, most current documents are available in electronic format, so scanning is not needed for those. They can be directly transferred into DocuWare.

DocuWare user fees for an initial core group of six users would be about \$440 annually (one additional member of this core user group already has DocuWare access). Additional users would each incur costs of \$6.10 monthly. Funding for user fees would be required.

Audit feature in DocuWare could be used to ensure that people access certain documents.

Benefits

Office paper reduction estimated potential: Access to documents in EDMS should eliminate the need for most users to maintain paper copies of HIPAA documentation. The ultimate paper savings depends on the extent of the library, the number of users, and the avoidance, to the extent practical, of making paper copies from the document images. Preliminary estimates of savings were not available.

Other benefits were identified:

- Provides instant access for all users to accurate, centrally maintained, and up-to-date information, and removes concerns about missing, out-of-date, or misfiled paper copies.
- Copies of DocuWare records can be sent by e-mail or fax to employees and others who do not have direct access to DocuWare.
- This application illustrates use of DocuWare as an active repository of reference information intended for widespread use.

Pilot Project in Process

A pilot project has started with design of the EDMS database, and test data has been loaded. HIPAA information can be added immediately. As noted above, a core group of "privacy designees" would be set up first with DocuWare access to HIPAA information.

Recommended future actions

The next step will be to assist Public Health staff to load HIPAA documents and initiate access to the core group of users.

Additional training will be needed for users who are not familiar with DocuWare.

Funding for user-access fees require further investigation (for those not already set up in DocuWare).

4. EDMS for County Board Agenda Packets: Chief Clerk's Office

Primary contact: Bonnie Jackelen

The project would provide electronic access to County Board agenda packets. Currently twenty-eight people receive a paper copy of the full agenda packet for each meeting. (Board agendas and meeting minutes are currently also available on the county Website.)

The IS Imaging staff conducted a two-month test to estimate the number of pages needed to distribute the agenda packets. In two months, 640 images were captured. Annualized, this represents the equivalent of about 107,500 for the 28 recipients. The Imaging staff noted that records for the past full year showed a higher average volume per agenda packet during that earlier period. Therefore, the two-month estimate may be low.

Most pages intended for board agenda packets are received from departments in electronic format then are copied to paper for distribution. DocuWare access would be provided initially to department heads and staff who wish to participate. At some future time, broader county access and outside access via the Internet could be provided.

Additional training for the prospective DocuWare users will be needed.

Options for indexing and cross-linking to information have been considered and a number of the issues resolved. More discussion will occur to determine what best meets the needs of current and prospective users.

Technical issues/assistance

All potential users would have to be set up with DocuWare access unless an intranet module is purchased. Users would pay a monthly fee of \$6.10 for access to all DocuWare applications.

Assistance may be needed to purchase a scanner for the Chief Clerk's Office although, as noted above, most documents are electronic files that can go directly into DocuWare. Alternatively, the IS Imaging staff could provide scanning at their hourly rate.

Internet access for broader public and media access would require purchase of the DocuWare Internet module. However, if any county department purchases the module, other departments can make use of it. Internet functionality and county intranet functionality each require purchase of a DocuWare Internet module, because they reside on separate county servers.

The full benefits in paper reduction would require that commissioners have electronic access to the imaged documents at Board meetings.

Benefits

Office paper reduction estimated potential: Paper copies currently are prepared for commissioners, department heads, staff, and others on request (the estimate is 28 full copies plus some partial copies). The estimated annual paper use for copies of agenda packets is up to about 107,500 pages. Actual savings will depend on how many persons discontinue using paper or print out only the portion of agenda packets that they need.

Other benefits were identified:

- Use of EDMS can eliminate the need for copies currently retained by departments. However, the Chief Clerk will continue to create and retain a master paper "copy of record."
- The project would provide improved access to historical agenda information, and provide database search capabilities.
- Copies of any documents in DocuWare can be sent by e-mail attachment or fax without creating paper copies.
- Faster and more widespread access to all users can be provided with electronic documents, particularly if intranet and/or Internet access is provided.

Pilot Project in Process

The EDMS database has been created. Almost 90 percent of the Chief Clerk's documents are electronic, so direct input to DocuWare is being done; any paper documents are being scanned. About four to six weeks worth of agenda packet information is in the database currently.

User access would begin with selected department heads, starting with one who has DocuWare access now. So, to date, no paper has been saved, but the system is ready for access. Notice of the availability of DocuWare access to agenda packet information is to be sent to the management team in the near future.

At a later time, after testing, access may be established for Board members who wish to receive the information electronically, either exclusively or in addition to paper copy for purposes of evaluation. Information could be accessed at Board meetings on laptop computers with network connections.

Recommended future actions

Provide training and technical assistance to prospective new users

Investigate the benefits of adding Internet and/or intranet access to broaden the base of users who otherwise would get paper copies.

For access to agenda packets through DocuWare at Board meetings, install a network in the boardroom and provide laptop computers for users who don't currently have them.

Washington County – Paper Reduction in Licensing Center Transactions

SWMCB Office Paper Reduction Team Members: Judy Hunter and Nikki Stewart.
Licensing Center Manager, Forest Lake: Erin Pearson.

The licensing centers conduct transactions for state departments of Public Safety (Driver and Vehicle Services), Health, and Natural Resources. Driver and Vehicle Services transactions account for more than 90 percent of licensing center transactions and paper use. Most DVS transactions now rely heavily on paper. However, currently more electronic and Web-based information exchange and transactions are being developed by DVS. In recent months, this changeover in process has resulted in the licensing center experiencing increased paper usage requirements. The Forest Lake Licensing Center has eight staff and an estimated 83,000 annual transactions. Two other licensing centers in Washington County have similar transaction volumes.

The approach to determine office paper reduction actions in the Forest Lake Licensing Center included:

- Staff interviews and contacts with Driver and Vehicle Services.
- Review of front-office and back-office transactions for paper reduction potential.
- Identification and evaluation of possible short-term actions for implementation.
- Recommendations based on a focused approach to short-term office paper waste reduction.

Technical issues/assistance

- Reviewed requirements and plans with DVS staff regarding transaction requirements and migration to more DVS Web-based services.
- Determined that the licensing center has older printers with no duplex capability, and that duplex add-on is not feasible. Identified options for new printer, duplex and network ready. Assisted with thought process for selection.
- Identified implications of a general trend by state agencies toward more Web-based information transfer, including for customer information and transactions.
- Daily multi-page transaction reports are produced on a DOS-based program. The program is outdated but not being replaced because Web-based services are expected to replace this functionality when implemented by DVS. The DOS-based software had been set up originally to overprint the last few lines of every page to a second page. Staff had used various means to attempt correction. Additional conversation and work with the software vendor resulted in implementation of a programming fix so each page now prints on one sheet.

Implementation of paper reduction actions

A small workgroup size printer with duplex and network capabilities has been ordered and will be installed in July. It will be attached to the office network in a location convenient for both back-office and customer transaction uses.

Staff planning and training will begin soon to maximize use of the new printer for back-office functions (notably multi-page daily reports to DVS) and customer functions (including informational materials, electronic/Web documents, and any other printed customer transaction information that can reduce paper usage through duplex printing).

Benefits

The Print-On-Demand capability means a lower volume of on-hand forms, brochures, and other paper used for transactions and reporting, so less ongoing storage space is needed and fewer obsolete forms will move into the waste stream.

Daily multi-page transaction reports to DVS, formerly printed one-side, will now be two-sided.

Print-On-Demand will be increasingly used as DVS and others provide more Web-based services. This will reduce paper waste due to obsolete or unused forms and informational materials being discarded.

Other benefits identified:

- Licensing center customers can receive informational materials and transaction information printed duplex, which can be viewed as a customer service enhancement consistent with most peoples' expectations.
- Storage space needed for daily transaction reports, now kept for three years in a bank of file cabinets in the office and in remote storage for three more, will be reduced by up to half the normal volume each year.

Recommended future actions

Assess other county licensing centers for networked duplex-capable printers and practices.

Seek additional opportunities to reduce paper usage as Web-based transactions increase, especially for customer transactions. Work with the OPRT members in this effort.

A longer-term solution to reduce paper waste in daily transaction reports to DVS will occur with the conversion to more Web-based transactions. In the interim, DVS daily transaction reporting and in-house copies could be done in electronic format only (although some additional formal authorization from DVS may be needed).

Anoka County Income Maintenance Dept. – Adaptation to “E-Docs”

SWMCB Office Paper Reduction Team Members: Sue Doll, assisted by Maggie Kirwin.
Income Maintenance Department Manager: Fay Bawek.

Anoka County’s Community Human Services, Income Maintenance Department (IM) uses a large number of forms, both state (Department of Human Services) and county-developed forms. Anoka County IM operates out of two offices, in Anoka (for Adult Intake services) and Blaine (for Family Intake services). Blaine takes appointments; Anoka takes walk-ins. Total Income Maintenance staff in both locations is about 200.

The state Human Services Department has implemented electronic documents (“E-Docs”), a Web-based delivery method to counties for state forms, brochures, bulletins, and other communications in Adobe Acrobat format. The large number of forms includes English and other language versions. The evolution of E-Docs is occurring in three phases: printable forms, fillable forms, and transmittable forms. Most forms are now printable or fillable, and the transmittable forms are in development.

The Anoka and Blaine offices use several hundred different forms and informational documents, including state- and county-created. An estimate of annual paper use volume is over 250,000 pages.

Supplies of paper copies of a large number of the forms are running out, both at DHS and county locations, and most will not be reprinted by the state. Paper copies of nearly all those documents (except the required, highest volume documents) will not continue to be supplied to counties at no cost, as in the past, by DHS. The costs for Anoka County to print all the forms formerly provided by DHS were estimated at many thousand dollars over the current budget. Coincidentally, the IM offices were directed to cut forms costs by \$5,500.

Most printers in the Anoka and Blaine IM offices are not duplex-capable. The ratio of workers to printers in IM is estimated at 20-25 to 1 (excepting supervisors and clerical) and many printers are older models and/or inkjet printers.

An unmeasured but large quantity of forms and other documents were regularly disposed of when they became obsolete due to law and regulation changes. Additionally, occasionally an obsolete form would be used, requiring additional follow-up work.

Forms are kept in a storage room and in the desks and nearby locations in workers' areas. Workers need a forms supply near their desks where they meet clients.

Among issues identified were:

- A key concern at the start was that the county offices would be responsible for the costs of paper including all printing costs of forms and informational publications that had formerly been provided in bulk by DHS.
- Staff noted that a growing number of county-created forms were being made available in electronic format from drop-down menus on workers' screens, and more workers were making use of those electronic county-originated forms.

Technical assistance/issues

Several discussions with staff and the director resulted in an understanding of the variety and quantity of paper documents that are used in the offices for client transactions and a prioritization of possible paper waste reduction actions.

An analysis revealed that at least 75 to 85 percent of the forms and other documents in both offices, including both state and county forms, have an annual usage volume of less than 1000. The potential for Print-On-Demand of these lower volume documents was then apparent.

It was concluded that the DHS Web-based forms and county-created electronic forms could be "integrated" on worker screens through a Web interface that IM's information systems support staff could create. The effect would be to customize screens to contain only the state and county forms used in each work group.

Interviews with DHS staff resulted in the finding that DHS would continue to provide in bulk the handful of forms that are the required (by law), highest volume state forms, such as the key eligibility related forms. These forms are least amenable to print on demand due both to the volume use and size or configuration of the documents. Beyond those, counties could request that other very high volume forms continue to be provided, and DHS would consider those requests.

Workgroup size, configuration, and location in relation to a workgroup printer were determined for a pilot test in each office.

Assistance was provided to determine which printers would be most appropriate for the two small networked workgroup configurations. Printers with duplex and network capabilities, as well as a second paper tray, were chosen.

Benefits

It was determined that a pilot project in each of the two offices would be possible to test the use of "print on demand" for the 75 to 85 percent of forms that are under the 1,000 annual usage volume, including both state and county forms.

The expected office paper waste reduction and related "downstream" savings will arise from minimizing the county printing budget through use of Print-On-Demand.

Other benefits identified:

- This project has pushed forward development and integration of electronic county-created forms with state forms.
- Only up-to-date forms will be generated, in the precise quantities needed, minimizing additions to the waste stream, eliminating the need for a substantial area of forms storage space (now a separate room) and in workers desks, and other "downstream" costs.

Two Pilot Projects in Process

Discussion of issues for planning and training the two pilot test workgroups (one each in the Anoka and Blaine offices) were initiated. Workgroup staff members (8 to 10 in each location) have been engaged in discussions about how the effort will affect their work. Continuing discussions will address their concerns and questions.

Two workgroup printers were being purchased, one each for the pilot test workgroups in the Anoka and Blaine offices. Implementation of the printers and the pilot project initiation is expected in July.

Recommended future actions

Create a forum for interaction so that the new pilot test workgroups' Print-On-Demand configuration continues to meet the needs of staff to cover client service requirements. Make necessary adjustments when a need is identified. This is expected to occur at regular staff meetings.

Continue to expand workgroup technology enhancements that support wastepaper reduction, on the same or similar design as the pilot program, to other IM workgroups.

Monitor IM network Internet performance, which is necessary to ensure rapid electronic documents access.

Continue the integration and refinement of state and county forms in the workgroups' PC-screen virtual environment. Employ this integration to identify further paper reduction opportunities.

Continue to coordinate actions with the Department of Human Services in the evolution of the E-Docs technology. Develop plans for future office wastepaper efforts with OPRT members, to keep up with the technology changes at the state Human Services Department.

Replication of Projects

Technology changes, either adoption (like EDMS) or adaptation (like E-Docs), can present opportunities to incorporate maximum office paper waste reduction strategies. Although waste reduction would not necessarily be a primary motivator for technology adoption, these strategies can be appropriately incorporated into technology planning. The SWMCB Office Paper Reduction Team's involvement in decisions about new technologies in departments – reviewing the implications for office paper waste reduction and encouraging actions that support maximum waste reduction – supports systematic movement toward the SWMCB's waste reduction goals.

Jump start with a Pilot Project

Counties that wish to conduct an effort similar to the demonstration projects discussed in this report might choose the approach that was used here. With comparatively limited resources, the focus of this effort was on identifying specific high-potential opportunities, identifying what it would take to initiate changes that reduce office paper waste, and focusing on actions to get the efforts started. Baseline paper usage information was developed in relation to the specific applications of interest. The focus on quick evaluation and project initiation was seen as maximally leveraging available resources.

Early decisions that focused efforts on small pilot projects to quickly initiate potentially much larger projects, especially in Ramsey County's EDMS projects, were crucial. The strategy was to leverage small initiating efforts into potentially large results by acting to get them moving ahead quickly. By getting those efforts started, the participants will be able to better evaluate how the larger effort would work, focus on problem solving in real applications, and better estimate both office paper waste reduction and the other often more compelling benefits (such as process efficiencies and improved customer service) to adopt the new technologies.

The time lines for projects involving significant organizational changes, like the adoption of EDMS or Print-on-Demand, may be longer than initially expected. These projects, however, are often the ones with greatest longer-term potential for office paper waste reduction. Reduced budgets and staffing levels can greatly extend the planning and implementation time frames, especially for projects involving new technologies. These efforts may be appropriately approached as small pilot projects, just large enough initially to get them going without major expenditure of time and budget.

Consider Other Keys to Implementation

Projects involving adoption of new technologies require managerial and user education, strong managerial support and persistence, and employees' willingness to make work-process changes. Managerial and supervisory reinforcement is necessary to support the extended effort that is required. Again, however, smaller pilot projects may support overcoming these potential barriers using a gradual and smaller-scale initial approach.

A key consideration is that education is required for potential adopters to understand additional applications. The initial barrier from lack of basic knowledge diminishes

progress. County staff with this knowledge can provide basic orientation for decision makers to new technologies where opportunities are likely to be present.

When a central service is provided on a cost recovery basis, such as with Ramsey County's EDMS software, the cost recapture methods are important to acceptance of new applications, given tight budgets. The IS department may discuss options for cost recovery with top management, since the charge-back method does affect adoption.

Utilize Readily Available Technology

The potential applications of Electronic Document Management Systems are more numerous than those that were included in this project. EDMS applications that use COLD (computer output to laser disk) technology and Web-based data collection and access are especially useful because they avoid paper from document origin to capture, use, and storage in the EDMS database. The technology has potential in small and large applications.

Web-based transactions including those using electronic documents are an increasing phenomenon in many organizations and across state-county organizational boundaries. Office paper waste reduction strategies for these new tools can be leveraged with Print-On-Demand and duplex printing. Ultimately, purely electronic transactions will continue to reduce paper usage. Even with expanding electronic transactions, however, certain types of paper documents will likely continue to be needed for customer records and receipts, some signature or authenticating paper documentation, and archival records.

The introduction of networked duplex printing capability is a comparatively easy and small-cost means to leverage both current and likely future office paper waste reduction efforts in conjunction with electronic transactions.

Advances in technology offer many new ways to streamline processes, enhance customer service, and reduce office paper waste. The SWMCB's projects demonstrate the large potential for office paper waste reduction from systematic evaluation of opportunities and adoption (including when appropriate the use of small initiating pilot projects) of readily available technologies. The potential savings would be further enhanced with adoption of a broad replication strategy.