GRAVITY UNION

Current State Summary

Norfolk County – Records Management Strategy

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Introduction

Background

Norfolk County is looking to develop a records and information management modernization strategy as part of its ongoing digital workplace transformation. To develop this strategy, the County first seeks to evaluate its current Records Management program, its associated information management systems, and prevailing operational challenges.

The information presented in this Current State Assessment was obtained through several interviews with key stakeholders at the county. These interviews sought to understand the interviewees' roles, their experiences, and how the County manages its recorded information and recordkeeping systems today. Through these interviews, we gathered notes and produced a thorough list of issues and opportunities to inform the County's strategic direction.

Objectives

- Assess Norfolk's records management by-laws, policies & procedures to determine the current state of information management within the County & opportunities to align with best record-keeping practices and legislative requirements.
- Review & evaluate physical records storage issues
- Review & evaluate the County's current RIM software (FileHold and FileTrail) to determine effectiveness as it aligns with Norfolk's records management program.
- Technology review of hardware for rapid digitization.

Current State Summary by Theme

The information gathered in this document was obtained through current state interviews with key stakeholder groups at the county. We began by conducting current state assessment interviews to understand their teams, roles, and how they work with their information today. Through these interviews we gathered notes and produced a thorough list of findings, organized by theme.

Governance

Governance is the set of policies, procedures, roles, responsibilities, and processes that control how your organization's business divisions, RM, and IT teams work together to achieve its goals.

Findings

Strained Staffing and Resource Levels

Norfolk County has a small, knowledgeable, and talented Records Management team whose responsibilities both outweigh their resources and grow in complexity. Typically, the County's Clerks and By-Law Department has one full-time Records Analyst responsible for all of the below:

- Records Center management, organization, and disposition
- RM systems configuration, governance, and implementation.
- Policy development and revision
- Staff training and training development
- Digitization initiatives
- FOI Support for Deputy Clerk

Recent staffing reductions in administrative support positions across the County have further strained its ability to foster strong, consistent records management practices in all Divisions. When recordkeeping practices shift increasingly from physical to electronic domains, more labour is required to reasonably maintain, advise upon, and modernize RM systems.

Governance Documentation & Needs

Some governing documents for the County's records management program are due to be revised and realigned with current roles and practices. Key documents and findings are listed below:

By-Law 2020-90, establishing County recordkeeping requirements

- Bylaw cites "document management systems, databases, shared drives, servers or SharePoint sites" as suitable storage locations for electronic records. However, not all repositories listed can actually facilitate records management.

Records Management Policy Statement (Policy CAO-14)

- Role descriptions for Information and Privacy Coordinator, Records Analyst, and Records Team Members are out-of-date and due for revision.

Additional areas of need for Norfolk's governing documentation include:

- Policy that affirms the County's standards for defensible digital reproductions of physical source records, and that outlines conditions where staff are authorized to destroy digitized source records.
- Clear policy or procedural guidance around records management responsibilities before and after personnel departure.
- Policy outlining staff expectations and requirements for working with or storing County records in remote locations (especially regarding physical records).

Parallel Digital Transformation Initiatives

For a cohesive direction on how to leverage digital collaboration, departments such as IT and R M should consider a single front to address this problem space. Ideally, a steering committee with leaders from both departments as well as representatives from key functions with a vested interest in supporting the alignment of a digital transformation initiative.

Reinstatement of Records Management Team

The Clerks and By-Law Department intends to establish a County Records Management Team in 2023. This was a self-organized Team of roughly 20-25 staff prior to 2019, but it dissolved in-part due to staffing strains cited earlier: reduction in administrative support roles County-wide, competing priorities, and 2020's changing work habits. Many aspects of the former Team are worth emulating in the next iteration, and some highlights are summarized below:

- Recognizing exceptional service contributions on a regular basis.
- Focus on sharing information and bridging connections between staff with similar roles, but in different buildings and Divisions.
- Keeping the discussions upbeat and fun supported long-term participation and involvement.

Reinstating a Records Management Team will aid the County in standardizing and modernizing its records management practices. Given the lean size of its Legislative and Information Services team, the County needs advocates in all areas to share and champion records management practices on their behalf.

What may continue to challenge this team is staff capacity; appointed Liaisons on the Records Management Team need adequate time afforded within their current roles to administer the Program in their Department and act as its point-of-contact.

Change Management

Change Management is a critical part of project delivery. Accounting for the human side of change tends to promote adoption of new systems, processes, and cultural initiatives.

Findings

Challenges with Communication and Stakeholder Consultation

Some of the most frequently cited pain points among interviewees were trends of insufficient or belated consultation with records management staff when change initiatives impact the governance of County records.

The 2021 building moves are significant examples of this trend; the former Public Works Department vacated its previous building for departments like Environmental Services and Engineering. Public Works' operational staff were only given 3 days' notice of their move date, and Records Management staff only learned of the moves once they had already occurred: after multiple rooms and repositories full of unscheduled records were effectively abandoned by their creating department.

As an outcome of these lapsed change communications, the County's Legislative and Information Services team continues to be heavily involved in identifying and cleaning up caches of decades-aged records in former Public Works buildings: pushed into a reactive posture of crisis management rather than first being invited as contributors in the planning phase.

Lapsed Knowledge Transfer & Training

On topics and duties of records management, County staff reportedly struggle with knowledge transfer – particularly when positions are vacated or restructured. When key information and processes are lost amid personnel changes, gaps reveal themselves over time, like:

- Inconsistent or lapsed recordkeeping, impacting discoverability of public information assets.
- Orphaned records in local office storage spaces (i.e. rooms of boxed records lacking context, cabinets full of paper).
- Organization and naming conventions that were personal to long-term staff but indecipherable to newcomers.

Light records management training is provided to new staff upon orientation, and additional non-mandatory records management training is offered through the County's course catalog. Given the

County's challenges with ensuring knowledge transfer and cross-department investment around information management, making this training mandatory for all staff in addition to required "refresher" courses may help boost awareness among all staff.

Information Architecture and Design

Findings

Shared Network Drives & New System Adoption

The County's shared network (G) drive is available and actively used by staff for records storage, working documentation, and convenience copies, regardless of whether they've onboarded to FileHold. The drive is generally organized by nested folders starting in order of division or function, then year, and sub-function. Staff have mostly-free agency over the folder and information structure in areas where they work, and inconsistent approaches make tasks like records discovery, retention oversight, and knowledge transfer especially challenging.

As Divisions approach newer RM systems such as FileHold and collaboration spaces like SharePoint, having effective information architecture and user-friendly navigation in these solutions will be critical for their adoption. The degree of customization and folder depth that users have in the G drive prevents effective records management. At the same time, users will also avoid using records management systems if their design, navigation, and features conflict with workers' everyday needs.

SharePoint Maturity & Information Architecture

The County uses SharePoint Foundation 2013, with different adoption levels and usage intents across departments. Divisions have collaboration sites for sharing key resources (ie. Policies, procedures), and many departments have their own site(s) with simple function-based document libraries.

Currently, the County is not yet using SharePoint's content services tools like the term store or content type hub, so many of the platform's benefits for search and content management are yet to be realized. Due to inadequate descriptive metadata, convenience documentation in SharePoint can also be challenging to locate without prior familiarity and context.

In addition to system-agnostic recommendations, the Information Architecture and Enterprise Taxonomy Strategy offers recommendations for optimizing SharePoint's information architecture across the following themes:

- Site structure and navigation
- Lists and Libraries
- Content type and column creation

- Leveraging views

Security

Findings

The county leverages Active Directory on-premises and Azure AD for authentication. Due to initial migration to Exchange Online, the team is already set up for Azure AD sync.

Security beyond the corporate network is provided using VPN, which allows county users to access FileHold and other internal systems securely. The VPN security leverages multi-factor authentication for increased security; however, no conditional access policies are in place.

External access is granted as an enterprise-wide policy, not restricted in for specific areas of the system. Access to common county resource is provided in kiosk computers set up for shared use.

The County also implemented Windows Remote Desktop Services (RDS) for public type computers.

For mobile devices, there is no formalized policy and there is no current Mobile Device Management solution implemented beyond the remote wipe capabilities provided by Exchange Online. Most devices

Currently, the county does not implement a standardized information security classification, and thus does not provide or enforce any information labeling in repositories such as OneDrive of SharePoint in Microsoft 365. Initially, Microsoft 365 was used exclusively by the IT group, currently all staff is onboarded.

Contractor access is currently provided via VPN, in addition a PAM solution is being deployed to increase their security posture.

The general public can access information stored in the public container of the FileHold solution, in addition, the Escribe solution used for providing meeting minutes and other relevant information to the public.

FileHold security

FileHold leverages Active directory for user authentication, once an account is created in AD, the RM team can assign permissions using any of the 7 or 8 permission levels provided. Users are typically assigned to groups, matching the department and sub-department for access.

There is a public container, which allows the general public and departments with desktop app users to access all content regarding by-laws, etc.

FileHold desktop app is not available in RDS terminal

FileTrail security

As a Cloud hosted SaaS application, CloudTrail leverages modern authentication protocols and leverages Azure AD and require for users to be granted access for viewing or editing information. When outside of the corporate network, users are challenged for MFA when accessing the system.

SharePoint Security

The County leverages SharePoint Foundation and has plans to move to SharePoint in Microsoft 365. SharePoint is available via LAN or VPN.

Audit log review

Currently not monitoring logs, however, IT is alerted when issues arise. Unusual access emails are active in Microsoft 365.

The IT group is looking into a managed SIEM solution for event management and log aggregation as they deal with multiple systems.

FileHold and FileTrail provide reports on security and access; however, they are not actively in use.

Permission Attestation and reviews

Presently, there are no formal permission reviews in place, access is managed based on onboarding and offboarding when RM team is notified, however, most changes in roles within the county may go unnoticed and may over time cause increased access that the user may no longer need.

Pain Points

No information security classification

The County will benefit from providing a clear and well-known information classification that can be implemented across different information containers to safeguard materials that require special consideration due to the sensitivity of the data.

Role and Permissions Governance

The lack of periodic access reviews may lead to inappropriate access due to role changes when an employee moves in the organization. This should be complemented with clear operational procedures that ensure the RM team is aware of changes. On the other hand, given that both systems (FileHold and FileTrail) are leveraging centralized identity, offboarding does not present a

challenge. This same recommendation applies for access management of cloud applications, including Microsoft 365.

Implement MDM

As the County embraces modern collaboration and document management technologies in the Microsoft Cloud, it will become critical to implement appropriate controls that can allow the County to manage the flow and storage of sensitive information in mobile devices. A mobile device management capable toolset will enable them to manage and control access while ensuring compliance on portable devices.

Implement Conditional Access Policies

The use of conditional access policies can support the County in restricting access to specific areas of content and increasing security based on the conditions of the device, the user and the resources being accessed. Today, while MFA is enforced in some areas, the use of Conditional Access policies can provide a better balance between accessibility of content and security where needed.

Simplify sharing using SharePoint in Microsoft 365

Implementing and governing security within SharePoint affects more than just accessibility of the content; it also effects manageability by reducing the efforts required to configure permissions and govern who has access to specific content or the ability to modify the SharePoint configuration. Implementing an open security model with a well-designed Information Architecture will provide users an environment to effectively perform their day-to-day activities.

Search

Findings

Discoverability of Aging Information Assets

Interviewees shared that many of the County's aging historical records can be especially challenging to search for a couple reasons:

- Prior naming conventions are unintelligible to current County staff, particularly given that some records predate the County's amalgamation in 2001.
- Effective discovery often requires historical context and input from longer-serving SMEs who may no longer work with the County.
- Box list metadata was often sparse or overly high-level.

Multi-Location Search

Given the County's reliance on multiple records repositories (FileHold, physical records storage, G: drive, SharePoint, etc.), it is challenging and time-consuming for staff to discover and retrieve relevant information in a comprehensive manner.

Discovery is especially complex for physical records stored outside the County's records center and for records saved on the G: Drive. These searches rely more heavily on consulting business unit staff who know and understand their information estate, but retirements and staff overturn can also make that SME knowledge precarious.

Search Skills and Training

Interviewees agreed that County staff generally struggle with knowing where or how to search for the records they need. Search training tends to occur in the County on an ad-hoc basis when staff contact Information Services staff for search support. IS staff leverage these calls as teachable moments to instruct colleagues on search skills and techniques.

Systems

Findings

During our interviews with the County we discussed primarily the FileHold and FileTrail systems. From an overall Digital workplace and document management strategy standpoint, we also considered other typical content stores and collaborations platforms such as file shares, on-premises SharePoint, Microsoft 365 powered platforms such as SharePoint Online and OneDrive as well as any other relevant information stores in use at the County.

FileHold

FieHold is the current on-premises digital records management solution. The system is implemented using Scale, a hyperconverged infrastructure providing compute and storage services.

As a Windows based software solution, FileHold uses three Windows Servers:

1 SQL Database Server (stores reference to the files and the system configuration)

- It is a shared SQL environment.

- Specs: 4 v-cores 32 GB ram

1 Internal Front end (IIS) and file storage server

- Uses SSL (HTTPS) for connectivity to both browser based and desktop solution

- Specs: 4 v-cores 16 GB ram

  - Current Storage: Data 1 TB, 275 GB System drive. Additional storage is continually added to keep up with demand.

1 Public IIS for external access (in DMZ)

- Provides externally available content (county bylaws, minutes, etc.)

- Specs: 4 v-core 8 GB ram

- Front-ended with Cloudflare for protection

From an end user point of view, the system behaves performant in most cases for internal staff, with the occasional slowness when working remotely due to personal Internet connectivity. As a result, staff often opts to defer work in FileHold for when they are working from the office to avoid slowness.

Compared with their existing SharePoint implementation, based on SharePoint Foundation, the FileHold solution provides many of the features they require for records management.

HR has not been onboarded to FileHold, so they still maintain records in physical form - offer letters remain in paper based.

On-premises SharePoint

The County has SharePoint Foundation 2013 currently installed. The Norfolk Intranet is currently hosted in it and provides among other things: news, events calendar, training calendar, job opportunities links to other Solutions and serves as another repository for County documents.

The navigation which works as a global navigation provides a resources section with information that should be available to all staff. Department specific sites are also available however, some departments still don't have a site, access provided to each department's staff during onboarding.

There are using custom solutions including Info-wise, which is mainly used to create customized lists with workflows. For Example, they have a staff transaction form built as a custom list with workflow.

Also, the Intranet is used as CRM type solution by the Service Norfolk team for call center management.

 Their existing SharePoint infrastructure is comprised of two SharePoint servers:

- 1 SharePoint farm server
- 1 SQL database (around 600-700 GB)

Regularly users work in SharePoint and not on FileHold, most recently updated policies and procedures are usually in SharePoint.

There's a need from RM team to build in processes to ensure records are also destroyed in SharePoint. The County needs to look at SharePoint as a records management container if they are planning to keep it. SLT (Senior Leadership Team) minutes and agendas are in SharePoint.

Microsoft 365 adoption

Currently planning to move to SharePoint in Microsoft 365.

They have an Intranet template in the works and are interested in the integration between Teams and SharePoint. At the time, IT was looking for a migration tool to aid in the migration efforts.

Their current timeline is for 2023 to have migrated over their SharePoint environment, however, this is also dependent on the communications team.

OneDrive for Business

The County is currently in the process of moving home drives to OneDrive, with IT leading the migration efforts.

Only OneDrive and Exchange Online are being used at the moment. Mostly done with Exchange migration, all/most staff in O365.

File Shares

The County currently has allocated 7.27 TB of file server storage and are quickly running out of space.

IT provisioned a Shared G drive, where each department has its own shared folder, some departments have multiple folders, and access is exclusive to each department.

For intra-department sharing there's a separate location called the Nor-common folder. This is used as an all-purpose share for internal users, and it is erased weekly.

GIS maps/air photography are stored in File Share.

Other NAS/ Storage solutions

There is a separate NAS server used for drone recordings. Drone recordings should have a retention period and are not in FileHold solution.

The NAS is not managed by IT and while is it built for redundant storage; no backup is in place.

Reliability, Backup and Recovery

Server (Scale) infrastructure for File Share is duplicated and is in two locations. Primary and failover are 3 kms apart.

The County uses Aperture as a backup solution, which does nightly backups. The ERP solution is backed up during the day.VM Snapshots are created during the day.

Renovations of a building are in the plan for next year with the intent to move to move infrastructure to the new building in 2023.

For connectivity, there is dark fiber between the two sites (10 GB link).

Rubrik is used for cloud-to-cloud backup of their Microsoft 365 tenant.

Pain Points

Lack of County-wide RM/digital strategy

No county-wide digital workplace/records management program, leading to limited adoption of FileHold and inconsistent use of tools such as SharePoint.

Missing departments

Rolling out by function has limited success given other departments up or downstream may not have been onboarded in the program.

Too many places to work on and store information

Multiple storage solutions are implemented, leading to unmanaged (by IT) locations or confusion from staff on where to store documents.

Digital Records Management & Scanning Solutions

Findings

FileHold System Limitations and Adoption Challenges

FileHold is well-suited to managing some but not all parts of a record's information lifecycle, and its weaknesses negatively-impact system adoption, maintenance, and usability. FileHold's shortcomings as a records management system are summarized below:

- The system is not suitable for managing working documents or collaboration; only 1 user can edit a record at any given time, so saving a record to FileHold is often an add-on task after the creation stage. Expecting staff to reliable save records in FileHold is unrealistic if the records system makes tasks like collaboration and reference more inconvenient to them than subverting the process entirely.
- FileHold can be slow for staff that work remotely; some staff defer using FileHold until working in-office.
- Security and permissions management in FileHold is too complex for one Records Analyst to reasonably govern alongside other job duties.
- Retention triggers are inflexible and lack automation. End-users must manually input close dates at the document level to start the retention timer, and this step is routinely missed.

Unclear Digital Recordkeeping Standards

As suggested under the Governance theme, the County's Bylaw 2020-90 gives loose guidance around where staff are expected to store and maintain County records: "document management systems, databases, shared drives, servers or SharePoint sites" are all cited as records storage locations, despite some being far more suitable than others. Governing documentation should be revised to clearly identify what systems and repositories are supported records management systems for the County, and which locations are only suitable for keeping working documents, transitory records, and convenience copies.

Persistent Redundant Source Information

Interviewees shared that most physical records in the County can be destroyed after being digitized, and this is most often occurring when records are digitized and delivered to business units from the records center. Despite this allowance to shred most digitized originals, there are also many instances where records are being duplicated and preserved in each format, either because staff are uncomfortable destroying paper records, or because they prefer using and referencing paper records.

The County has no documented policies or procedures outlining either their standards for defensible digital reproductions or the conditions authorizing the destruction of digitized source records. Developing and distributing these standards may reduce staff discomfort and uncertainty around scenarios where they can destroy source records, while also educating them on processes like quality assurance reviews, applying OCR, and scanning strategies. In developing such a standard, consider whether some records must be maintained in physical format to satisfy legal requirements (such as documents with a notary seal).

Scanning Solutions

The County's Records Center uses a Fujitsu Scansnap for on-demand digitization in lieu of physical file delivery, and interviewees shared largely positive feelings about using the device. Scansnap performs OCR but no longer scans directly into FileHold; staff using ScanSnap must instead migrate digital reproductions into FileHold as an add-on step.

Digitization tends to occur at the file-level rather than item-level (Drainage records are an exception). File-level digitization requires significantly less labour than item-level digitization and description, but with some drawbacks for later search and discovery.

As the County looks to digitize more files and potentially hire temporary staff to assist, planning stages should involve an informed assessment of:

- Which stored paper records require frequent access.
- Which inactive records have the highest, long-term impacts on physical storage availability.
- The state of boxed records (high use of staples, paper clips, fragile materials, etc. add significant time to digitization work.
- Eligibility of boxed records to be destroyed post-digitization.

In some cases, it will be more pragmatic and cost-effective to maintain existing paper records as-is until their destruction is due.

Physical Records Management

Findings

FileTrail Implementation

The County's new physical records management system – FileTrail – went live over the span of our interviews. The system appears very well-suited to physical records management, and interviewees shared that County power users also find the system user-friendly and simple to learn.

FileTrail is cloud-based, supports single sign-on and can be used for a robust range of physical recordkeeping functions, including tracking check-out and check-in actions. Given the County's ongoing struggles with visibility into physical records assets across all buildings, the addition of FileTrail is a strong step toward improving visibility and tracking of records both in and outside the Records Center.

Preservation Standards for Transfers to Records Center

Aside from general recommendations to box materials in a space-conscious manner, the County does not document or enforce standards around the state of records transferred to inactive storage; records can be boxed as-is.

This relaxed stance is one that may have unintended and negative consequences for both archival preservation and digitization initiatives. The presence of things like binders, staples, clips, tape, and stickies will add significant time to records scanning and digitization. Furthermore, they can cause permanent stains and damage to records of historical importance that require long-term preservation.

Building Moves and Chain of Custody Challenges

Recent building moves and belated RM consultation (also discussed under Change Management) had lasting, damaging effects on the County's physical records governance: buildings contained multiple rooms and semi-concealed caches of orphaned, abandoned records.

The County's Clerk alongside Information Services staff have been working to address these issues through a combination of:

- Building walkthroughs with Departmental and Divisional Leadership
- On-site work to identify, classify, and box inactive records for storage or destruction.

While interviewees express that these initiatives are helping to resolve these issues, they emphasize that widespread Leadership buy-in and cooperation from the records' creating business units is paramount to successfully remediating the problems and preventing their recurrence.

Storage and Resource Constraints

Physical records storage is at a premium both in Norfolk's records center and in its other buildings. While the records center's outflow now outpaces its inflow, this was not the case in its recent history, when the records center had to suspend the receipt of incoming transfers due to storage constraint.

One pain point in the Records Center's physical storage is its high volume of rolled maps. An immediate remedy to this issue might be contracting scanning services to digitize and then destroy these large, fragile materials. Alternately, maps can be stored in a more-space-friendly method by being laid flat with one another in large map-sized drawers vs. rolled.