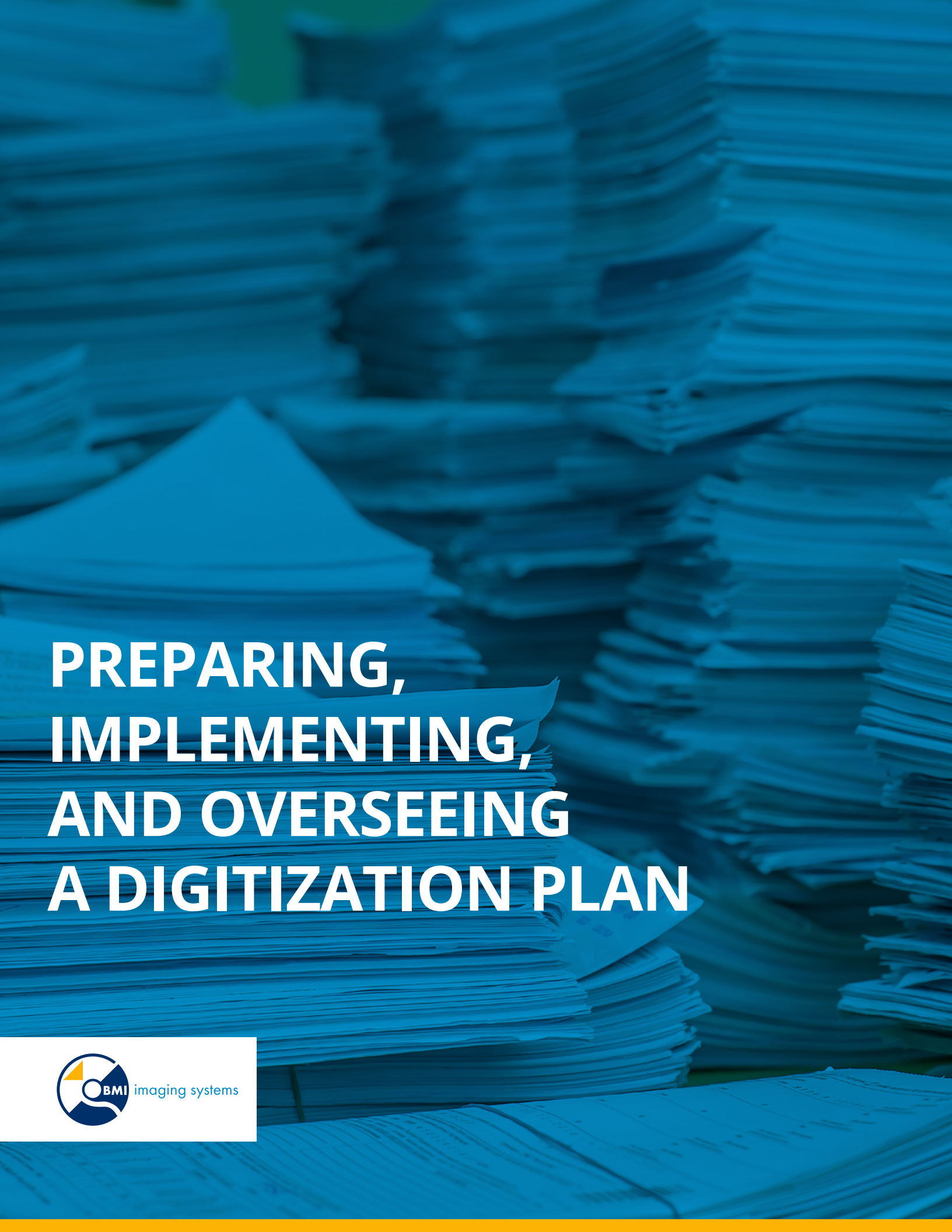


PREPARING, IMPLEMENTING, AND OVERSEEING A DIGITIZATION PLAN

BMI imaging systems

PREPARING, IMPLEMENTING, AND OVERSEEING A DIGITIZATION PLAN

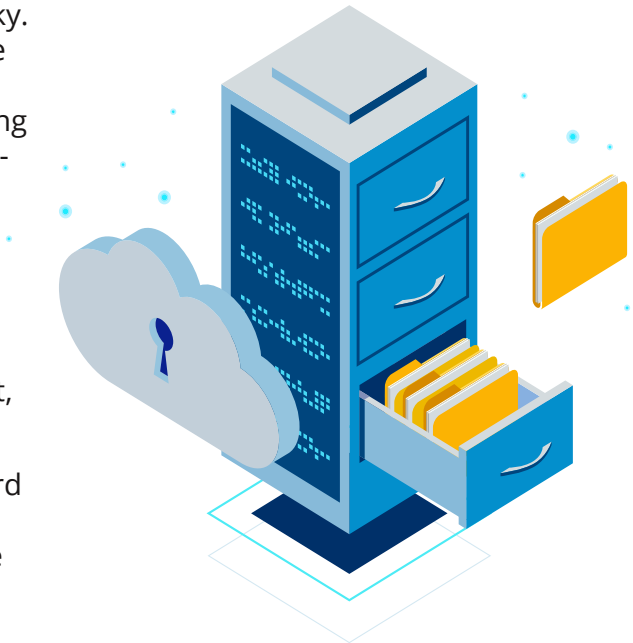
If you've been holding on to paper documents and records stored on microfiche, microfilm, and aperture cards, you're likely aware of the pain points that come with storing and retrieving physical records.

They take up space. They're vulnerable to environmental factors like temperature and natural disasters. They slowly erode each time they're handled. They could be stolen, lost, or misplaced at any time, causing inefficiencies and needless expenses for your business.

THE NEW AGE OF DATA

There's a lot of data in the world and it's being created at a rapid pace; more than 90% of the world's data has been created since 2016. If you keep a portion of your records online, it makes sense to move what you've been storing physically to digital storage, as well.

Maintaining physical storage of records can be financially risky. The 2018 Cost of a Data Breach Study by Ponemon found the average cost for each stolen or lost record with confidential and sensitive information is $148. Data theft and loss is getting costlier each year. In 2018, the cost increased 4.8% year-over-year.

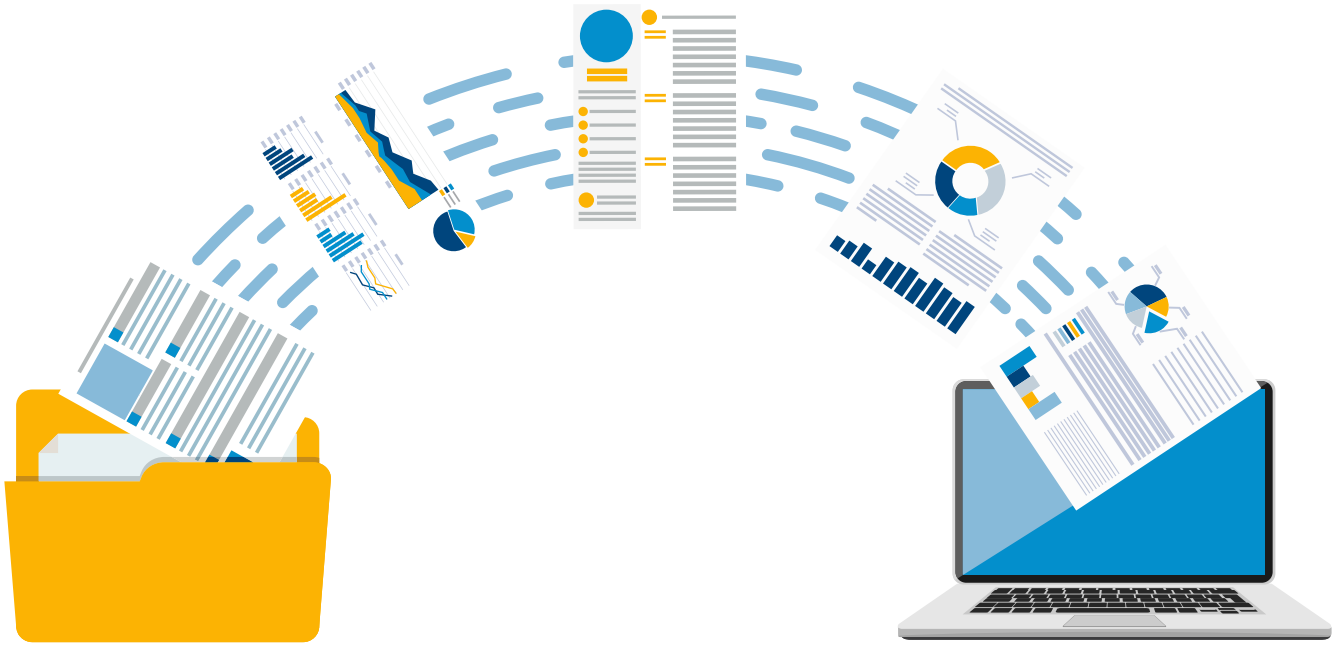


It's important to get on board with digitization as soon as possible, because research shows that companies that do are seeing higher profits. McKinsey & Company reports 49% of leading companies invest in digitization more than their counterparts do. Digitization requires an up-front investment, but it can pay profit-boosting dividends over time.

When you contemplate making the move from physical record storage to digitization, you need a digitization plan for a successful transition. Use this eBook to learn more about the benefits of digitization, how to plan the digitization process along with how to effectively use your new digitized system.

THE BENEFITS OF DIGITIZATION SOLUTIONS

From freeing up your staff and saving time and money to ensuring you always have the records you need a few clicks away, digitization solutions provide advantages for your staff and those you serve. Before describing the advantages, we'll take a look at some risks associated with not converting your records to a digital format.



THE RISKS & HASSLES OF PHYSICAL RECORDS

Maintaining physical records makes record-keeping more prone to human error and destruction. There's more to keep track of, more to store, and a higher risk of losing or mishandling a record.

PHYSICAL STORAGE IS INEFFICIENT AND COSTS TIME

According to the United States Department of Commerce National Technical Information Service (NTIS), this is what physical record-keeping costs a business.

$880 A YEAR:
The cost of maintaining a five-drawer file cabinet

$11 A YEAR:
The cost-per-inch of paper documents

10 MINUTES:
The average amount of time for a document to be retrieved and re-filed

Plus, around 5% of documents are lost and 3% are misfiled.

PHYSICAL RECORDS BREAK DOWN

Paper, books, microfilm, microfiche, aperture cards, and other types of physical records often contain historical records. These records might not be frequently requested and become an afterthought in an archive, but they're nevertheless important to retain.

These records deteriorate naturally over time and if not properly stored, the process accelerates. Heat and high humidity, for example, can lead to chemical reactions, mold growth, and insect activity. Conversely, if there's too little humidity, embrittlement and desiccation can occur. Too often, clients do not pay attention to these records because they're not frequently requested or accessed.

According to the National Archives, the best conditions to preserve historical documents are:

- Temperatures below 75 degrees Fahrenheit
- Relative humidity below 65% but above 15%
- Storage away from rooms that are damp, hot, and/or susceptible to wet conditions

Rooms that have temperature and relative humidity fluctuations can also be damaging. Archival records will expand and contract to react to environmental changes, which can lead to warping, deterioration, flaking, and cracking.

Microfilm and microfiche are also vulnerable to "vinegar syndrome," where the film breaks down and emits a strong vinegar smell. Hot, humid conditions cause the film to shrink and become brittle, which distorts the images.

Ensuring optimal environmental conditions requires time, money, and resources.

NATURAL DISASTERS COULD DESTROY RECORDS

When you store your records in a physical space, they're vulnerable to any natural disaster that affects it including fires, floods, earthquakes, cyclones, hurricanes, and tornadoes. The National Oceanic and Atmospheric Administration (NOAA) reports that from 2016 to 2018 the annual average number of billion-dollar disasters was more than double the long-term average and that the frequency of natural disasters is increasing.

A physical space is rarely foolproof, and since environmental changes can be caused by your staff (such as improper temperature changes) every physical space is at risk for harming your records.

SECURITY CONCERNS AFFECT SENSITIVE MATERIALS

Business theft is a serious concern.

According to the National Criminal Justice Reference Service, in 2018 there were 65,486 robberies at United States businesses;more than 28% of burglaries occur at non-residence locations.

Besides someone breaking into your organization and stealing records, there are also threats from within: employees. Sensitive materials, such as criminal records or health information, are at risk of being stolen or shared with an unauthorized party. The per capita cost of lost or stolen records is higher than average for industries like healthcare ($408 per record) and finance ($206 per record).

RECORDS MAY BE MISHANDLED

Wear and tear of records occur whenever they're handled. Fingerprints, transferring contamination from foreign materials to records, dirt, and abrasion are a few ways records deteriorate from mishandling.

PHYSICAL STORAGE IS INEFFICIENT AND COSTS TIME

According to the Institute of Museum and Library Services, mishandling can occur through:

- Using the wrong tape or ink
- Not washing and drying hands before handling materials
- Not using gloves for certain materials
- Not packaging materials appropriately
- Records coming into contact with jewelry and other objects

Staff who are not trained or who misunderstand directions can make costly mistakes.

Record mishandling could also result in the accidental destruction or loss of a record. If that was the only copy of that record, that means time and money is required to locate or replace it.

PHYSICAL RECORD-KEEPING IS INEFFICIENT

Staff time, organizational funds, and customer service time are all precious resources that are spent on physical record-keeping. Using microfilm as an example, to get an idea of the amount of time you can save by going digital take a look at our infographic "Making the Business Case For Microfilm Digitization" and consider the following digitization case studies:

After the **Phoenix Police Department** digitally converted more than 5,500 microfilm rolls (with more than 15 million images) dating back to 1960, the result was an estimated **savings of 8 hours per day.**

The **San Francisco County Superior Court** converted more than 4,000 rolls of 16mm microfilm to 5 terabytes of data accessible by all court staff. That resulted in an estimated **savings of 100 hours per day.**

WHY YOU SHOULD CHOOSE DIGITIZATION

Now that you know the risks of not going digital, here are the advantages of choosing to digitize your records.

DIGITIZATION SAVES MONEY

First, consider the physical costs of storing records non-digitally. There are:

- Office space requirements
- Cabinets, shelves, and racks for storage
- Costs to maintain and repair or replace broken equipment

It typically costs at least several dollars per square foot to rent office space, with a yearly cost between $4,194 to $14,800 per employee a year, depending on your location. Translate that to how much space you're using to store your records.

To put equipment maintenance costs in perspective, the average annual maintenance cost for 15 microfilm readers is $20,000. You'll also need to maintain climate-controlled environments to ensure records don't deteriorate.

DIGITIZATION SAVES TIME

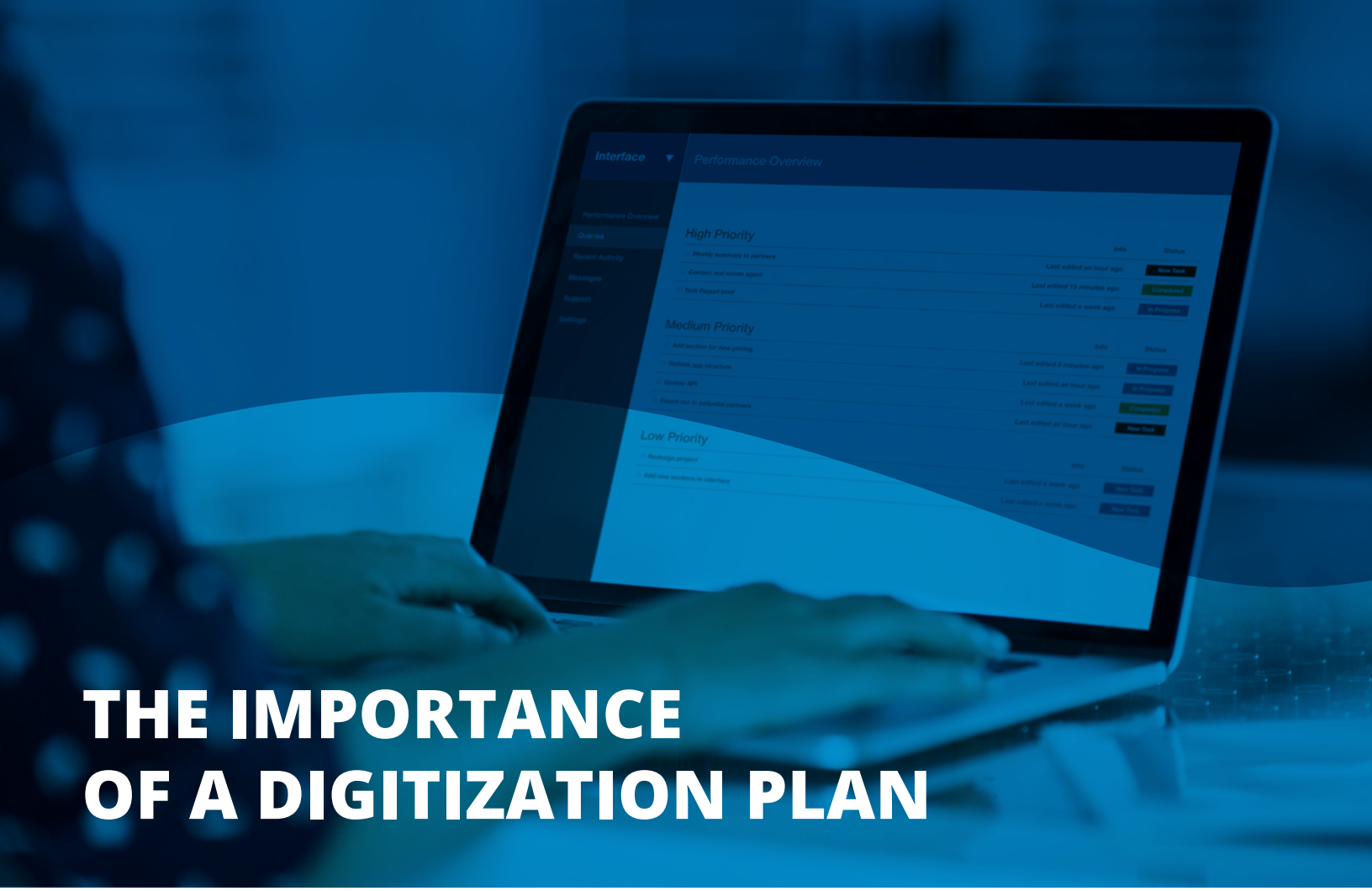
With access to information online, retrieving a record is almost instantaneous compared to the time-consuming manual process of searching for a physical record. Searches using metadata and on-page text make it easy to find the exact record needed. Adjustable image enhancement can improve legibility and eliminate the need to go back to the original hard copy record.

Storing records digitally increases efficiency; finding records is easier, naming conventions can be applied and enforced to reduce index inaccuracies, and files can be digitally duplicated to reduce the risk of loss. Your team doesn't have to maintain a physical system that could be taking time away from more valuable tasks.

DIGITIZATION SAVES TIME

The financial damage caused by a data breach cost an average of $3.86 million in 2018, the Ponemon study reports. That's an increase of 6% year-over-year.

What would losing records cost your organization? Financial damage? Valuable contracts? Customers? Your entire company, if you're sued? Digitization helps your organization mitigate those risks and keep your reputation intact.



THE IMPORTANCE OF A DIGITIZATION PLAN

As President Dwight D. Eisenhower said, “In preparing for battle I have always found that plans are useless, but planning is indispensable.” Going through the digitization planning process and identifying what needs to be accomplished will help you be more productive and successful. You may not stick to the plan you initially come up with, but by going through the planning process you’ll identify gaps in your digitization goals and be more adaptable if you need to adjust direction during the execution process.

A post by the Peel Art Gallery Museum + Archives explains why having a plan for digitization is so important. Once a plan is defined, it becomes easier to identify the right partner to work with to accomplish the goals of your plan. If you choose to work with scanning and digitization experts, a plan helps them understand what you want to accomplish and work with you to achieve what you want in the most cost-effective way.

DIGITIZATION FACTORS TO CONSIDER:

No two organizations are the same, and no two have identical digitization needs. When you're assembling your digital conversion plan you should keep the following variables in mind:

VOLUME

This is how much material you need to digitize, which could be dozens to tens of thousands of records.

DIMENSION

The physical sizes of your records may determine different solutions available to you. For instance, oversized books that must remain bound will require planetary (overhead) scanning under glass and on a book cradle to provide an accurate digital image. Some microfiche types are sized outside of the normal dimensions and require distinct methods of scanning to capture their images and data.

CONDITION

Fragile and unique records may require fragile handling and specialized scanning to protect the original document and ensure its accurate digital capture.

METADATA

Once converted into electronic files, records will need to be searchable using phrases, descriptions, and keywords.

PREPARATION FOR DIGITIZATION

To prepare for digitization, you'll want to determine your overarching goal (what "success" means to you) and work with that end in mind. Your goal might look like:

- Create a complete digital archive of all microfiche records
- Set up a records management system and import the digital microfiche records
- Backup all digitally converted microfiche data on a third-party cloud platform

When you're plotting out your goal and the definition of success for your project, be careful not to overdo it. As Jeff Goldblum as Dr. Ian Malcolm in Jurassic Park said, "Your scientists were so preoccupied with whether or not they could, they didn't stop to think if they should." Why do we put this here? First, because it's from Jurassic Park, and any time you can use a quote from Jurassic Park, you should. Second, because it's a warning that if you go too hard, too fast you'll cause problems for yourself. The KISS method is a good rule of thumb: Keep It Simple, Stupid (please don't take offense, it's a saying we use on ourselves as much as we can).

Before you plan the digitization process, you'll want to take an audit of all record materials. This gives you an idea of which records you'll need to digitize. If you don't want to risk a record being lost, stolen, or destroyed, it should be included in your digitization plan.

You should also physically organize the relevant records as much as possible. This will make the scanning process go smoothly and help ensure you're digitizing the records you want and/or need.

PLANNING THE DIGITIZATION PROCESS

Once you know what you want to digitize and you have an end goal in mind, you can plan the digitization process. Your timeline, budget, personnel availability, and requirements will help guide the plan formation and put it into motion.

YOUR TIMELINE

Understanding the forces that affect a digitization project will be critical to a successful outcome. Some questions to consider:

- Do you have a start date that can't be missed?
- Do you have a hard end date by which the project must be completed?
- Have you allotted any "flex" time to allow for contingencies and potential obstacles that could come up during your project? What are these based on?
- Have you created internal phases and sub-goals so that your team has a benchmark for progress?

Working with a digitization expert can help keep your project on track with by providing pre-project guidance for best results, and being adaptable to the myriad changes that could come up during your project. Without an experienced partner, how will you handle obstacles and changes?

YOUR BUDGET

Just like the timeline of a digitization project, the cost of digital conversion can vary based on numerous factors, and you should think about these when putting together a budget for your project. Some of the factors that may affect your price are:

- The amount of material that you're going to have digitally scanned. Higher volumes usually equates to lower per-unit prices, but the overall project price will increase.
- The condition of your records. If they're in poor condition, plan to spend more for special handling and slower scanning/processing.
- Indexing requirements. If your goal is to have a simple digital archive and are content with high-level index/organization, your price will be lower than if you wanted granular, file or image-level data capture.
- Project completion turnaround schedule. If you're looking for a fast turnaround then your price may be adjusted to compensate for the shortened timeline. On the flip side, if you're not in any hurry and are fine with your partner scanning as time allows, you may get a price break for your generosity.

Be realistic with the solution you desire and the budget you have or are trying to obtain. If the budget isn't there for everything you want today, there may be ways to spread your payments over a longer period of time. Work with your partner to explore options so that you don't have to put off your project.

YOUR PERSONNEL

What are the human factors that need to be addressed for your conversion project? Which people do you need involved and what are their responsibilities? These are some questions you should be able to answer as you plan your project to ensure the best chance of success. Keep your digitization plan focused by designating personnel to be in charge of certain aspects. Potential roles include:

CONVERSION COMMITTEE:

A digital conversion committee contributes ideas and provides deliverables to a project manager and digital conversion partner. This committee ensuresthe project aligns with the organization's overarching digital goals. A good idea is to have a stakeholder from each department/ team be part of the committee, so that all parties are aware of the project and are engaged in its success.

RECORDS CUSTODIAN:

The records custodian is responsible for the records being digitized. They secure, care for, and maintain the records. This person will be responsible for inventorying the records and providing the material to be digitized.

DIGITAL CONVERSION PARTNER:

Your digital conversion partner will be your trusted expert who works with you to execute and complete your project.

AFTER DIGITIZATION

A crucial part of the creation and implementation of a digitization plan is to know what to do after the conversion is complete. How will you backup your files, and in what format will you export them? Will you have a backup copy of your digital records off-site in case a disaster destroys your copies?

POST-DIGITIZATION STORAGE OPTIONS

Digital documents are extremely versatile and can be converted to a variety of efficient storage methods. Each data storage option has its benefits, from cloud-based hosting applications to external hard drives.

CLOUD-BASED STORAGE

Your digital files should be backed up in case of a data breach or malfunction that causes data disappearance. Backing up data in the cloud means it's available from a secure server anywhere, any time. A simple, low-hassle option is BMI's Digital ReeL application.

PHYSICAL STORAGE

Physical storage comes in a few different flavors, but the most common we see are USB drives and DVDs. As a physical form of data storage these are vulnerable to theft, loss, and damage, not necessarily of the content itself (although that's part of it) but of the actual device. When you have a piece of equipment lying around, such as a USB hard drive, it's pretty easy to see how someone could just grab it and walk away, or even kick it by mistake and destroy its ability to be accessed. Either way, your data is gone. If you're going to have a hard copy device for your data, make sure it's stored properly and securely.

Additionally, backing up your backup isn't a bad idea. In case your USB gets lost or just stops working, it would be nice to have a cloud-hosted disaster recovery copy.

Depending on your goals, your digital conversion partner will be able to make sure they're answering all the questions you need to in order to ensure a smooth post-digitization process.

ESTABLISHING A DIGITAL ARCHIVE

Digitization provides time and money, but you'll want to establish and manage a digital archive to make it work for you long-term. Here's what you'll need to consider:

- **CREATE A SYSTEM THAT WORKS FOR YOUR ORGANIZATION, AND STICK TO IT.**
  Records should be cataloged and managed, and a search portal or database must be established to house them. Keywords will need to be assigned to records so they're easily searchable. You'll want to make digital archive access consistent for everyone involved, so it can be managed easily. For some thoughts and suggestions on how to digitally organize your records, take a look at our article about indexing.

- **ASSIGN MAINTENANCE RESPONSIBILITIES IN YOUR ORGANIZATION, WITH TRAINING.**
  Anyone accessing the digital archive will need training. Also, maintenance roles should be assigned for security, backup, permissions, and passwords.

- **ASSIGN MAINTENANCE RESPONSIBILITIES IN YOUR ORGANIZATION, WITH TRAINING.**
  Anyone accessing the digital archive will need training. Also, maintenance roles should be assigned for security, backup, permissions, and passwords.

- **ARE THERE SENSITIVE DOCUMENTS THAT SHOULD ONLY BE ACCESSED BY PRIVILEGED PERSONNEL?**
  Security and privileged access need to be considered to keep documents safe. You'll need to designate privileged personnel and assign passwords to prevent unauthorized access. You will also need to consider where records can be accessed – only at one location, or remotely, for example.

  You want your digital archive to make record-keeping easier, not harder. Discuss digital archive recommendations with your digitization partner that will be most efficient for your business.

NEED HELP WITH DIGITIZATION?

In some cases, you may be able to complete your digitization in-house. In most cases, especially if you have a meaningful amount of records you want to digitize, you'll want to consult with an expert regarding timelines, preparation, budget or any other aspects of digitization planning.

For expert digitization advice, and help getting your digitization plan together, contact BMI Imaging for a free digitization consultation.

BMI Imaging Systems

(800) 359-3456

info@bmiimaging.com