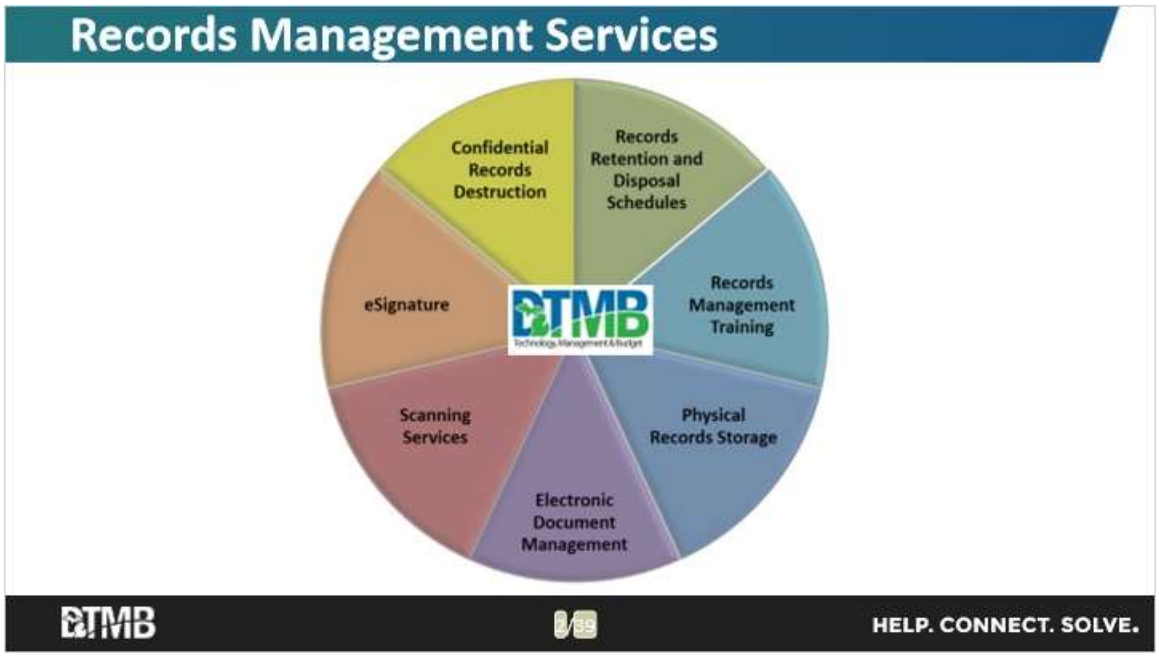
Electronic Document Management
Class Handout

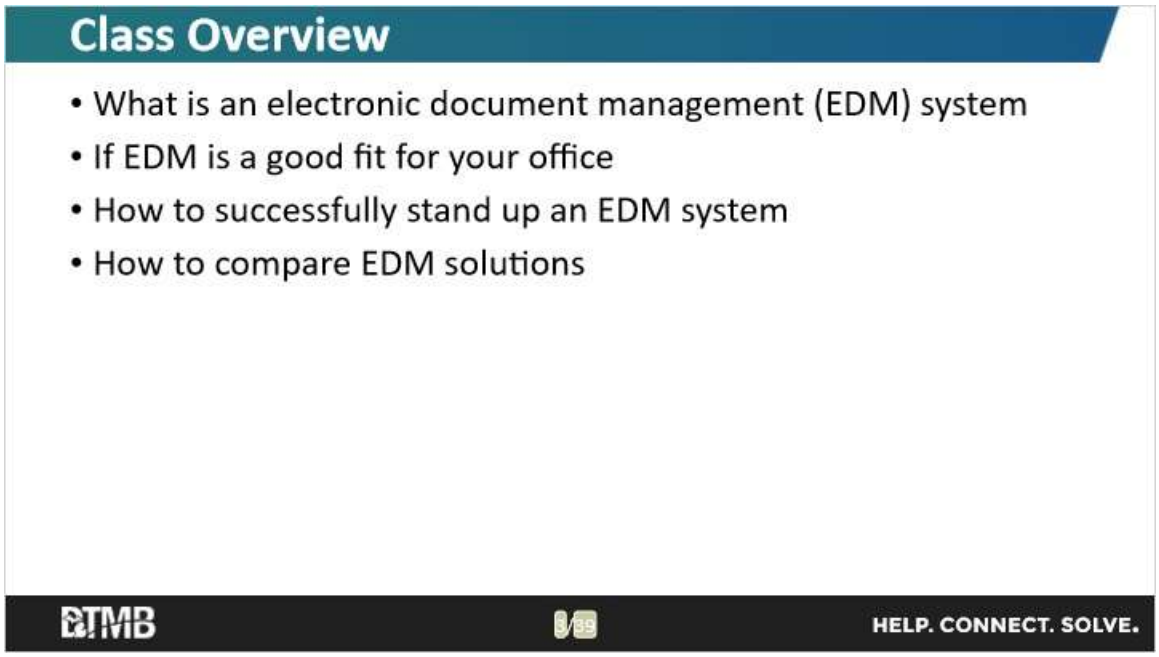
Notes:
Welcome to the training module titled, Electronic Document Management. This training is offered by the State of Michigan, Records Management Services.

This class contains audio. Users can click on the closed captions button in the player to view the transcript.



Notes:

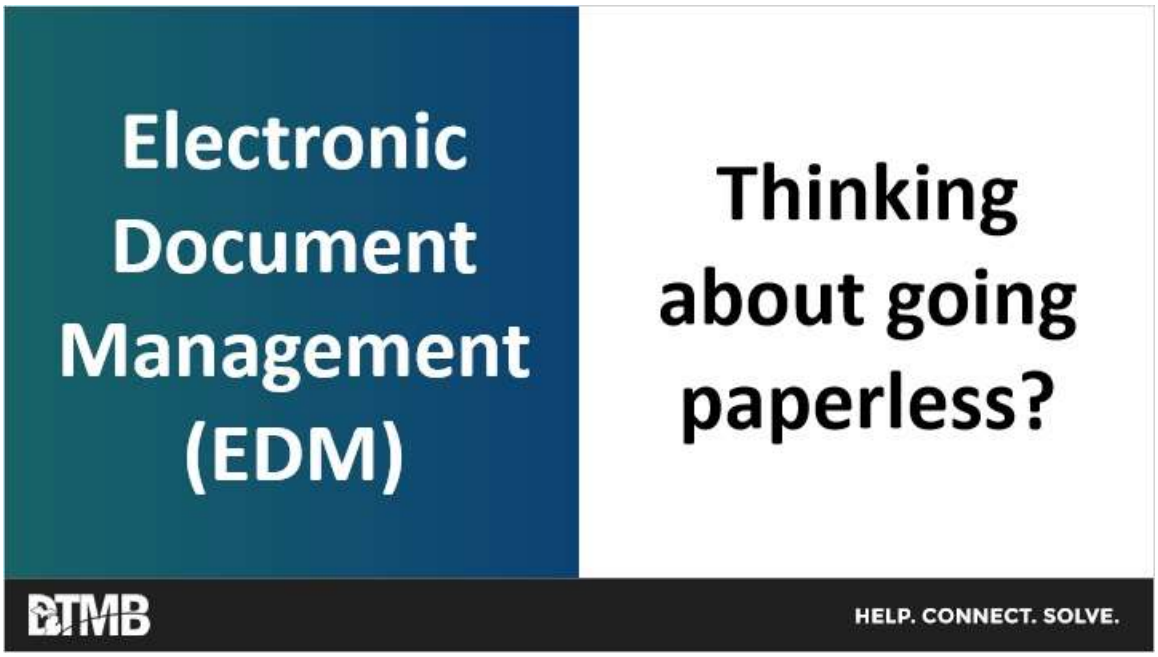
Employees who took other DTMB Records Management Services classes, heard quite a bit about the services provided by RMS. Just to recap, RMS is responsible for the development, review and approval of records Retention and Disposal Schedules. RMS also provides records management training, physical records storage services, electronic document management services, scanning services, eSignature solutions, and confidential records destruction services.



Notes:

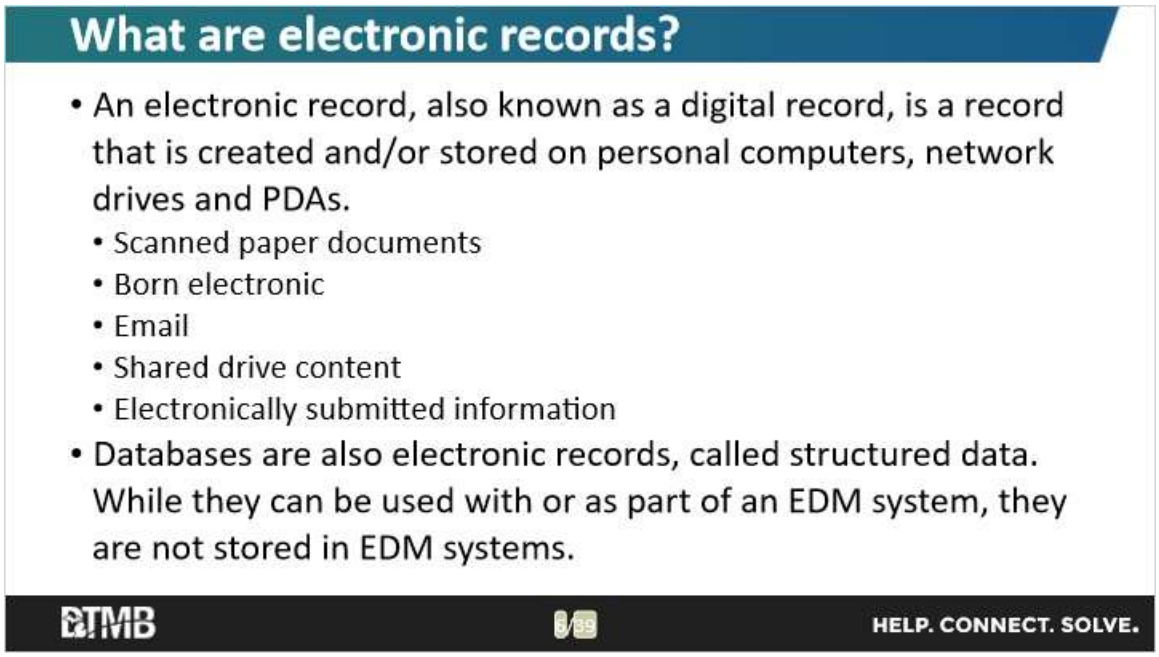
This class will cover:

- What is an electronic document management, also called EDM, system
- If EDM is a good fit for your office
- How to successfully stand up an EDM system
- How to compare EDM solutions



Notes:
Many state agencies are seeking more efficient ways of serving their customers, collaborating with partners, getting information, and using information. As fewer records are born in a paper form, it makes sense to implement an electronic recordkeeping solution.

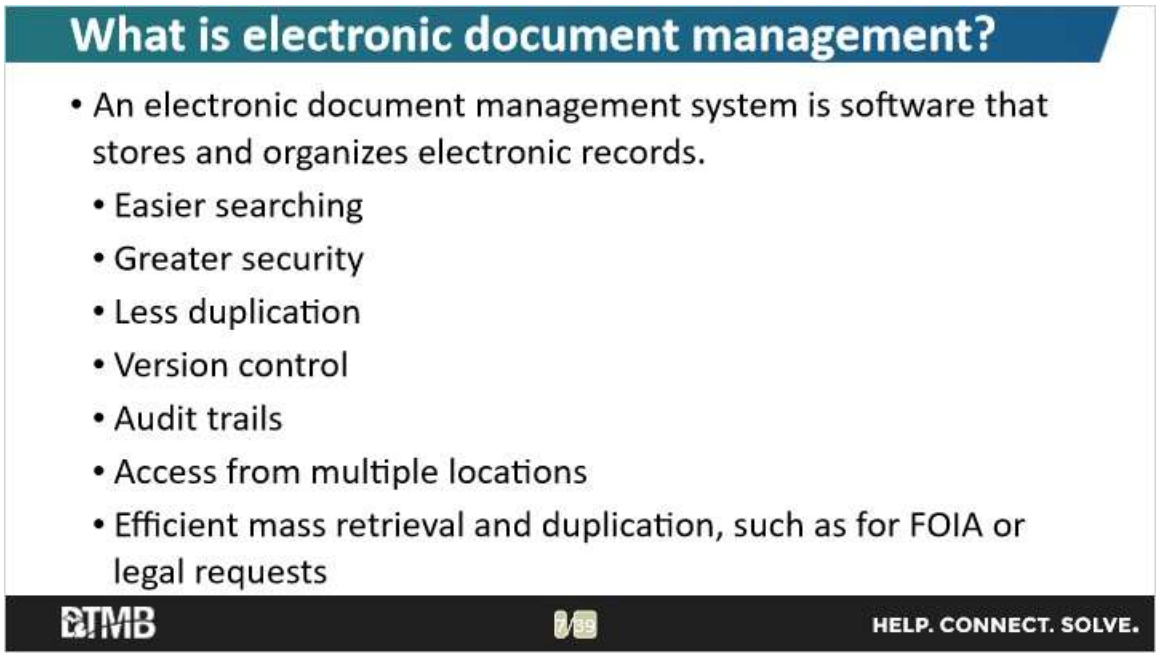
Notes:
There are lots of reasons why agencies consider EDM. Common recordkeeping problems include electronic storage space issues, trouble finding documents, FOIA requests, disorganized records, version control problems, duplicate records, and more.



Notes:
What are electronic records? An electronic record, which can also be known as a digital record, is a record that is created and/or stored on a computer. This can include scanned paper documents, electronically born documents like this PowerPoint presentation, email, records stored on the shared network drive, and information electronically submitted over the Internet.

Databases are also electronic records, called structured data. While they can be used with, or as part of, an electronic document management system, they are not stored in EDM systems, and will not be addressed by this class.

Records Management services offers a separate class on document imaging, the conversion of paper records to digital images. This class will briefly discuss digital imaging, but for a deeper dive, employees should take the document imaging class.



Notes:
An electronic document management system is software that stores and organizes electronic records. There are numerous advantages to an EDM system, including easier searching, greater security, less duplication, version control, audit trails, access from multiple locations, and efficient mass retrieval and duplication. An EDM system should make records easier to find, access, share, and distribute.

Notes:
Is EDM is really a good fit for the office? What are the office's goals for going paperless, and what problems is the office trying to solve? It is important to analyze the root causes of these problems, and to not adopt new technology just because it seems like the coolest and newest must-have gadget.

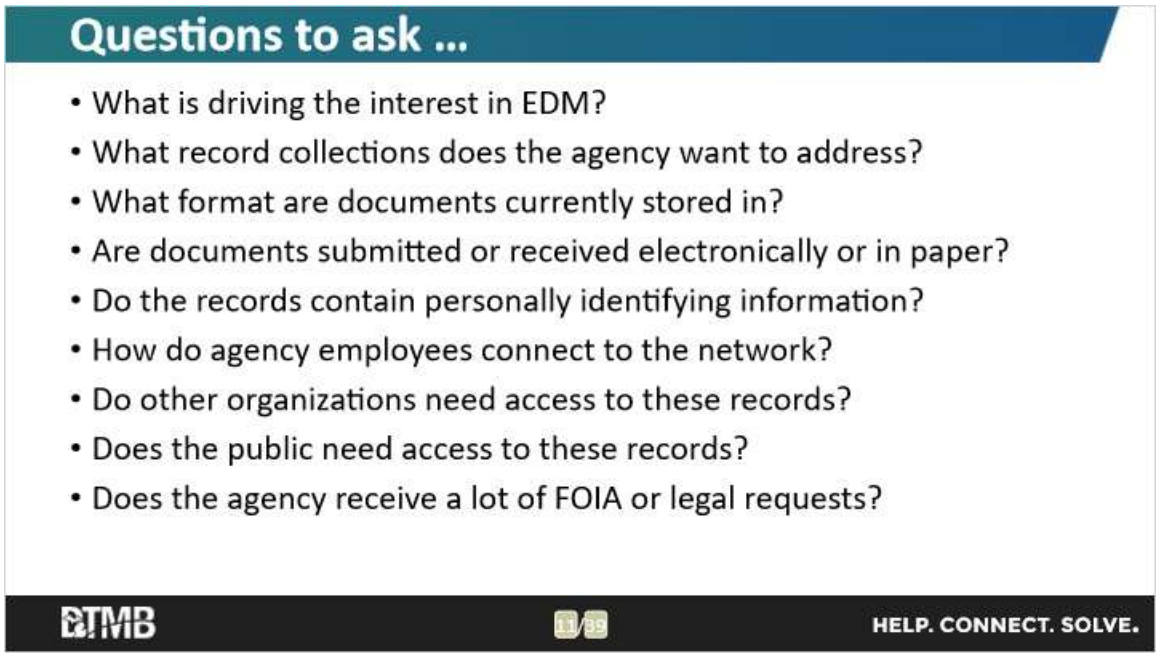
Notes:
There will probably be some clues as to when it is time for an office to start using EDM.

This video illustrates the challenges that offices have with version control that can be resolved using EDM.

EDM can benefit agencies if:

- Staff are in multiple locations who need to access the same records
- There is no available space in the office, and inactive records are not eligible for disposition
- Agency receives frequent mass retrieval requests
- Most of the records that are received or created are electronic

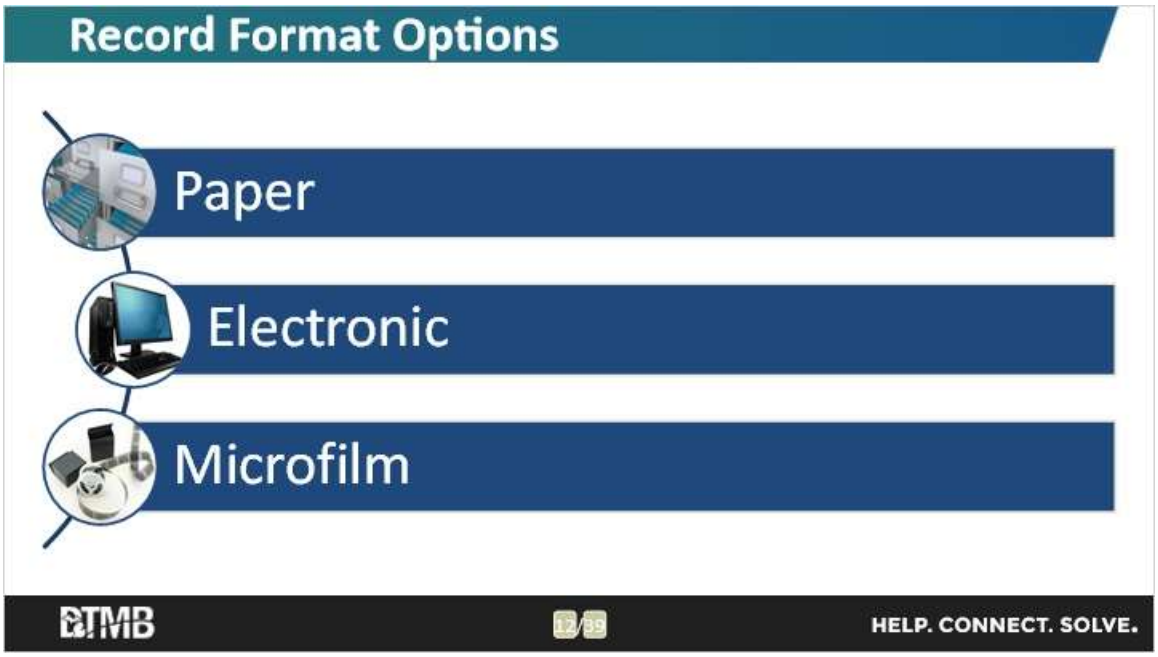
Notes:
Agencies should consider an EDM solution if: they have staff in multiple locations who need to access the same records; they are out of space in their office and do not have inactive records that are eligible for disposition; they receive frequent mass retrieval requests; or most records are received or created electronically. Any of these by themselves are a good reason to consider EDM; if all four of these describe the office, they should definitely consider EDM.



Notes:
Before starting on the EDM journey, ask some questions to determine if EDM is a good solution. For example,

- What is driving the interest in EDM? The previous slide contains some examples.
- What record collections do the agency want to address? It is usually best to start with a small scope and expand later. For example, start with registration files, then add exams, and finally add investigations.
- What format are the documents currently stored in? Are they paper, electronic, or microfilm?
- Are documents submitted or received electronically or in paper?
- Do the records contain personally identifying information or other sensitive material?
- How do agency employees connect to the network? From a desktop at the central office or from a hot spot in the field?
- Do other organizations need access to these records?
- Does the public need access to these records?
- Do the agency receive a lot of FOIA or legal requests?

The answers to these questions might be different, depending on the record collection. The agency might even need different solutions for different collections.



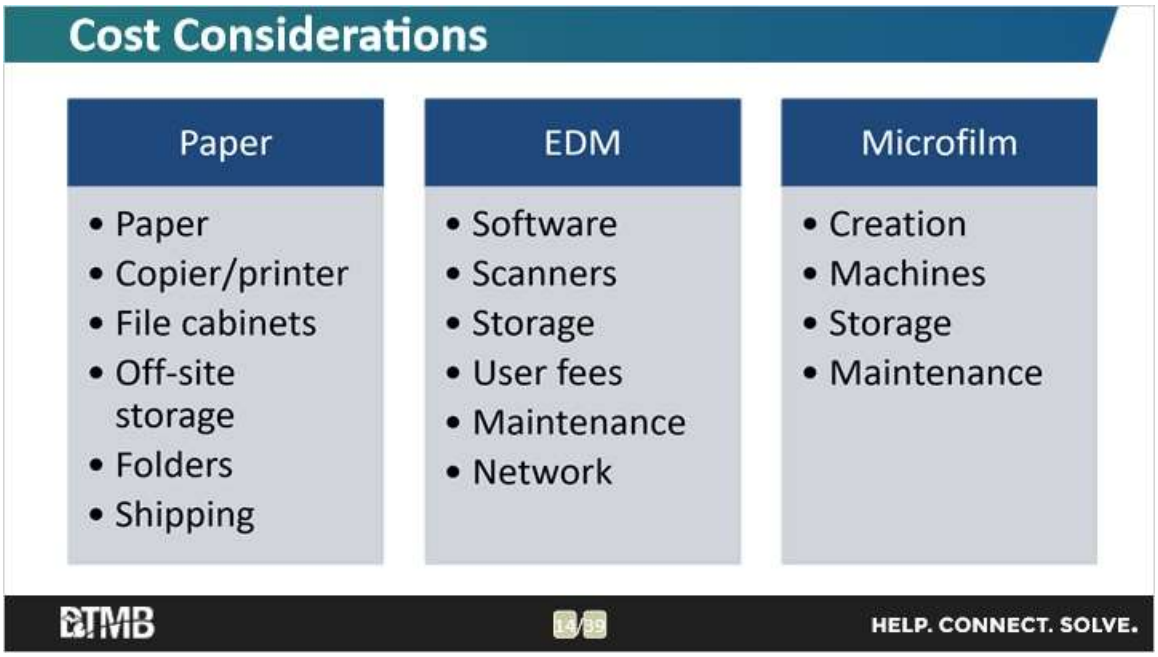
Notes:
When it comes to format, there are three broad choices: paper, electronic, and microfilm.

Evaluating Storage Options	Paper	EDM	Microfilm
Are records retrieved frequently shortly after creation?	●	●	X
Are records retrieved frequently over the entire retention period?	●	●	X
Are records used by multiple people or used at multiple sites?	X	●	X
Are copies sent to agencies outside the office (including FOIA)?	Δ	●	X
Does retrieval need to be immediate?	Δ	●	X
Are records created or received electronically?	X	●	X
Do the records have a retention period greater than 50 years?	●	Δ	●
Are records modified after creation/ filing?	●	●	X
If you answered "yes": ● = preferred Δ = acceptable X = not recommended			

Notes:
Various characteristics of a collection will make it better suited to certain formats. These questions will help compare the different format options.

- Are records retrieved frequently shortly after creation?
- Are records retrieved frequently over their entire retention period?
- Are records used by multiple people or used at multiple sites?
- Are copies sent to people outside the office (including FOIA)?
- Does retrieval need to be immediate?
- Are records created or received electronically?
- Do the records have a retention period greater than 50 years?
- Are records modified after creation/filing?

There may not be an answer that is 100 percent right for each record collection. Asking these kinds of questions can help compare options and identify the one that is best suited to the agency.



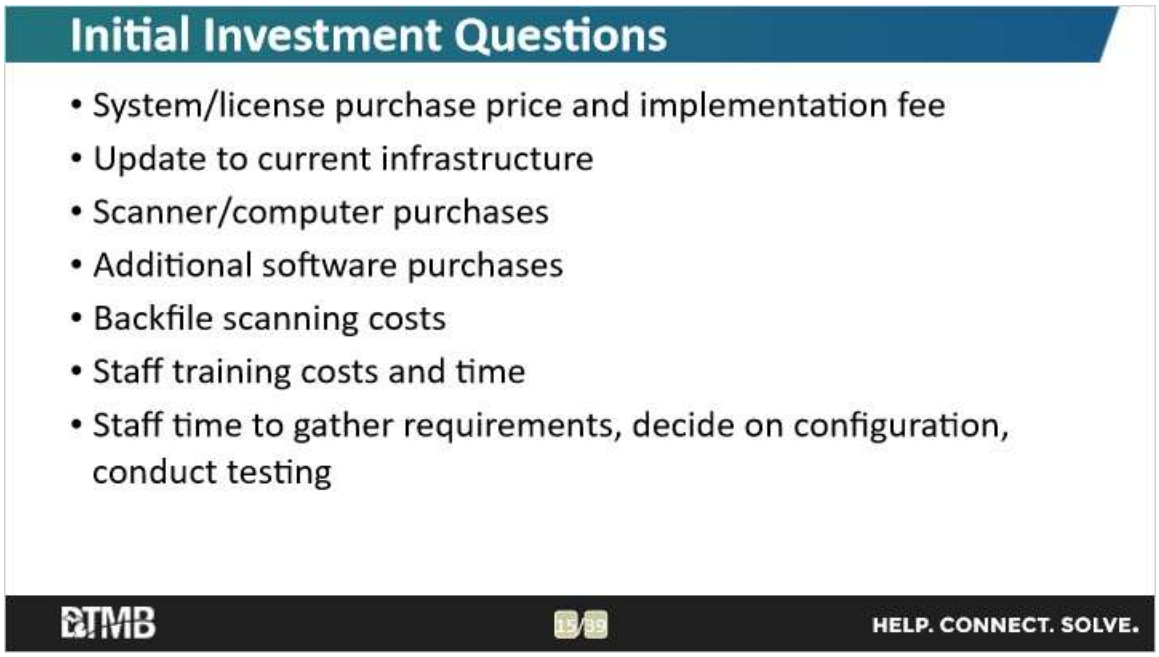
Notes:
Each format has different cost considerations.

With paper, there is the cost of the paper itself, as well as copiers and printers, file cabinets or off-site storage, folders and other office supplies, and shipping.

With an EDM solution, there is the cost of the software, scanners or vendors for conversion, digital storage, user fees, maintenance, and the network.

With microfilm, there is the cost of creation - the most expensive of these options - plus machines to read the film, storage, and maintenance for both machines and film.

Storing records is never free, no matter what format is chosen.



Notes:
There are a lot of things to consider when selecting an EDM system. These are just a few of the things to consider before making a commitment.

Is there a purchase price for the EDM system or licenses? Is there an initial implementation fee? And is that a flat fee or by the hour? If by the hour, how many hours does the vendor estimate?

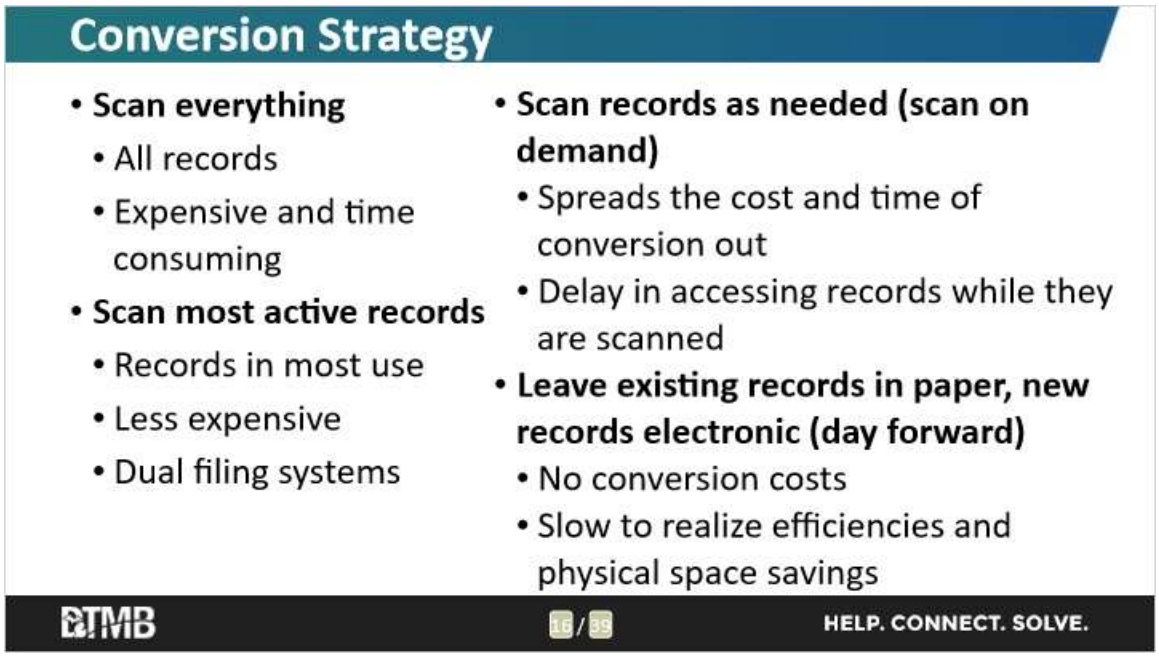
Is the agency's current IT infrastructure compatible with the EDM system, or will it need to be upgraded? For example, agencies that are using dial-up network connection will not be able to use an EDM system.

Will additional computers need to be purchased? Does the agency need to buy scanners or additional software, such as image capture software to go with the new scanners?

Will the agency do backfile scanning, which means scanning in all the existing paper in the office? Will the agency do the scanning in house, or hire a vendor? How much will each scanning option cost?

What is the cost of staff training? How much time will staff spend in training and acclimating to the new system?

How much staff time will it take to develop this system, such as gathering requirements, making configuration decisions, and conducting testing?

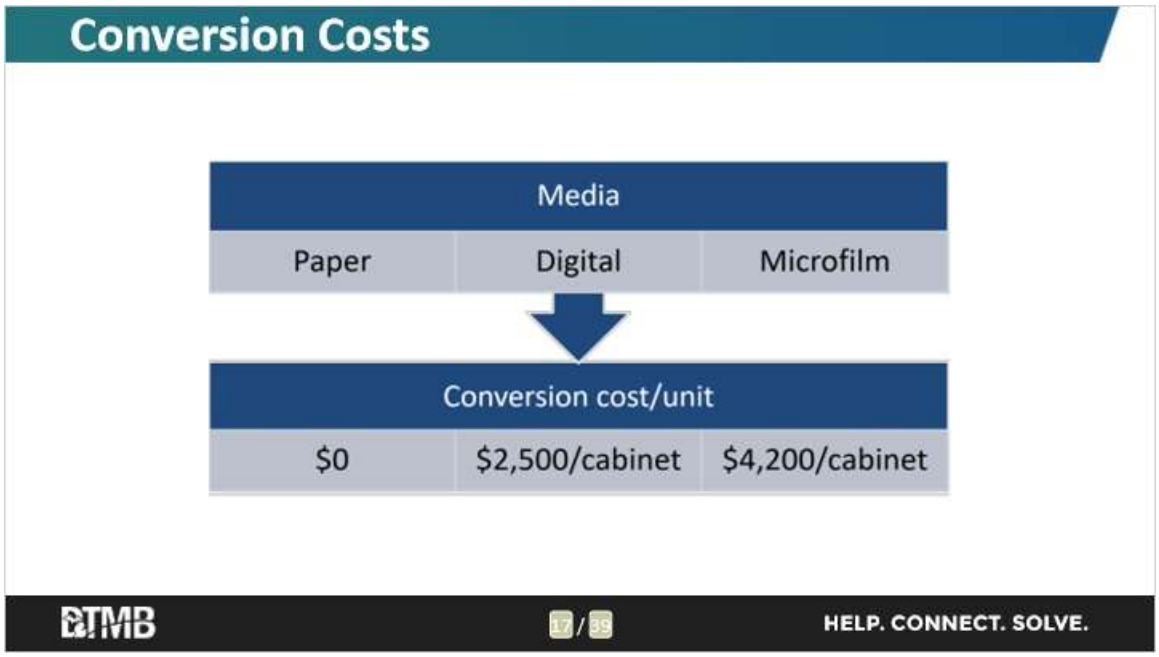


Notes:
There are multiple methods of converting existing paper files into digital images. Agencies could just scan all of their paper. This is frequently an agency's first instinct, and while it does put all of the records at an employee's fingertips, it can be expensive and time-consuming.

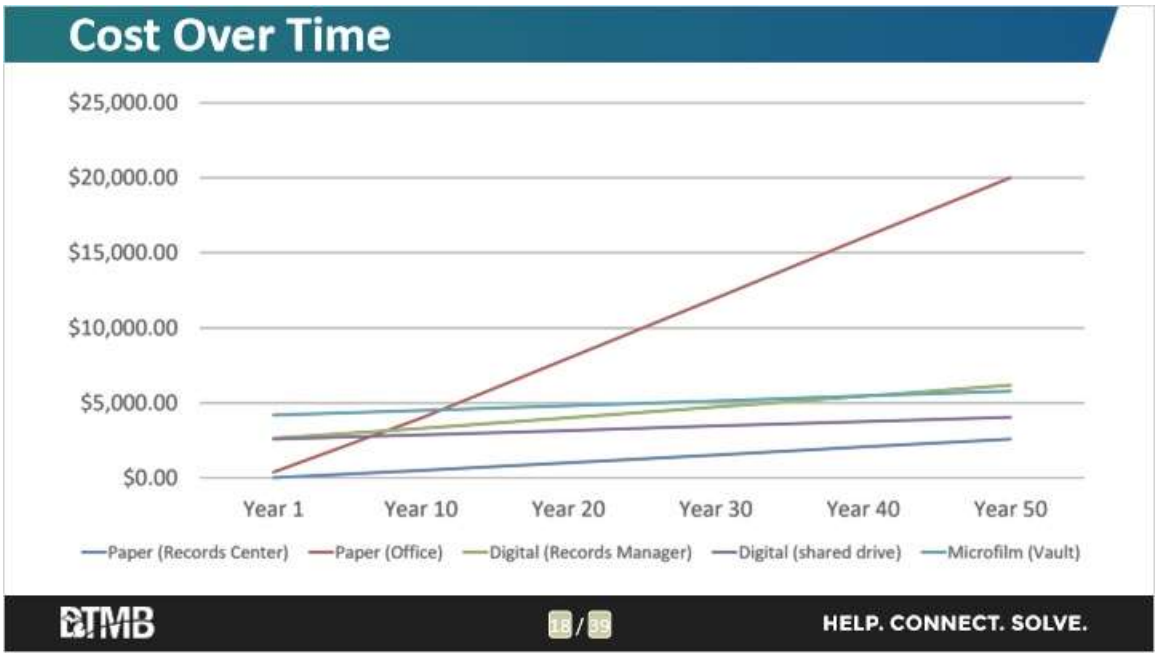
Agencies could scan in their more active records, making them readily available. This method is less expensive. However, this leaves the agency with dual filing systems, both paper and digital. This option can work well when it is combined with scan on demand.

Scan on demand only scans records when they are requested. It can spread the cost and time of a conversion out over years. However, there will be a delay in accessing records while they are getting scanned.

Agencies could adopt a day-forward approach, which leaves their existing records in paper, and only stores new records electronically. Most records are born electronically now, so there are no conversion costs for those records. New records that are created or received as paper would need to be scanned, but the volume of these documents will be low in many situations. The agency will be slow to realize the efficiencies and physical space savings offered by digital storage using this approach.



Notes:
Agencies that decide to do a backfile conversion need to consider the cost. On average, it will cost about $2,500 to convert one five-drawer 36-inch file cabinet of paper to digital images. It will cost about $4,200 to convert the same cabinet to microfilm.



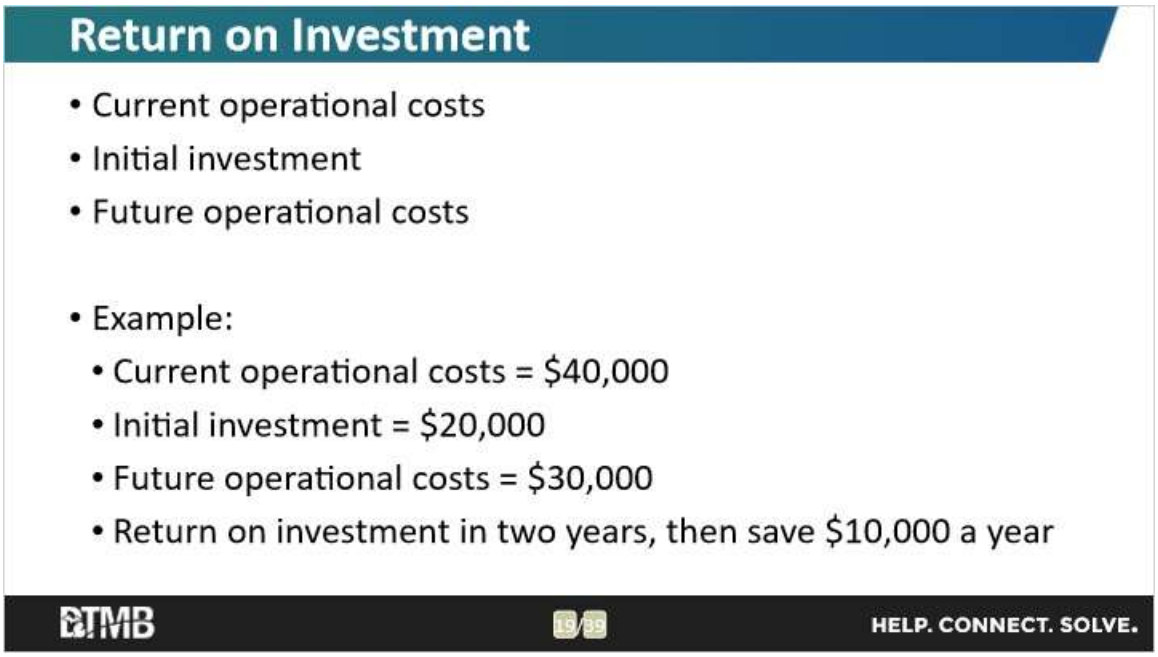
Notes:
The retention period for the records should be considered when comparing the cost of conversion for different record formats, because it will impact the long-term storage costs. This chart compares those costs over time. It does include conversion costs, and assumes that costs are consistent over time with each solution.

The dark blue line along the bottom is the cost of off-site paper records storage. This is always going to be the cheapest option, but it only works for inactive records that need to be maintained. It does not work for active records.

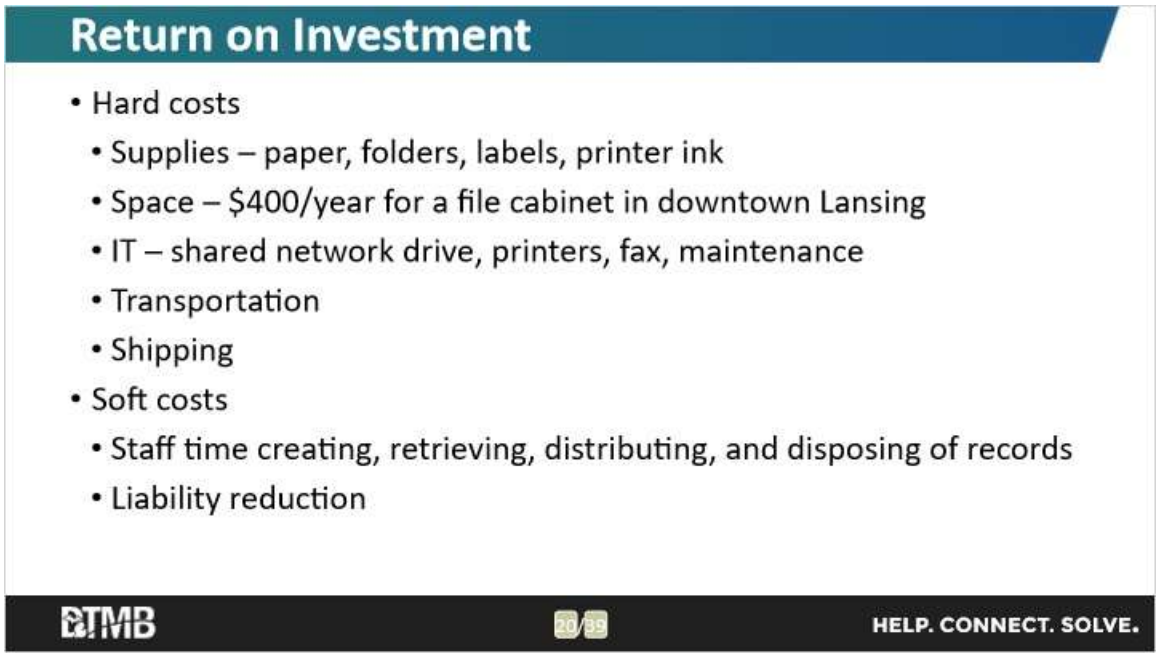
The red line is the cost of keeping paper records in an office. It is only cost-effective for about seven years, and after about year 10, it is the most expensive option. Agencies that need to retain active paper records in their office for longer than seven years should consider a different storage option.

The purple line is digital storage in an unmanaged environment, like a shared network drive. The green line is digital storage in a managed environment, such as an EDM system. The unmanaged environment is always going to be less expensive, and while it offers some benefits, it does not offer robust security, indexing and retention management.

The light blue line along the top is microfilm. Microfilm is expensive to create. However, around year 45 it becomes less expensive than an EDM system. It takes about 45 years to get a return on investment for microfilm, but it may be a good option for long-term records with a retention period of 50 or more years.



Notes:
It is important to estimate the agency's return on investment, also known as ROI, before making any decisions. To determine the ROI, know the current operational costs, the cost of initial investment, and the future operational costs.



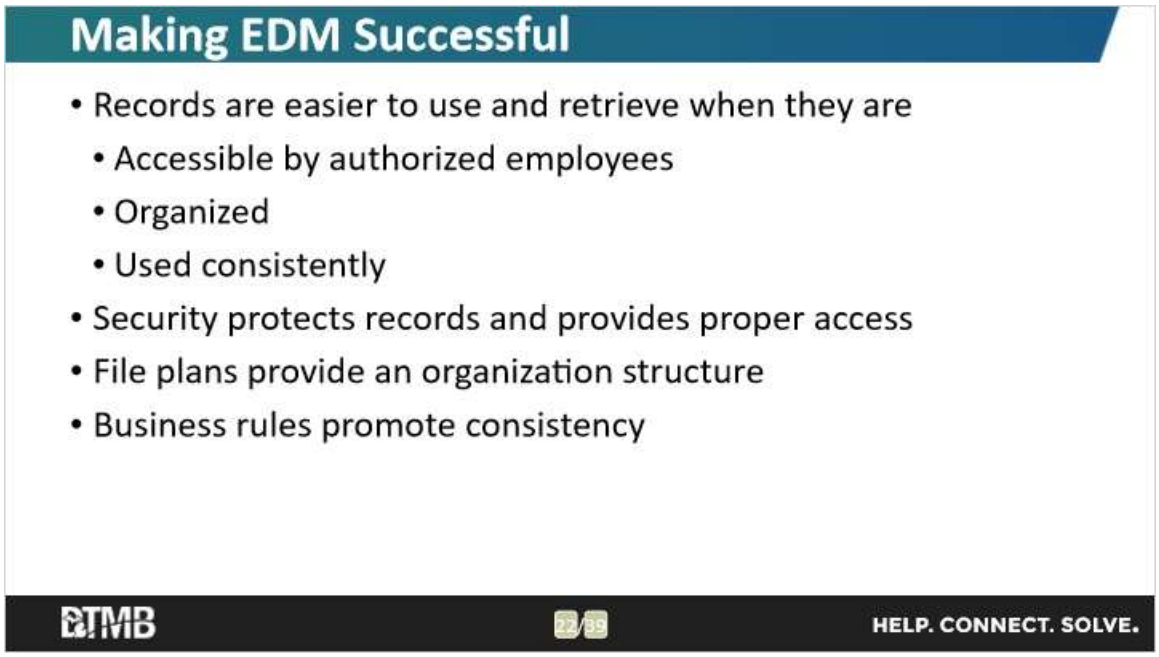
Notes:
Make sure to include all of the current operational costs, including soft costs like employee time. Records Management Services previously worked with and agency that reduced staff time devoted to FOIA requests by two-thirds. Given that they had three full-time people working on FOIA, that meant they went down to one person working on FOIA, and were able to redirect two full-time employees to other work. This meant that they did not need to hire two new employees.

Also look at things like shipping and office supplies. Another agency saw a ROI from shipping costs in one year. They had employees working around the state and all using the same central file system in Lansing. They had two cubicles filled with shipping supplies, primarily for overnight shipping since their staff needed documents right away.

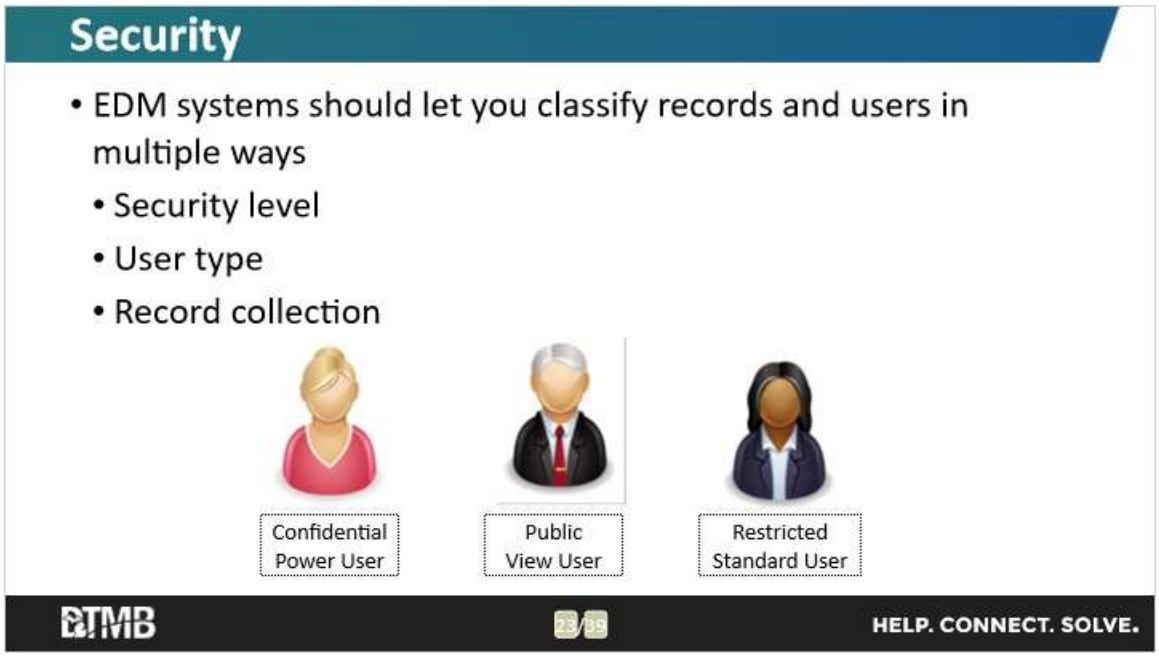
Another agency realized a ROI from office supply costs in two years. This included their office space, folders, paper, highlighters, labels - everything that goes into a paper filing system.

Agencies should also consider the risk and liability reduction that an EDM system offers through increased security and audit trails, and through retention management. It is difficult to put a hard figure on money that the agency is hoping to never spend, but make sure to think about this while making decisions.

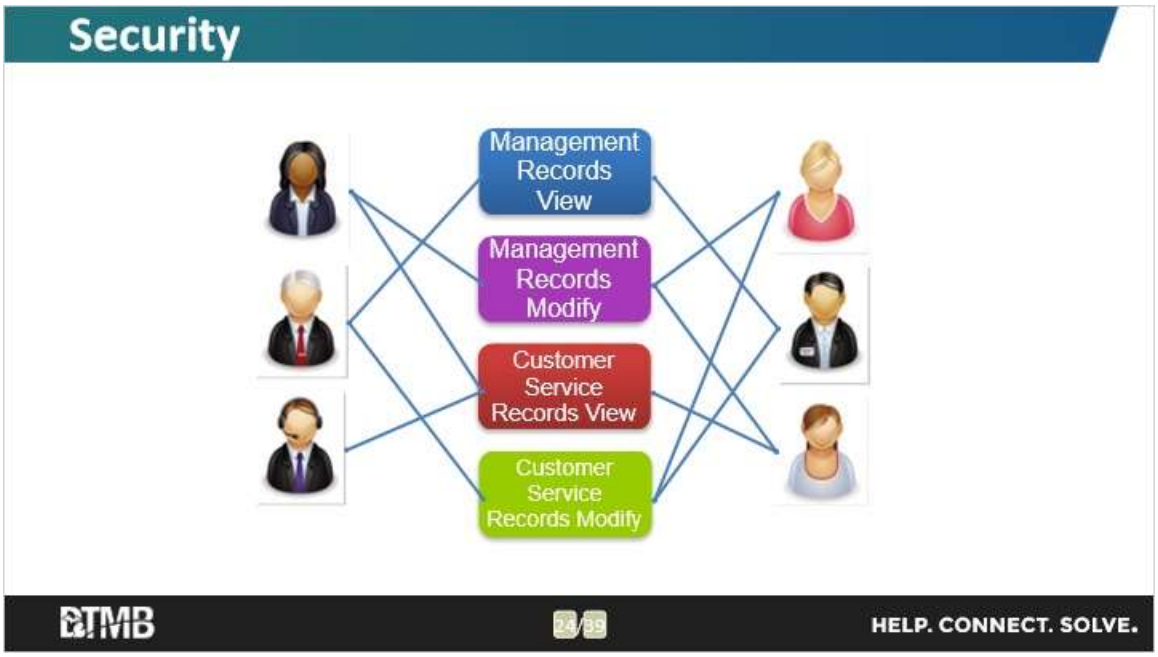
Notes:
EDM is more than a piece of hardware and software. It is also the methods or processes that are employed to manage the content. Essential methods toward achieving a successful EDM implementation are security, file plans, and business rules.



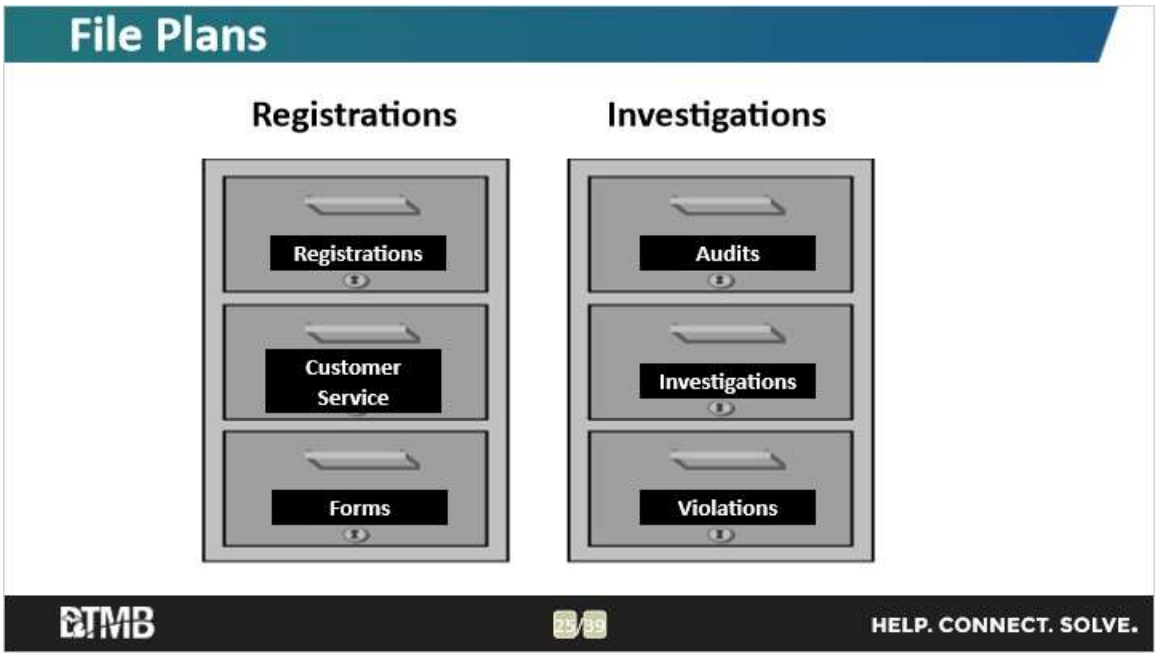
Notes:
Records are easier to use and retrieve when they are accessible by authorized employees, organized, and used consistently. Security protects records and provides proper access, file plans provide an organizational structure, and business rules promote consistency.



Notes:
EDM systems should allow agencies to classify records and users in multiple ways, such as by security level, user type, and access to record collections. These settings control who has what type of access to each type of records.

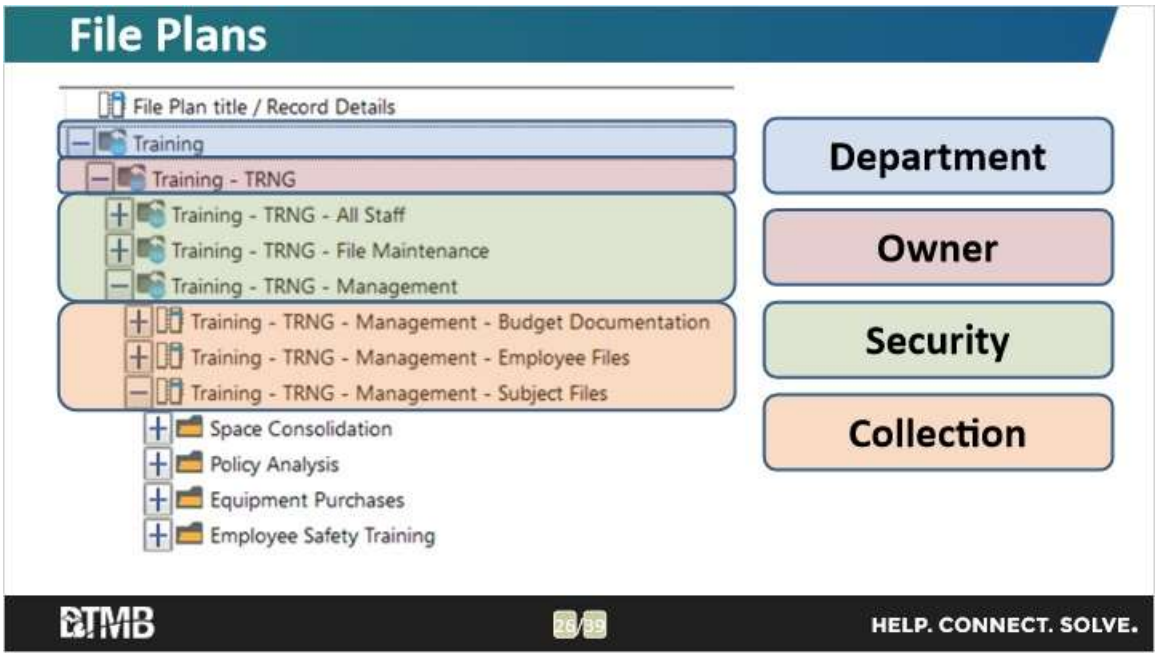


Notes:
When designing the EDM security it is important to determine who needs to access the records that will be stored in the EDM. Do some employees need to access all records owned by the agency, while other employees only need to access certain records that relate to their job duties? Do users need different types of access to different record collections, such as the ability to modify management records but only view customer service records?



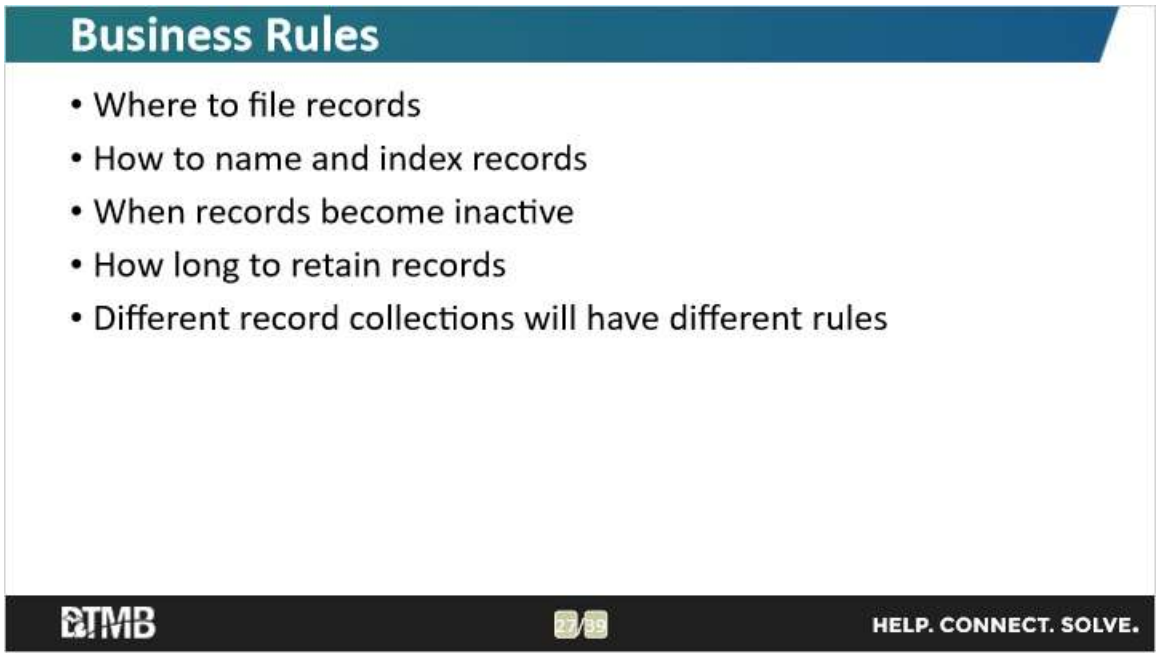
Notes:
File plans identify records collections and organize records according to the business process they support. This allows all records related to an activity to be kept together, so employees only need to look one place to find stuff.

Try to mirror the office's current paper-based system, if it is working effectively. EDM will offer new features that the agency may want to take advantage of, but avoid changing the scope of the staff's day-to-day job tremendously at first. Start small and work toward exploring new ways to leverage EDM features.

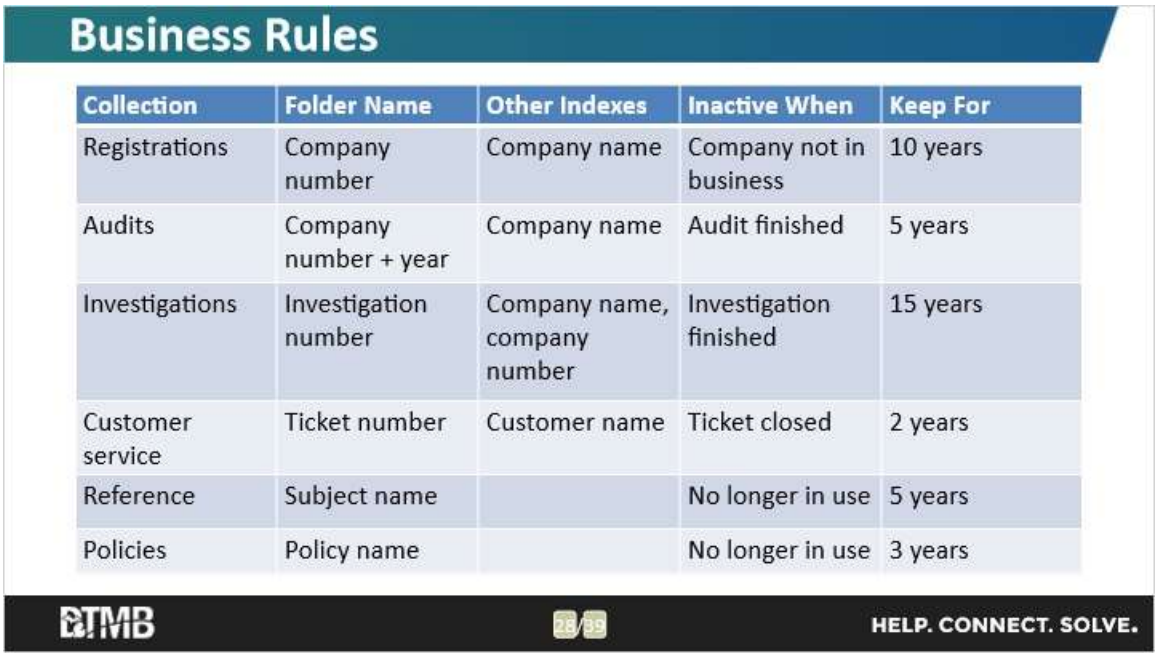


Notes:
Most EDM systems use a file plan to organize records and apply ownership, security, and retention. The first level of the file plan is the department, the next level is the owner of the collection, the next level controls the security and defines which employees can access the collection, and the next level is the collection itself.

However, most end users do not see the file plan structure. The vast majority of EDM systems work like a search engine, where a user enters a search criteria and then receives a list of results. The file plan structure works on the back end to manage records, while the end user searches for and identifies the records they want.



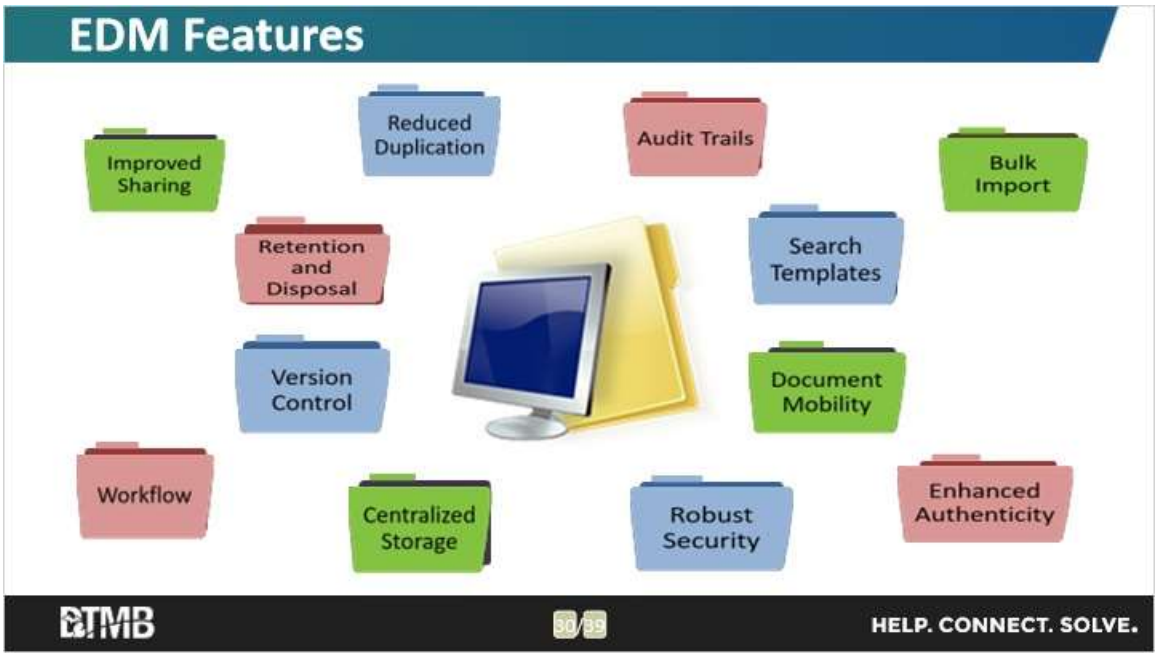
Notes:
Business rules help employees understand where to file records, and how to name or otherwise index them to support easy search and retrieval. The goal is to be able to find what is needed when it is needed, quickly and easily. Different record collections will have different rules.



Notes:
Some record collections may have multiple index values, or ways to search for them. Others may only have a naming rule. These rules should include when records become inactive and how long they should be retained, in alignment with retention schedules.

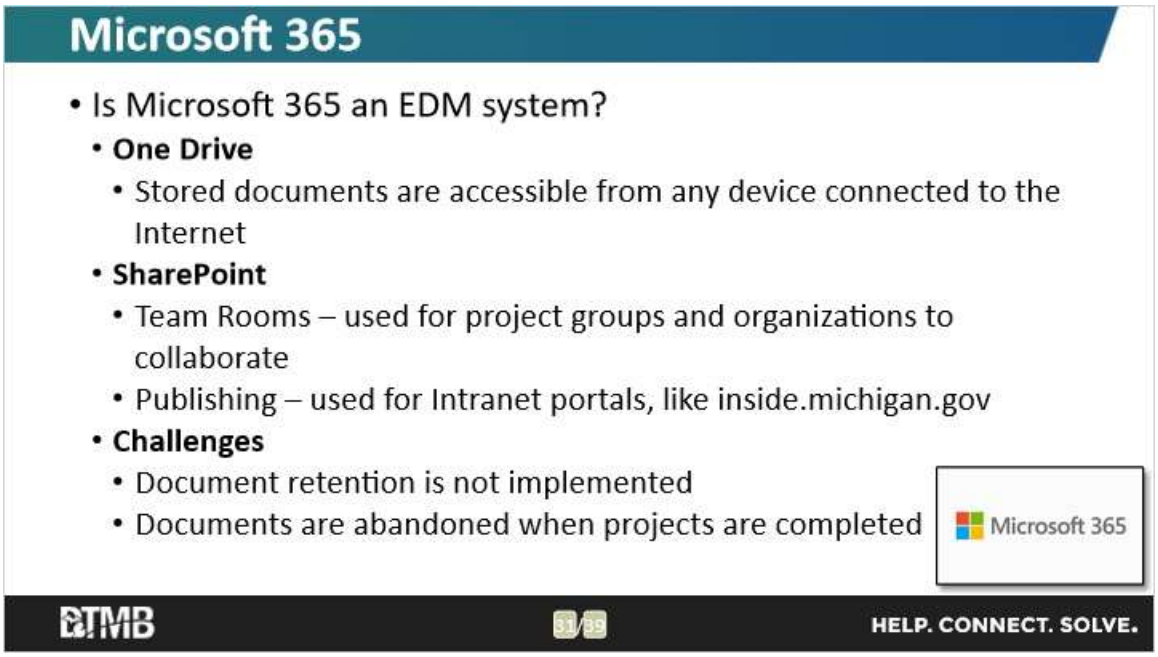
This table provides some examples of business rules. Such as, audit files are stored in folders that are named according to the company number and year of the audit. They are indexed by the company name. They are inactive when the audit is finished, and then are kept for another 5 years.

Notes:
There are many EDM solutions available today. How can agencies assess them to see which is the best match?



Notes:
Different EDM systems will usually offer similar functions. Some of these features are inherent to the nature of EDM systems, such as centralized storage, improved sharing, reduced duplication, and document mobility. Some make managing the electronic records easier, such as workflow, version control, search templates, and bulk import.

Some features are critical to the success of the EDM application. Ask about these features early and often. These include retention and disposal, audit trails, robust security, and enhanced authenticity. These should be requirements for any EDM system.

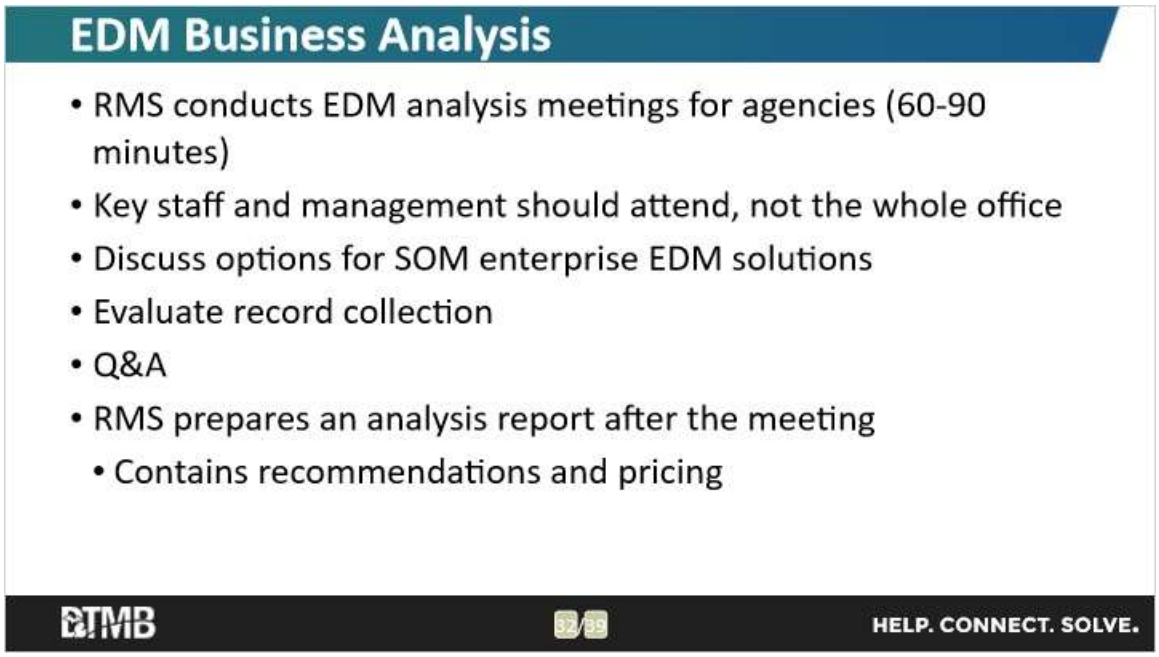


Notes:
Employees often ask if they can put all of their electronic documents in Microsoft 365. Microsoft 365 has great document creation, communication, and collaboration tools, but it is not an EDM system.

OneDrive provides document storage that is accessible any computer or device with Internet access.

SharePoint is a collaboration tool. It can be used for Team Rooms for project groups, and for organizations to collaborate on shared documents. It can also be used for publishing, such as for Intranet portals, like inside.Michigan.gov.

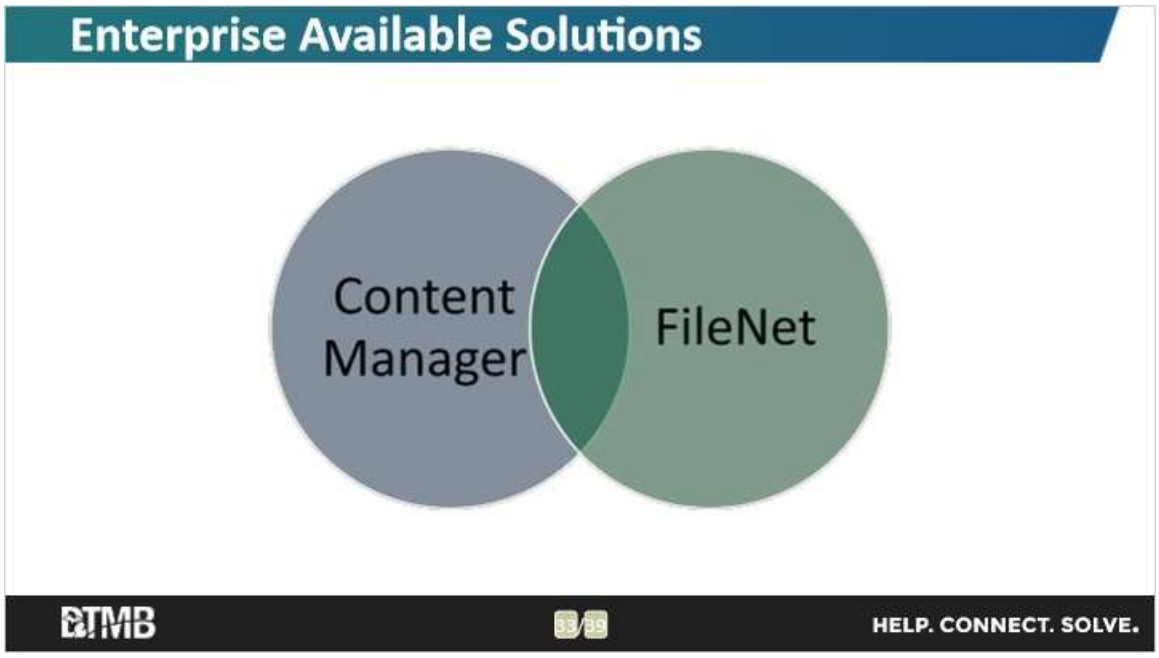
The State of Michigan is not using the document retention tools that exist within Microsoft 365. Documents are often abandoned when projects are completed.



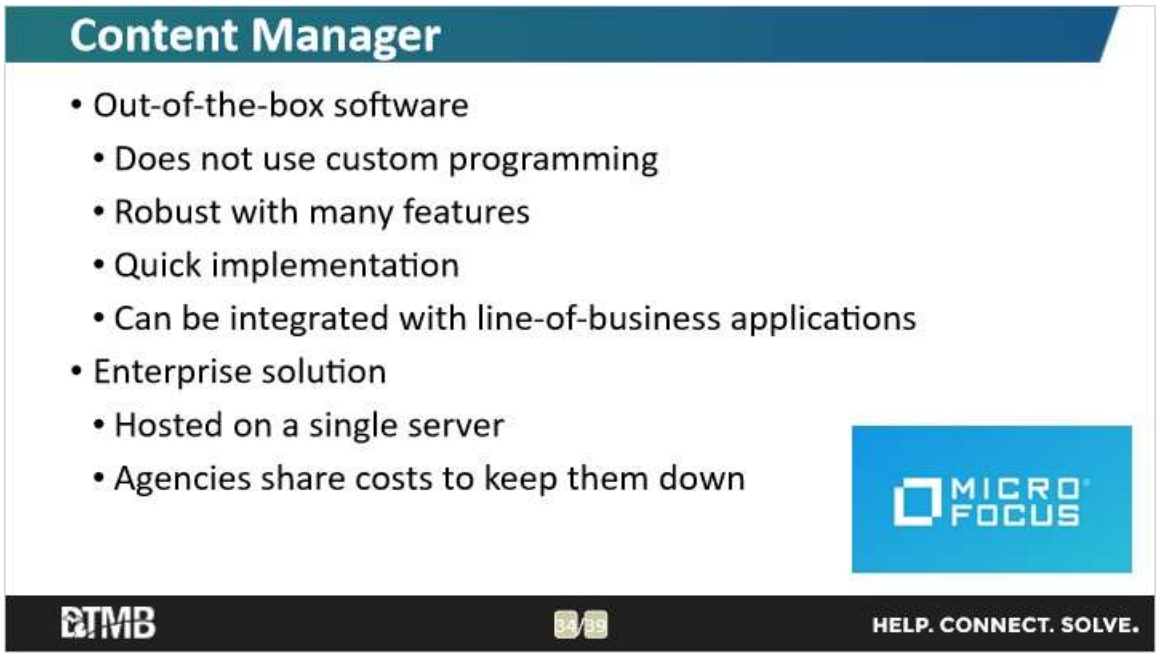
Notes:
Helping state agencies assess their options is one of the functions of Records Management Services.

State agencies interested in electronic document management can request an EDM business analysis from RMS. The meeting takes 60-90 minutes and is held at the requesting agency's location. Key staff and management should attend. It is not necessary to have everyone in the office attend this initial meeting. RMS will ask a series of questions about the agency's records and business processes that help to determine if EDM is a good fit, and what the right solution is. RMS will prepare an analysis report after the meeting that will contain recommendations and pricing for different EDM options.

The analysis may recommend an EDM solution, or a paper or microfilm solution. It will also provide pricing for different solutions.

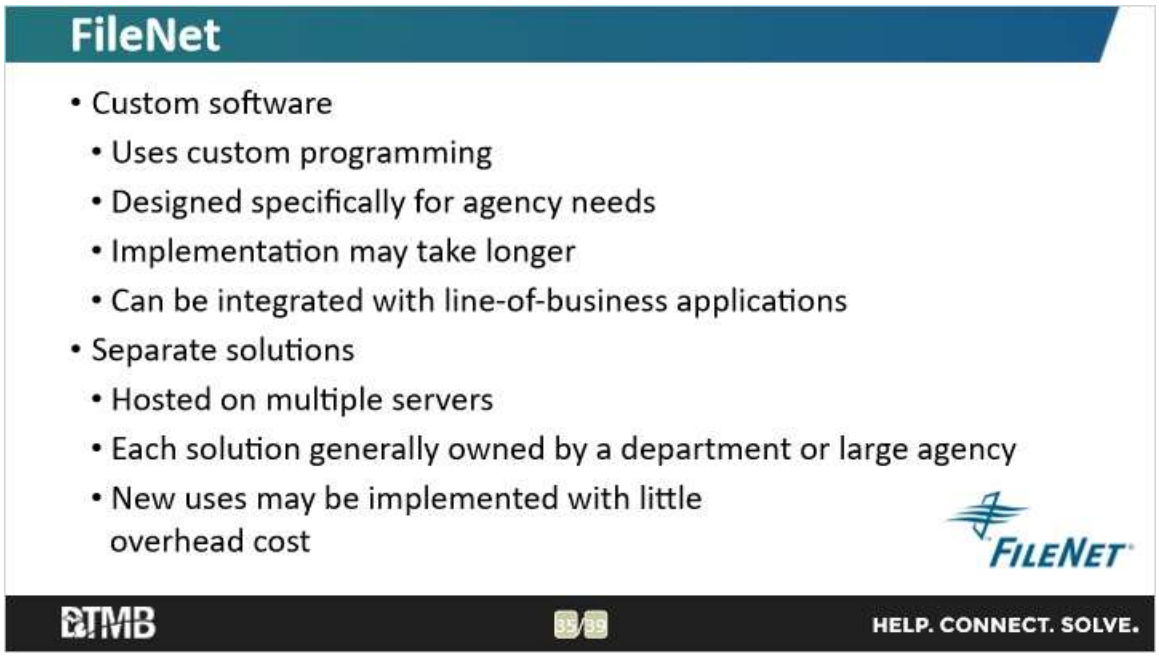


Notes:
State agencies can choose to use one of the state's two enterprise electronic document management systems, Content Manager (formerly TRIM and Records Manager) and FileNet.



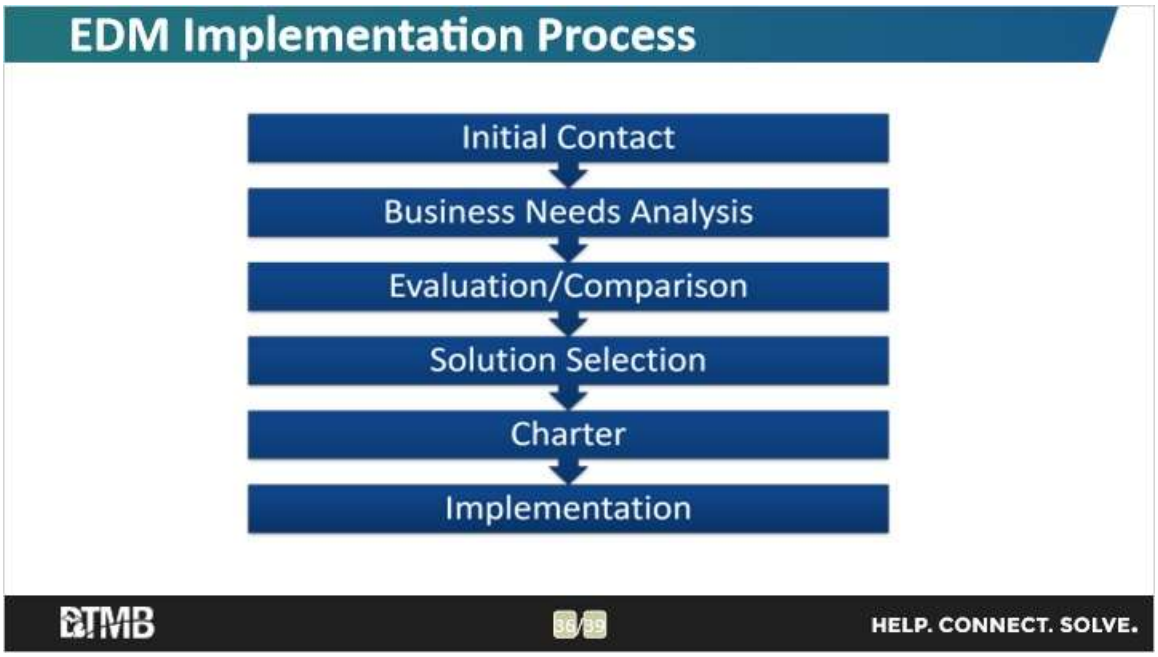
Notes:
Content Manager from MicroFocus is an out-of-the-box enterprise solution for State of Michigan agencies. Out-of-the-box means that this software was not specifically designed for the State of Michigan. Programmers are not used to set the software up for use by different agencies. Instead, tools within the software are used to configure the software to meet different needs. Within its box, Content Manager is robust and offers a wide variety of features. Content Manager is also an enterprise solution, meaning it is hosted on a single server as a single instance. Everyone shares the same environment but can only access their own records due to access controls.

Because it is an out-of-the-box software, Content Manager is generally quick to stand up, and being an enterprise solution, its costs are kept low. It can be integrated with line-of-business applications, though this does involve additional resources like programmers to hook the two systems together.



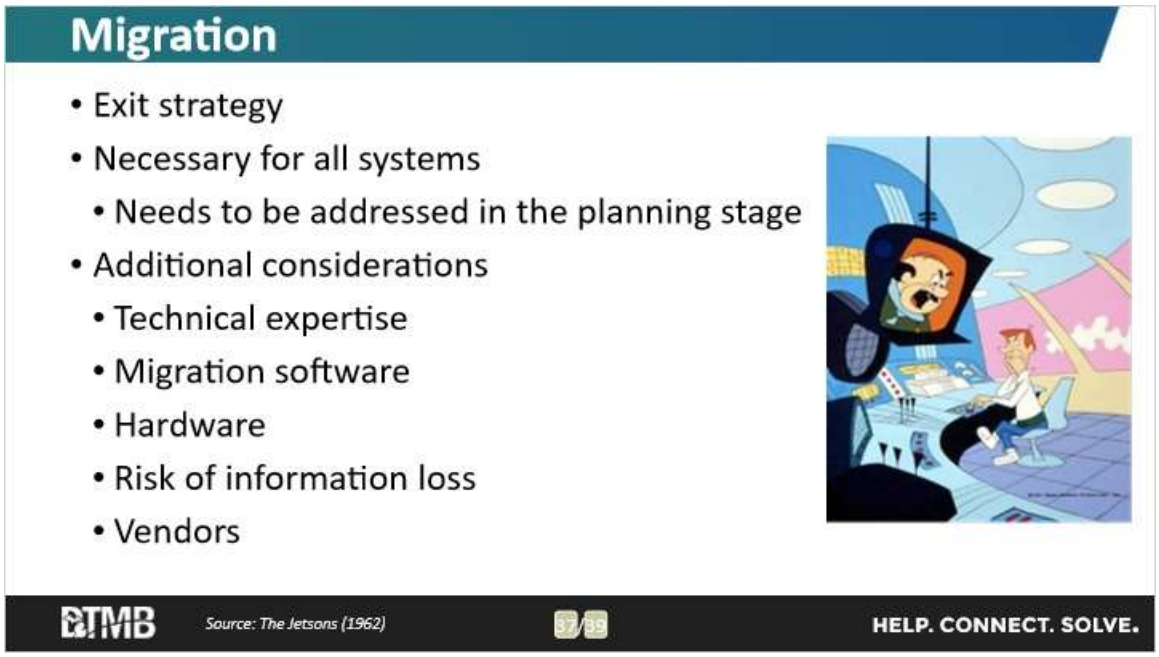
Notes:
FileNet from IBM has an out-of-the box package, but most State of Michigan agencies that use it have a custom solution, meaning that it was designed by computer programmers specifically for their needs. FileNet also has several separate solutions dedicated just to one department or one system. These are hosted on separate servers with separate support teams.

Because it is administered by programmers, FileNet can take longer to stand up, but it also can meet an agency's exact specifications. Although it has several separate environments, they are used for large user bases, generally an entire department, and can often be expanded to new uses within that department without difficulty. Departments using FileNet often have purchased a large number of licenses, and agencies with a new use for the software may be able to implement the solution with little overhead cost. FileNet can also be integrated with line-of-business applications.



Notes:
These are the steps that need to be taken to start using SOM EDM solutions. First, interested agencies should contact RMS. An analyst will meet with the agency to collect information about the agency's records, business processes, and recordkeeping needs. The analyst will use this information to prepare a business needs analysis. This is not a technical document. Instead, it focuses on business processes, retention schedules, security needs, and retrieval needs. The analysis will evaluate and compare options to address the agency's issue, and it will be sent to the agency for consideration.

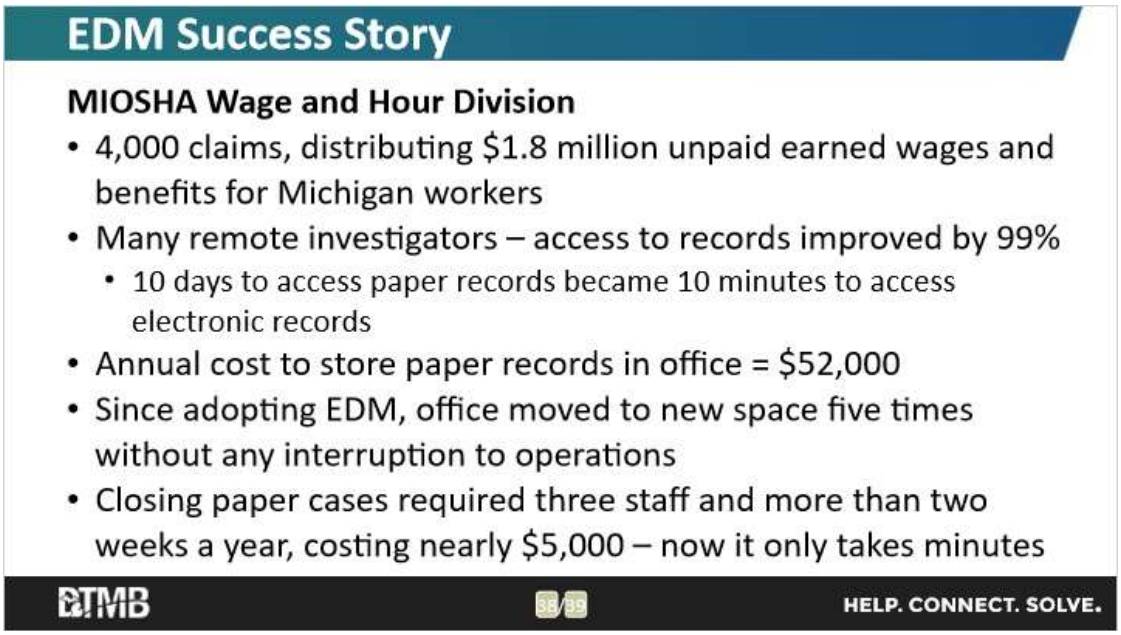
If the agency decides to proceed with EDM there will be a charter agreement that will be signed by all parties. The charter will define the next implementation steps for the project. These steps include file plan development, defining user roles, testing, training, and maintenance.



Notes:
It is never too soon to think about the future. On the day that the agency gets its EDM system, it will be the newest, fanciest, best system ever invented. Until the second day... In today's world, technology changes fast and eventually the time will come to move on to a newer, fancier, better EDM system. Start thinking about that move when selecting the system, not years down the road.

Try to determine if the agency will need to hire people or use additional resources to migrate the records from one system to another? Will the agency have to buy additional software or hardware? Can the agency move all of the data and scanned documents without losing anything? Will the agency have to pay a vendor to get out of a contract, or to turn over the records? Thinking about these things now will save money and headache in the future.

When, as The Jetsons predicted, we will all be using punch cards and tube televisions.



Notes:
The following is an EDM success story. The MIOSHA Wage and Hour Division, now part of LEO and previously part of LARA, protects the wages and benefits of Michigan workers, who can file claims if their employer has not followed a law or regulation. While claims can be filed online, many are still filed by paper mail, email, or fax. Annually, the division processes 4,000 claims, collecting and distributing $1.8 million in unpaid earned wages and benefits to workers.

With the implementation of Content Manager in 2012, the division gained numerous efficiencies. Previously, administrative support staff would manually copy claim documents for investigators who worked from home. These investigators received documents by mail, causing a delay of at least a week. Investigators in the Upper Peninsula would not receive documents related to their claim caseload for 10 days when sent by mail. Currently, administrative support staff scan documents that are received by mail, making them available within a day of receipt. Once filed, records are immediately available to staff from anywhere. If a paper document has not yet been scanned, it can be scanned, uploaded, and available to remote staff in no more than 10 minutes.

Prior to moving into EDM, the division had 244 square feet of paper storage for active records in its office. At a cost of $18 per square foot per month, the annual cost to store paper records in the office was $52,700.

Since adopting EDM system, the division has moved five times with no interruption to investigator access to records. The agency was able to resume operations within minutes of relocating, rather than spending weeks unpacking and re-filing records.

The division achieved additional efficiencies during record maintenance activities. With paper records, the division conducted an annual process of identifying closed cases, boxing the paper records, indexing them, and sending them to the State Records Center for storage. This process required three staff people working for two weeks at a cost of nearly $5,000. Now, closing case files is part of routine operations and takes minutes.

Notes:
Thank you for viewing this online class. Please visit the website, https://inside.michigan.gov/recordsmanagement, for additional information about retention schedules, digital imaging, and much more!