# The Case for Third Party Archiving in Microsoft® Exchange Environments

**An Osterman Research White Paper** 

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#### **EXECUTIVE SUMMARY**

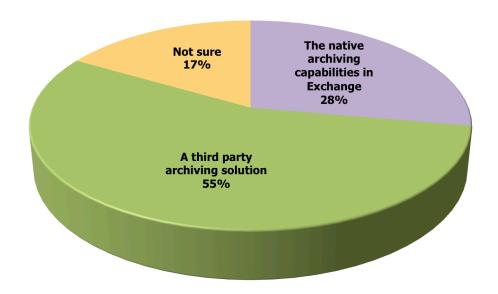
The native archiving capabilities in Microsoft Exchange 2013 are useful and represent a reasonable evolution of the archiving features and functions that were initially offered in Exchange 2010. These capabilities include good eDiscovery capabilities, a faster search capability enabled by FAST (Fast Search & Transfer), improved capabilities around legal holds, and better support for accessing archives through Outlook Web App (OWA).

However, native archiving in Exchange is missing some capabilities that many organizations will require, such as support for mobile device users or users of the Mac. Moreover, the elimination of single-instance storage beginning with Exchange 2010 can create excessive storage growth, while the lack of sophisticated highlighting or tagging tools may limit the appeal of Exchange archiving for eDiscovery.

Further, the lack of role-based search (i.e., searches based on user roles instead of names) and lack of support for all of the data types an organization might need to process may limit the appeal of the archiving capabilities built into Exchange. The lack of supervision/surveillance tools limits the effectiveness of native Exchange archiving as a compliance solution.

As a result, Osterman Research believes that the majority of Exchange-enabled organizations will require the use of third-party archiving tools. However, this is not just our opinion — a primary research survey conducted specifically for this white paper found the same result, as shown in the following figure.

Figure 1
Preference for Archiving Capabilities if Organizations Had to Deploy
Archiving from Scratch



#### **ABOUT THIS WHITE PAPER**

This white paper was sponsored by Actiance – information on the company is provided at the end of the paper.

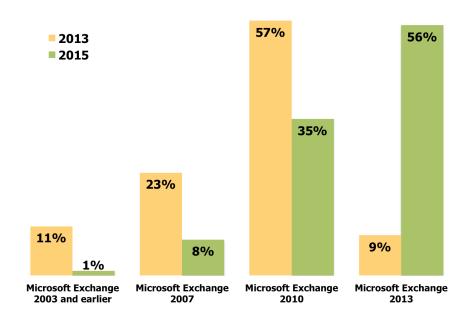
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#### THE CHANGING EXCHANGE ENVIRONMENT

#### **ORGANIZATIONS ARE MIGRATING TO EXCHANGE 2013**

While the majority of Exchange-enabled users are currently deployed on Exchange 2010, the market is clearly shifting to Exchange 2013, as shown in the following figure. What this indicates is that a) nearly three in five Exchange-enabled users today have available to them the native archiving capabilities built into Exchange, and b) more than 90% of users will have access to these capabilities within two years' time.

Figure 2 Users on Various Versions of Exchange 2013 and 2015



#### **KEY ARCHIVING ENHANCEMENTS IN EXCHANGE 2013**

Microsoft has improved upon many of the native archiving features it offered initially in Exchange 2010. Among these improvements are:

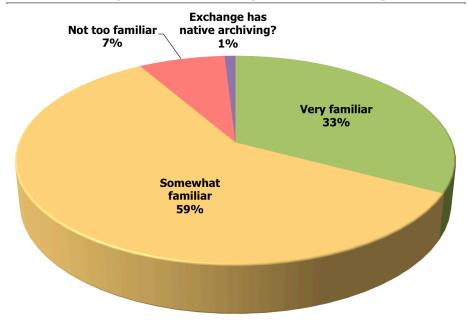
- eDiscovery is now more efficient by eliminating the need to copy searches into a specific mailbox intended to store the results of these searches and then to a .PST file. Now, the results of an eDiscovery search can be viewed directly and then exported to a .PST file if desired.
- Exchange 2013 now uses the Fast Search and Transfer (FAST) search capability
  that Microsoft acquired in 2008 instead of the Exchange content indexing
  capability used in Exchange 2010. This has significantly improved the
  performance of searches in Exchange.
- The ability to perform legal holds on email has been improved. In Exchange 2010, messages that were placed on legal hold were copied to a separate repository; in Exchange 2013, these items can be held in-place.
- Outlook Web App (OWA), formerly known as Outlook Web Access up until Exchange 2010, can now search users' primary and archive mailboxes.

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#### MOST ARE FAMILIAR WITH NATIVE EXCHANGE ARCHIVING

Our research found that the vast majority of IT staff in organizations that have users on Exchange 2010 or 2013 have some familiarity with the native archiving capabilities in both platforms, as shown in the following figure. What this indicates is that most decision makers understand at least the basic archiving capabilities provided in the latest two versions of Exchange, with a large percentage of these very familiar with them.

Figure 3
Level of Familiarity With Native Archiving in Microsoft Exchange



#### WHY SHOULD CONTENT BE ARCHIVED?

#### **LEGAL DRIVERS**

Among the many reasons to archive electronic content, legal drivers are among the most important, especially among organizations that are less heavily regulated, such as companies not in the energy, financial services, pharma or healthcare industries. Legal drivers for implementing archiving capabilities can be broken down into three key areas:

#### eDiscovery

Searching for electronic content when seeking relevant information during a legal action, the extraction of this data for analysis by legal counsel, and the presentation of information to parties that need it is the primary driver for archiving in many companies. Because parties to a legal action must produce information from their email and other archives on a regular basis, many organizations use eDiscovery as the most important reason for deploying an archiving solution.

#### Legal holds

Legal holds are another key reason for deploying archiving, since relevant information must be retained for as long as necessary after a legal action has been initiated, or when decision makers can reasonably expect that such an action is likely to occur.

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#### Early case assessments

The ability to conduct early case assessments is another important reason to archive electronic content. The ability to search an archive of email, file servers, social media posts or other electronic content stores can be valuable in helping senior managers, legal staff or outside attorneys to perform assessments of an organization's legal position before a legal action has commenced or during its early stages, since this can help decision makers to decide whether to pursue a legal action or settle as early as possible.

#### **REGULATORY AND COMPLIANCE DRIVERS**

Similar to the legal reasons for implementing an archiving solution are a number of regulatory drivers that make archiving a best practice. There are thousands of statutory requirements in the United States and around the world to retain business records, including records in email, files and other sources. A small sampling of these requirements includes the following:

#### Energy

In the United States, the Federal Energy Regulatory Commission demands that certain types of non-public, electronic transmission information exchanged between transportation and marketing function employees must be retained for a five-year period.

#### Financial services

The US Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority (FINRA) require that various records related to securities transaction be retained for up to six years. An entity that fails to retain these records can face stiff monetary penalties, censures or cease-and-desist orders. Moreover, firms must perform supervision of registered representatives' communications and be able to illustrate that they are enforcing these policies. Broker-dealers must also have attestation from a third-party that it will provide records if the firm is unable or unwilling to do so.

In the UK, credit agencies are permitted to retain consumer credit data for a period of six years.

The European Union (EU) Markets in Financial Instruments Directive (MiFID) Article 25(2) requires that investment firms must keep the relevant data relating to all transactions in financial instruments that they have carried out, whether on their own account or on behalf of a client, for at least five years.

In Canada, the Investment Industry Regulatory Organization of Canada (IIROC) Universal Market Integrity Rule 10.12-1 requires that a record of each order to purchase or sell securities must be retained for a period of seven years from the date the order record was created, and for the first two years, such record must be kept in an easily accessible location.

#### Healthcare

The US Department of Health and Human Services (HHS) has expanded the requirements for protecting sensitive and confidential patient information, expanded the number of organizations that are subject to the Health Insurance Portability and Accountability Act (HIPAA), and can be expected to levy fines and penalties more regularly than they have in the past. The Omnibus rule allows HHS to impose fines that range from \$100 for a "Did Not Know" breach of Protected Health Information (PHI) to \$50,000 for a single, uncorrected and willful violation, although fines can reach \$1.5 million per year or more.

Health plans, health plan clearinghouses and healthcare providers (e.g., physicians, nursing homes and clinics) must preserve electronic health records for six years from the date of their creation or the date when they last were in effect, whichever is later. Medicare requires that in most cases, clinical records must be retained for up to six years from date of discharge or last entry.

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In the United Kingdom, the Department of Health has established guidelines<sup>i</sup> for the retention of various types of health records. Examples include electronic patient records held by General Practitioners (to be retained indefinitely), standard operating procedures (in perpetuity if electronic), ward pharmacy requests (one year) and audit trails for electronic health records (to be retained indefinitely).

#### Pharmaceuticals

The US Food and Drug Administration requires that various types of records related to food receipt, release and processing must be kept for anywhere from six months to two years. Records that relate to non-clinical lab studies must be preserved for up to five years; and records related to drug receipt, shipment and disposition must be retained for two years after a marketing application for a drug is approved.

#### Publicly held corporations and privately held companies

For public corporations in the United States, the Sarbanes-Oxley Act of 2002 requires that accountants of publicly held companies retain certain records and workpapers related to the audit or review of such corporations' financial statements for a period of seven years.

#### Employers

In the UK, employers are permitted to retain a variety of details about their employees, including their National Insurance number, details about their disabilities, employment history, information on work-related accidents and any disciplinary actions taken against the employee.

The Companies Act 2006 requires UK-based public employers to retain accounting records for six years; for private companies the requirements is three years.

#### Government requirements

Many US state, Canadian provincial and local governments have rules that require retention of public records under "sunshine law", Freedom of Information, or related obligations. In the event of a request for public information, these various open records laws may require production of relevant information within a given time frame.

In Australia, The Archives Act 1983 requires that Commonwealth records cannot be destroyed unless authorized by the National Archives of Australia.

#### **FUNCTIONAL CONSIDERATIONS**

Another important benefit of archiving email and other types of electronic content – and one that applies to virtually all organizations, is the set of functional benefits that email archiving can provide:

#### Improved storage management on email servers

By migrating email and files from servers to archival storage, an archiving solution can dramatically reduce the volume of content stored on these servers. The result is that backups take less time, restores are much faster, and server performance improves.

Osterman Research has found in a number surveys over the past several years that about one-half of the top ten problems in managing email servers are related to excessive storage, a problem that archiving addresses directly by moving older data to archival storage. This minimizes the overall cost of managing storage and it reduces IT's storage-related costs by postponing or eliminating the deployment of high-performance, primary storage.

#### Employee productivity

An archiving solution can permit end users to access their own older content.

The Companies
Act 2006 requires
UK-based public
employers to
retain accounting
records for six
years; for private
companies the
requirements is
three years.

This enables them to retrieve missing or older emails and attachments without having to ask IT to do this for them. Not only does this significantly reduce IT's workload or force IT to deny the request because of a lack of staff resources, it makes employees more productive because they have access to more information.

An archiving solution can reduce the amount of time that employees spend on managing their mailbox content. Without an archiving system, employees must spend time filing, deleting or moving their emails and other content to stay under the mailbox size quota that most IT departments have implemented. However, with an archiving system in place, users have a mailbox that appears to be limitless in size because content is automatically migrated out of mailboxes to the archive.

#### LOOKING AT THE FUTURE OF CONTENT ARCHIVING

When many decision makers consider content archiving, they think about email archiving – and rightly so. Email is a critical source of corporate business records and so should be considered as a first priority as organizations embrace the notion of content retention and long-term management of their information assets. However, email is generally the appropriate *embarkation* point for archiving, not its *destination*. Instead, decision makers must consider the wide variety of content types that should be archived. For example:

#### Instant messages

Many organizations rely heavily on real-time communications systems like Lync and Sametime, but also non-enterprise focused tools like Skype and Yahoo! Messenger. Business records – such as file transmittals, communications with clients, notifications, etc. – are commonly transmitted using instant messaging tools and so this content must be archived in compliance with the same rules that generally apply to email and other archivable content.

#### Social media

Outside of the financial services industry, very few organizations archive social media content, i.e., content from public-facing sites such as Facebook, LinkedIn, and Twitter. However, decision makers that opt not to archive social media content increase the risk that their organization faces. As just one example, consider the relatively common trend for recruiters and other HR staff members to review prospective employees' social media pages. While a decreasing number are requiring these prospects to turn over their login credentials because of various statutes forbidding the practice and the growing sentiment against it, there is an enormous amount of available information that employers can review that can give them clues about the suitability of a prospect.

However, because employers are not permitted to consider an applicant's race, age, religion, sexual orientation and certain other attributes when evaluating prospective employees, they must not take these factors into consideration when reviewing social media posts and the like. Consequently, best practice dictates that organizations a) use someone outside of the HR department to collect information about prospects from social media sites and cull information that might indicate a prospect's, religion, age, etc., b) provide this filtered stream of content to HR, and then c) archive this content. The last step is critical in order to ensure that organizations faced with a lawsuit over a hiring or firing decision can demonstrate that they did not have available to them any information that would be illegal to consider for hiring decisions.

#### Enterprise social/collaboration-type content

Organizations are increasingly turning to enterprise social applications like Salesforce Chatter, Jive, SharePoint, and IBM Connections to exchange information, foster collaboration, and enhance employee productivity. As a result, content in these applications can also be considered business records,

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subject to the same regulatory and legal requirements as the aforementioned communications channels.

#### Web pages

Web archiving is what its name implies: the capture and archival storage of Web pages and entire Web sites. The concept of Web archiving is not new, but relatively few organizations today have implemented Web archiving to the extent they should. Web content can be required for eDiscovery and other litigation support requirements in much the same way that emails, files, PDF files and other content are required. In the same way, Web content may be required to demonstrate an organization's compliance (or lack of compliance) with regulatory requirements in the context of advertising, forward-looking statements, claims of suitability and other content that must – or must not – be posted to Web sites.

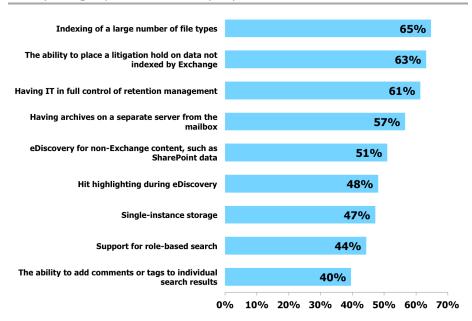
#### Other data types

User-generated content, CRM data and other content types are often more common than email in many organizations. In addition, application-generated files are another source of rapidly growing content that decision makers should consider archiving. This includes production line logs, call logs, CCTV images/video, machine telemetry and similar types of content.

## NATIVE ARCHIVING IN EXCHANGE WON'T SATISFY ALL CUSTOMER REQUIREMENTS

Exchange-enabled organizations have a substantial "wish list" of archiving features and functions that they consider to be important or extremely important, as shown in the following figure. However, as discussed below, the native archiving capabilities in Exchange cannot satisfy all of these requirements as completely as some decision makers might like.

Figure 4
Importance of Various Archiving-Related Capabilities
% Responding Important or Extremely Important



Applicationgenerated files are another source of rapidly growing content that decision makers should consider archiving.

#### STORAGE CONCERNS

One of the problems with Exchange from the perspective of many in IT is that single-instance storage (SIS)<sup>ii</sup> was eliminated in Exchange 2010 and remains missing in Exchange 2013. There are some good reasons for Microsoft to have eliminated SIS, such as improving the performance of Exchange servers because of falling storage prices. However, the use of SIS is an important benefit available with many third-party archiving solutions and one that many IT administrators still find beneficial. Not only are storage requirements in Exchange significantly greater without SIS, but Database Availability Groups further complicate the storage problem when used for high availability.

In the absence of SIS, migrating personal folders (.PSTs) to Exchange can increase storage overhead. This data is replicated inside the Database Availability Group and requires significant amounts of storage for what is largely redundant data. Also, as .PSTs are migrated into the In-Place Archive, users lose the capability to access that data offline. This data would need to be connected to Exchange in order to access the data after migration.

Organizations considering a migration to Exchange 2013 should carefully design the new Exchange 2013 architecture with respect to per mailbox storage capacity and its overall impact on backup and recovery, as well as total storage cost. Most organizations will require third-party solutions in order to manage total storage capacity with a centralized email archive for cost-effective long-term retention of email information, including SIS.

It is important to note that the archiving functionality in Exchange 2010 and 2013, while offering a number of useful features, does not reduce the load on Exchange servers because content is not moved to a separate archive system. This eliminates an important advantage that is offered with some third-party archiving solutions. As a result, the Exchange infrastructure must support email for its entire lifecycle, including email for all current and ex-employees and email that is held on legal hold.

#### **eDISCOVERY AND RELATED CONCERNS**

The eDiscovery capabilities built into Exchange 2013 provide some important and useful capabilities, although these capabilities are not likely to satisfy some of the more sophisticated requirements that some organizations might require. For example, Exchange 2013 provides for basic search of mailbox contents, but there is no "hithighlighting" of the search results that are returned. Consequently, a review of hundreds or thousands of items becomes more difficult when the reviewer must read each item without the aid of hit-highlights.

Although Exchange 2013 offers the ability to place a hold on the contents of an entire mailbox or a query-based search, a litigation hold can be applied only to data that has been indexed by Exchange. Since Exchange indexes fewer file types than many third-party solutions, that latter may still be required in order to manage file types that Exchange does not support. Some eDiscovery capabilities built into third-party solutions are not supported by Exchange 2013, such as results analysis and tagging and role-based search.

Moreover, data that has been changed in flight or deleted before an Exchange legal hold is implemented can present another problem. There is a chance that this data will not be discovered with the built-in Exchange capabilities and thus not held. The advantage of journal archiving (which Exchange does not support) provides important safeguards, since a copy of all sent and received email is preserved and is retained efficiently by archiving solutions that support journaling.

eDiscovery in Exchange 2013 lacks some important features like hit-highlighting and adding comments or tags to individual search results – functions that some need to support rapid legal review. The search and review workflow process itself can be more cumbersome and complex in Exchange than it is in many third-party solutions.

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The Case for Third-Party Archiving in Microsoft® Exchange Environments

The Exchange multi-mailbox search is more suited for basic search and exporting the search results to a third-party eDiscovery solution for detailed legal review and analysis.

Moreover, Exchange 2010 and 2013 support eDiscovery only for Exchange Server mailbox content. For the discovery of documents and content within Microsoft SharePoint, Lync and Windows-based File Shares, SharePoint 2013 eDiscovery Center is needed, although it works only with the 2013 versions of Exchange and SharePoint. This might complicate and increase the cost of eDiscovery and other litigation support functions in some cases, so many organizations will likely opt for a single archiving solution that enables policy management and search from a single interface to improve overall efficiency of the eDiscovery process.

#### **RETENTION CONCERNS**

Exchange In-Place Archives is a separate mailbox accessed by users in Outlook or the Outlook Web App. The mailbox contents in the In-Place Archives remain on the Exchange Server permanently, thereby increasing the total storage load on Exchange Server and impacting Exchange Server recovery time in the case that a restore is needed. When considering the need to retain email on legal hold and email for exemployees, sometimes for many years, the impact of this on Exchange can be considerable.

Moreover, users are primarily in charge of their own retention management other than for mailboxes that are on legal hold. This might result in the deletion of content from an Exchange mailbox. Because many third-party solutions offer more robust controls over content retention, these might be a better choice in some situations.

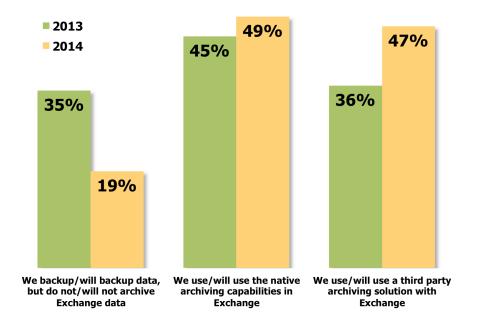
#### **SEARCH CONCERNS**

Because Exchange does not support role-based search, the multi-mailbox search commands access to all mailboxes cannot be tailored to specific groups or departments. This limits the ability to manage legal discovery securely with multiple individuals – a common requirement for most organizations.

The result is that although native Exchange archiving is a solid offering, most organizations will opt for third archiving party-solutions, as shown in the following figure.

Although native Exchange archiving is a solid offering, most organizations will opt for third archiving partysolutions.

Figure 5
Use of Archiving in Exchange Environments
2013 and 2014



#### **RECOMMENDATIONS**

#### **ARCHIVING AS DEFENSE AND OFFENSE**

Most decision makers view archiving as a primarily defensive play and generally for good reason: archiving is useful as a tool for demonstrating regulatory compliance, for eDiscovery and for other activities that require proof that an organization has complied with the law, its attorneys' advice, its corporate policies, etc. Not surprisingly, archiving is viewed as a "necessary evil" in many organizations simply because it represents something akin to an insurance policy.

However, archiving should also be viewed as an offensive, or proactive, tool that can enable decision makers to learn more about their organizations, their customers and other aspects of their business. Because an email archiving system, for example, contains a vast amount of information about how information flows in a company, decision makers can tap this information source to find out how often salespeople are communicating with customers and the tone of those conversations (content that might never make it into a CRM system), who the "shadow bosses" (those employees to whom others turn for insight) might be, whether or not managers are treating their employees well, whether or not fraud is occurring or likely, and so forth. Armed with this information, decision makers can then take proactive steps to correct problems before they become more serious or are exposed to the public.

Key here is that decision makers need to consider archiving as both a defensive tool that can protect the organization, but also as a proactive tool that can provide much greater insight into the workings of an organization. When viewed in this way, the question then focuses on whether or not native Exchange archiving is sufficient to provide this level of insight into the inner workings of an organization, or if a third-party solution that is more focused on analytics might be more appropriate.

## ESTABLISHED DETAILED AND THOROUGH RETENTION AND DELETION POLICIES

Every organization – regardless of its size, the industry it serves or the archiving solution on which it eventually settles – should implement policies that are designed

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to help it retain important content in email and other electronic data stores. Our research has found that many organizations do not have email retention policies or that have policies that are not well defined. This is in part because some decision makers view business records in email improperly. For example, in a 2012 survey conducted by Osterman Research<sup>iii</sup>, we discovered that senior managers in roughly one in five organizations view email content as "transitory" and not necessary to retain for long periods. Nearly 50% view records in email as important, but subject to retention only at the discretion of their employees. The remainder holds the correct view (at least in our opinion) that records in email are important and should be managed by IT according to corporate policies.

### UNDERSTAND WHAT EXCHANGE 2013 ARCHIVING CAN AND CANNOT DO

We also recommend that those responsible for legal discovery, regulatory compliance and other archiving-centric tasks perform due diligence on the native archiving capabilities in Exchange. Just in the context of eDiscovery, for example, decision makers should evaluate the extent to which they will require simple vs. advanced search capabilities, review and culling, saving search results, and exporting search results. If an organization will require features like hit highlighting, role-based review or other more sophisticated eDiscovery features, they should seriously consider the use of third-party archiving and other eDiscovery management solutions. The same applies to archiving's role for regulatory compliance or storage management — understand how Exchange archiving compares to third-party capabilities.

Moreover, decision makers should carefully evaluate Exchange 2013's architecture with respect to per mailbox storage capacity and its impact on backup, recovery and total storage costs. Most will need third-party solutions to manage total storage capacity in Exchange with a centralized email archive for cost-effective long-term retention of email information, including SIS.

## **EVALUATE APPROPRIATE THIRD-PARTY ARCHIVING SOLUTIONS**

Finally, it is essential that all decision makers consider the wide range of third-party archiving solutions available for use in Exchange environments. The goal of such an exercise is simply to match an organization's current and long-term archiving requirements with the solution best suited to satisfy them. Decision makers may find that the native archiving capabilities available with Exchange might fit the bill, but most will find a third-party solution better suited to their needs.

#### **OTHER CONSIDERATIONS**

There are a few other questions and issues to consider in the context of deciding whether or not the native archiving capabilities in Exchange will be sufficient or if a third-party archiving solution will be necessary:

 Migrating content to a new archive – e.g., moving data from an Exchange archive to a third-party archive – should be considered carefully. Should all data be migrated to the new archive or just more recent data? Opting for the latter reduces the risk of data corruption and a faster migration project, but it results in the maintenance of multiple archives and potentially higher costs when searching across multiple archives.

The bottom line is that the benefit of a "rip-and-replace" approach to archiving migration is that a single archive can be established that will offer more efficient searches for eDiscovery, compliance with regulatory audits and the like. The downside is the potential high cost for doing so and the risk to the migrated data.

 The future of archiving will be in advanced analytics and business intelligence. In other words, archived data will be searched and analyzed, often in real time, to extract useful information and insights for a wide range of business and technical Decision makers may find that the native archiving capabilities available with Exchange might fit the bill, but most will find a third-party solution better suited to their needs.

applications. Archiving solutions should be planned with these capabilities in mind, particularly in the context of using vendors that have this vision for the future of archiving.

• Consider the potential for "blind subpoenas" when using cloud-based providers. Such a subpoena, as might be issued via a National Security Letter from the US government, can require a cloud provider to turn over archived or other data on individuals or business to the FBI or some other government agency. These subpoenas sometimes include a gag order that prevents the cloud provider from informing their affected customers that data has been requested. This is by no means a criticism of cloud providers or the notion of archiving data in the cloud, since providers simply have no practical choice in these matters.

In light of the reality of blind subpoenas, there are a couple of things that customers of cloud archiving providers can do. First, data can be encrypted and the keys held only by the customer so that government agencies requesting data will need to inform these customers of their request for information. While a government agency could opt to break the encryption, this is by no means a common occurrence. Second, customers can request of their providers what some call the "canary" approach: namely, request that their provider send a daily or more frequent communication indicating that their data has not be subpoenaed. When the communications stop, the customer knows that their data has been requested.

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The ability to maintain a single copy of content even though multiple users or system share that data. The goal of SIS is to improve system efficiency by deduplicating multiple copies of the same data.

<sup>&</sup>quot; Unpublished research from Osterman Research, Inc.