IRON MOUNTAIN®

WHITE PAPER

YOUR DIGITAL TRANSFORMATION JOURNEY: A STEP-BY-STEP GUIDE

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Let's be honest. There's a power struggle between "business as usual" and the undeniable force that is digitization. It's a pervading pressure happening all around us.

Even though our personal worlds have been somewhat overtaken by digital processes, evaluating and reconfiguring well-established business processes and procedures is a massive undertaking.

While digital transformation can seem overwhelming, doing nothing is no longer an option.

DIGITAL TRANSFORMATION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

We all know today's consumer isn't exactly the most patient and we have technology to thank for that. Businesses, who want to continue to successfully exist, have no choice but to digitally upgrade their operational processes.

Digital transformation encompasses just about any initiative to use technology to improve business processes and activities to better meet the needs of today's consumers and the bottom line.

Not every industry has the same consumer needs so digital transformation means different things to different organizations. A financial institution using machine learning to detect and predict fraudulent transactions? Digital transformation. An e-commerce retailer searching for new and innovative ways to serve personalized recommendations to customers? Digital transformation.

THE FOUNDATION OF DIGITAL TRANSFORMATION: DATA AND INFORMATION MANAGEMENT

By 2022, IDC predicts 70% of all organizations will accelerate digital technologies to transform existing business processes that drive customer engagement, employee productivity and business resiliency.

In this 2020 report, IDC's group vice president Rick Villars commented on digital transformation and how the pandemic forced businesses to swiftly accelerate changes. "The COVID-19 pandemic highlighted that the ability to rapidly adapt and respond to unplanned/unforeseen business disruptions will be a clearer determiner of success in our increasingly digitalized economy. A large percentage of a future enterprise's revenue depends upon the responsiveness, scalability, and resiliency of its infrastructure, applications, and data sources."

So with digital transformation serving different purposes for different organizations, we believe every good baseline digital initiative starts with modernizing data and information management systems. Otherwise, how can you effectively digitally transform high-value, customer-centric operations when your basic, everyday workflows are still reliant on manual, paper-based processes?

HOW TO DIGITALLY TRANSFORM YOUR ORGANIZATION

To help you develop a strategy to modernize your data and information management processes and procedures, a solid digital transformation guide is key. From small-things you can get started now to those initiatives that may require cross-functional support and executive buy-in, we've put together a comprehensive guide on how to get started with your digital transformation. By the end, we will have provided you with an idea of where your resources, in both staff and budget, should be allocated.

Feel free to jump around from step to step in whatever order works best for your organization. Our goal with this guide is to help lay the foundation for your digital transformation.

Read along, download it for later, or jump to the section most relevant to you.

PART ONE: RETHINK YOUR RELATIONSHIP WITH PAPER

Today, most business records are "born digital." While there will always be instances where using or storing paper is required for legal business purposes, you should do your best to seek balance between your physical and digital files. Not only will it aid in your digital transformation efforts, but it will also mitigate the below drawbacks that can occur with an overdependence on paper:

COST

When it comes to the cost of paper, most do not think about it beyond the price of a few reams. However, research shows all associated paper costs (storage, copying, printing, etc.) could reach as much as 31 times the initial purchase cost. By that measure, a $5 ream of paper could in actuality cost close to $155[1].

RISK

Hackers may steal the spotlight but the majority of information loss is due to breakdowns in processes and procedures, such as employees losing sensitive files[2]. Considering the average large organization misplacing a single physical file every 12 seconds, it's not hard to see how easy it is for things to go wrong.

Across the pond, there is the European Union's General Data Protection Regulation (GDPR). Violations are punished by legal action and penalties of up to £20 million or 4% of global turnover-whichever is higher-per infraction - which could be as minor as an employee losing a single piece of paper with personal information.

While the EU enjoys a federal level of data protection, the same cannot be said for the United States. Unfortunately, there are many state-level laws but we are one of the few countries without a universal data privacy law. There are rumors of Congress passing a federal data privacy law some time in 2021.

> THOUGH GDPR IS EUROPEAN UNION LEGISLATION, IT IS APPLICABLE TO ANY FIRM THAT HAS PERSONALLY IDENTIFIABLE INFORMATION OF ANY EU RESIDENT.

INEFFICIENCY

Paper dependency and, by extension, manual processes means more time physically performing various administrative tasks and less time spent focusing on strategic, high-value initiatives.

As more and more of your business is conducted digitally as years go by, the continued use of paper creates a hybrid physical/digital information landscape. It's difficult to manage. It duplicates efforts. It increases risks to your business and its bottom line.

WHERE DO WE GO FROM HERE WITH PAPER?

UNDERSTAND WHAT YOU OWN

At the onset of any type of digital transformation, you must have a complete understanding of all the records and information you possess. This can be achieved by conducting a thorough information audit.

Yes, you will have to comb through every last filing cabinet and storage closet you can find. An overwhelming and exhausting task for sure but a necessary one that will literally pay off.

After conducting this audit, your team will then be ready to enable your digital transformation which far exceeds the initial paper sorting time investment.

IF YOU DON'T NEED IT, DESTROY IT

Don't be that business that keeps everything "just in case." While the notion of keeping everything may be tempting, it's also potentially damaging and here's why:

- Cost: The more you store, the more you pay.
- Compliance: With more to physically keep track of, data loss along with privacy and regulatory violations are more likely occurrences.
- Speed: With paper files, the average employee spends 25%[3] of their week filing, copying, indexing or retrieving documents.

> YOUR ORGANIZATION'S RECORDS RETENTION SCHEDULE DETERMINES WHEN TO DESTROY RECORDS BASED ON LEGAL, REGULATORY AND OPERATIONAL REQUIREMENTS.

DIGITIZING YOUR BUSINESS PROCESSES

When it comes to digitizing paper and its processes, your team has a few options. Here, we've outlined each paper converting process with their respective benefits and drawbacks:

- **Entire Backlog:** This route puts you in the fast lane for digital transformation but it's an extremely labor intensive process. Start by categorizing your files by priority into smaller conversion projects which is known as Backfile Conversion.
- **Image On-Demand:** The process of digitizing individual documents on an as needed basis. It reduces the upfront burden of going digital, but runs the risk of not having a digital copy of a record immediately available.
- **Day Forward and Digital Mailroom:** Typically used in conjunction with Backfile or Image-on-Demand options, this path digitizes scans, indexes and converts new incoming paper documents

Remember, those integral paper records that remain fundamental to your business operations can be converted into digital formats. Originals can be either stored or destroyed, depending on your needs and obligations.

Here are just a few benefits of digitizing:

- Expeditiously extracting valuable data and insights from legacy files
- Gaining quick electronic access to records (no more digging through file cabinets)without subjecting originals to wear and tear or loss
- Creating a centralized your information in an electronic repository for easy access and sharing from any location

STORE WHAT YOU HAVE LEFT

Is the paperless office ever going to be a possibility? While it's a nice notion, one-hundred-percent removal of physical documents is far from feasible. Consider these stats[4]:

- Paper use is increasing in one third (32%) of businesses
- Three quarters (77%) of invoices that arrive in PDF format get printed
- Only a little less than half (45%) of paper documents scanned by businesses were created digitally

Changing the way businesses produce, access and store information is a large undertaking. For decades, paper has been the way to go for all operational processes. It's possible to shift mindsets as we progress further into the digital age but, even after destroying and digitizing, you'll be left with more than your fair share of physical documents. How you store those documents depends largely on your digital transformation goals.

Here are the two storage options for remaining paper records:

- **Onsite Storage:** With this, your records are never far away. Accessing a record could be as simple as walking into the next room and thumbing through a filing cabinet. Depending on your record inventory size, onsite storage could be cheaper than moving it offsite.
- **Offsite Storage:** By working with a trusted partner that can guide you in proper labelling, indexing and storing records, there will likely be faster access times than if they were stored in filing cabinets in a backroom.

In addition to quicker access, there are other benefits to offsite storage not directly related to digital transformation, including improving security and compliance as well as increasing protection from both man-made and natural disasters.

CONSIDER THE VALUE OF METADATA

Metadata is descriptive information about your company data. It tells what the content is and the characteristics it possesses and consists of key identifiers, such as Record Owner, Document Type, Dates, Legal Holds and associated values (e.g., John Doe, project plan).

When it comes to efficiently locating records, data and information, establishing ownership, applying legal holds and identifying retention fulfilled records, metadata is indispensable. It's also critically important in legal, audit, compliance and regulatory activities because it demonstrates the authenticity and reliability of the requested information.

Metadata is increasingly becoming a key component of data analytics and digital transformation success. Without metadata to provide context to information (including its authenticity and level of business value), organizations will store records just for storages' sake - increasing operational confusion and overall workplace efficiencies.

HOW TO DEVELOP YOUR METADATA STANDARD

Since the development and approval of a metadata standard is a collaborative exercise, it's important to establish a set of universally agreed upon rules applicable to all records. Depending on your organization, developing metadata standards requires input from IT, Legal, Compliance, Enterprise Data Management or Data Governance, Privacy, Information Security, Audit and Records and Information Management (RIM) and others. To enable consistency, any alternate naming schemes that already exist across departments should shift to a singular method.

By using metadata, you can identify additional markers to supplement baseline standards for different business units, record types, location, security, retention periods (more on that in the next section and more. However, keep in mind that an overly subdivided system can undermine the goal of developing a system for locating and retrieving records easier.

HERE, WE'VE INCLUDED A BASELINE METADATA CHART:

DATA ELEMENT	DESCRIPTION	ANSWERS THE QUESTION...	EXAMPLES	RETENTION	PRESERVATION	PRIVACY/ SECURITY
Unique Identifier	Barcode/box/file number for physical records. Batch number/file number/ account number for electronic records.	How can we identify or locate an individual record/carton/ file/batch?	Physical: Typically the barcode number provided by the storage vendor Electronic: Generated by the application.	✓	✓	
Record Retention Class Code	Code (typically alphanumeric) that corresponds to a record class and its associated retention period. (For multi-national retention schedules, the record code must be used in conjunction with record class jurisdiction).	To which record class does the record belong? How long must the record be retained?	Alphanumeric: HR001-222 Numeric: 111-222 Named: Payroll Records	✓	✓	
Record Class Jurisdiction	*For retention schedules that cover multiple jurisdictions,* this element works together with the record code - as the same record class/ code can have different retention periods across jurisdictions.	To which geographical jurisdiction does the record belong?	Can be full country/ jurisdictional name or a code, such as US, CA, GB, etc	✓	✓	✓
Retention Start Date	The date upon which the retention countdown begins.	When does the retention period countdown begin?	Create Date, Trigger/Event Date, To Date, From Date, Receipt Date, Legacy Receipt Date, Ingestion Date	✓		
Preservation Status	Indicates whether the record is under Preservation (Legal Hold, Litigation Hold, Destruction Hold).	Is the record under Preservation?	"Preservation/ Hold" checkbox, Yes/No selection, Field for Matter Name/ Preservation Name/ Preservation Code		✓	✓

With this chart, you can see the five standardized identifiers on the left most column detailing when a record was created, how long it should be stored, what laws are applicable to the record and where it's located.

THE BENEFIT OF METADATA STANDARD IMPLEMENTATION

OVERCOME HUMAN ERROR

Entering multiple metadata elements is a burdensome process for most employees. Because of this, there is often inadequate or inaccurate record information. To help alleviate this, capturing metadata at every stage of the information lifecycle is recommended.

Here are a few other ways we recommend lessening the metadata standard building process:

- Install a parent/child relationship to the system by applying metadata at a higher level (e.g., record class) to enable inheritance by lower level records.
- Use employee roles to apply metadata standards based on the type of records he or she creates and receives.
- Leverage business process workflows to apply metadata as the record moves through a repeatable process.

CREATE AND ENFORCE METADATA POLICIES

We understand just how difficult it can be to put new processes in place, especially when it's something that touches nearly all operational processes, for large amounts of people to follow.

Here are our best practices we recommend when creating your metadata standard:

- Set system rules specifying which, if any, metadata fields can be altered by someone or an application other than the creator.
- Enable a mandatory requirement for all applicable current and future information management systems and applications once the standard is in place.
- Freeze metadata (i.e., cannot be edited by end users) once a record is declared so that it is only editable by administrators and applications under special circumstances.
- Capture a metadata stub as a record when digital files reach the end of their retention period and are purged. In the metadata standard, include specific directions regarding which elements are retained in the purged record stub.
- Provide instructions when a record is sent outside of your organization that contains metadata. For example, if the text of a record does not include Personally Identifiable Information (PII) but its metadata does, that record should be protected and labeled PII.
- Outline a systematic elimination process that names roles required to approve information destruction.

HERE'S HOW TO AVOID REPEATING THE PAST

Five, ten, fifteen years from now, do you really want to find yourself in a similar position? Stuck in an unmanageable hybrid digital/physical state without a complete grasp on what records you possess? We didn't think so. After you've finished your thorough records audit along with the removal and digitizing of legacy paper records, the last thing you need is to repeat the process.

To help avoid going through the arduous process of digitization from ground zero down the road, having a Records Retention Schedule is a must. It's a policy document that defines an organization's legal, operational and compliance recordkeeping requirements. This schedule is there to help guide employees on how long to keep records for legal and operational purposes and when it's okay to securely dispose of obsolete ones.

Here are a few more benefits of having a Records Retention Schedule:

- Controlling the unrestrained growth of records volume
- Demonstrating compliance with statutory and regulatory recordkeeping requirements
- Improving the ability to locate and retrieve records when required
- Reducing litigation risks

How you execute a Records Retention Schedule is a matter of choice. Here are a few options:

- Manually track and record your records (in an Excel document, for example) and then disseminate policy as-needed via email and/or memos
- Use a third-party platform that automates the more laborious processes
- Attach rules to applications or actual records using metadata.

What works for your organization depends entirely on your needs and to what degree you wish to include automation as part of your digital transformation efforts.

To be clear, a Records Retention Schedule is not, in the strictest sense, necessary for digital transformation. It's intended use is to ensure your digital transformation journey remains on track and compliant-both now and in the future. Consider it a long-term digitization management blueprint.

PART ONE SUMMARY

HOW REMOVING, DIGITIZING AND STORING PAPER GETS YOUR TEAM CLOSER TO DIGITAL TRANSFORMATION

No digital transformation can ever be fully complete when information needed to feed decisions is stored in non-digital records. Paper records slow down almost every business aspect of operations. As the digital world around us continues to pervade every part of our personal and work life, digitization of records is the fastest way to ensure efficient and effective processes.

If your team is looking to automate any business process, the removal of paper is a key component to its success. Digitization helps alleviate administrative tasks for automation which frees up employees to be more productive and innovative in their respective roles.

PART TWO: AUTOMATION

AUTOMATE YOUR WORKFLOWS

Now that your digitizing is complete, it's possible to automate those manual, paper-based processes that once took a large part of your employees' valuable time. This is especially relevant to the parts of the business that must manage a large number of records, such as Human Resources, Accounts Payable and Receivable and Contract Management.

To illustrate the benefits of automation as it relates to digital transformation, we'll use Human Resources as our core example.

AUTOMATED WORKFLOWS IN ACTION

Records in Human Resources can easily accumulate as the department touches almost every part of the business. Here's where we've outlined the most egregious areas:

- Recruiting: Resumes and cover letters, applicant correspondence, reference and recommendations, interview notes and potential offer letters
- Onboarding: Emergency contacts, W-4/tax forms, direct deposit forms, EEO information, technology requests, employment contracts and I-9 forms
- Employee File Management: Leave/vacation tracking, employee status change notifications, employee referrals, and travel requests
- Administration Policies and Procedures: Changes to company policies and procedures disseminated through email or paper
- Employee Separation: Supervising the return of access and equipment, conducting an exit interview and handling the necessary paperwork

Even with the removal and digitization of paper, it's still time-consuming and difficult to ensure all newly digital records (sometimes hundreds per employee) are stored and accounted for as well as routed to and seen by the appropriate stakeholders. Any delays in these processes or missing documents should be noticed right away and rectified.

These same problems can extend from HR to virtually every other department. How often have financial closures been delayed? Or deals with vendors bogged down by unnecessary red tape?

From department to department, breakdowns in the management of records and information forces employees to waste time chasing down solutions to otherwise avoidable problems. It's unnecessary and runs counter to the goal of becoming faster, more efficient and adaptable to today's digital age.

IDC shows us that automating workflows can lead to a more than 30% reduction in errors and 25-30% increase in productivity, depending on the specific functional area and process[5].

PART TWO SUMMARY

BACK-OFFICE WORKFLOW AUTOMATION: THE PATH TO DIGITAL TRANSFORMATION

Automating habitual administrative tasks eliminates bottlenecks that slowdown initiatives, making your business faster, leaner and more agile. It also frees up your employees to spend their time focusing on strategic, high-value campaigns, rather than being hamstrung by busy work that has less impact for your business.

PART THREE: MODERNIZE THE WAY YOU MANAGE DIGITALLY-BORN DATA

Now that we've covered how you manage physical records through digitization, it's time to focus on digitally-born data.

Though it is easier to handle than paper, the reality is not all data can-and should be-treated equally. The way you choose to store data has a profound impact on your company's digital transformation success.

DO YOU REALLY NEED A DATA LIFECYCLE MANAGEMENT STRATEGY?

Yes, the answer is yes. Without a solid data lifecycle management strategy in place, all of the work your team has done to convert physical records over to digital will be worthless.

A data lifecycle management strategy is about creating and executing a plan to protect, preserve and manage digital data at each stage of its lifecycle, from creation through destruction as informed by a Records Retention Schedule. This includes making strategic storage decisions to fuel digital transformation.

Establishing your data lifecycle management strategy is no small feat. Combing through your data inventory to tag and classify it all requires significant investment and can be enough to dissuade many from fully pursuing digital transformation. But it's precisely this type of leg work that makes the difference when it comes to meeting the needs of today's consumers and regulators.

WHY A DATA LIFECYCLE MANAGEMENT STRATEGY?

New data is constantly being created in multiple formats and added alongside older data. Extracting valuable insights from it-a key component of digital transformation-depends on having easy and reliable access.

At the same time, the value of data changes as more information is added into your work environment. Your enterprise doesn't need all of its data all the time, but a lawsuit, audit, request to "be forgotten" or other sudden event can make quick retrieval a necessity.

For digital transformation to work, you must find the most efficient way to classify, manage and store different data types. For more immediately needed data, you might consider onsite or cloud storage; whereas older, keep-it-just-in-case data can be stored in less-expensive, tape archives. There's no right answer because it all depends on your organization's needs and budget. The key is to develop a strategy to optimize your data in order to best fuel your digital transformation goals.

DATA LIFECYCLE MANAGEMENT STRATEGY BENEFITS

Now that we have a better understanding of data lifecycle management strategies, you'll of course want to know how it benefits your business. In addition to being able to easily extract valuable insights, here are a few other benefits:

- Manage and Control Costs: A data lifecycle management plan incorporates a wide range of technologies meant to keep expenses manageable as your company's data intake continues to grow. The technologies your team will use (all with varying costs) include everything from on-premises storage to storage tiering, cloud storage and offsite tape backup.

- Improve Service Level Agreement (SLA) Business Processes: In any digitally-run business, everything relies on IT so any amount of downtime is unacceptable. Today's average cost of downtime is $16 million a year[6]. A data lifecycle management plan incorporates the need for greater uptime and deploys a variety of solutions to help you lower Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs).

- Drive Innovation: Digital transformation helps reinvent business processes. Through data management best practices, organizations can drive innovation through initiatives such as big data analytics, mobility and the Internet of Things (IoT).

Bonus added benefits unrelated to digital transformation but nevertheless valuable to your organization include:

- Protecting and securing data at all times

- Meeting compliance and e-discovery requirements.

HOW DO YOU FORMULATE A DATA LIFECYCLE MANAGEMENT PLAN?

Each organization will embrace digital transformation at its own pace so not every data lifecycle management plan will be the same. Having said that, we've put together some basic general guiding questions to help get your team on the right track.

Fully assess your business and data management challenges to help address fundamental questions that relate to your digital transformation challenges:

- To what extent is the business embracing digital transformation, including extracting value from data?

- What are the current gaps in data storage and management?

- Is there critical information isolated in silos?

- Is data being properly tagged and created at the point of creation?

- What is the budget for data storage, including backup, archiving and replication, and will that budget shrink, grow or remain flat?

This is by no means an exhaustive list, but it gives you a sense of the strategy building process. Depending on the size of your organization, you may be able to answer these questions yourself, or you may need to seek outside help.

EXECUTING A DATA LIFECYCLE MANAGEMENT STRATEGY

Once you've set your goals and built the framework of a data lifecycle management strategy, the next step is to implement that strategy.

Here is an example of what your plan could look like:

Stage One: Store active data locally and on a network server while also backing it up to local storage appliances or cloud storage.

Stage Two: As data ages, move it from primary storage into less costly off-site tape vaults or cloud.

Stage Three: Retain your older, inactive data in case of a legal, regulatory or audit event in off-site tape archives that offers high security, quick access and lower storage costs.

Stage Four: Adhere to federal, state and industry regulations for destruction.

DEFINITIONS YOUR TEAM MIGHT NEED

- **DATA RESTORATION:** Regaining access to data from obsolete or unused storage mediums.

- **DATA MIGRATION:** The process of transferring data from those older storage mediums to more modern ones.

Chances are your team has been storing data for years-if not decades-across different systems and technologies. If you have old data stashed on 3.5-inch floppy disks, you probably won't be able to get to that information without specialized equipment to retrofit modern machines.

There's also the possibility all your information is contained in electronic formats but stored in systems spread across the enterprise with some saved on local servers, backed up to the cloud, and/or archived in offsite tape vaults, etc.

For a data lifecycle management strategy to be both holistic and effective, your organization's IT staff must prioritize the restoration and migration of that data away from disparate and legacy formats (e.g., floppy disks) towards more readily accessible modern storage media. Why? Remember complete digital transformation-especially those initiatives predicated upon advanced data analytics-depends on getting the most out of all your data.

Quite simply, getting the most out of your information via digital maturity is impossible if you have unknown data stored on outmoded equipment.

Throughout this process, keep in mind that data retrieval requests can overwhelm many IT departments. Large-scale data migration and retrieval processes require considerable resources and pulling IT staff away from their routine activities could invite unintended risks. Overworked and understaffed IT departments are often cited as a factor7 in companies falling victim to vicious cyber attacks.

TO OUTSOURCE OR NOT TO IN-HOUSE? THAT'S THE QUESTION.

Restoring data from legacy systems and migrating them to more accessible storage options is a massive request for any IT department. It's also one of the most crucial parts to digital transformation.

Of all the steps towards digital transformation we've mentioned thus far, digital restoration and migration, this definitely warrants consideration for outsourcing the most. The benefits of outsourcing are not limited to only faster and safer data restoration.

Because you're outsourcing with a third-party data management provider, you'll never have to worry about future technology obsoleting today's storage mediums. Any provider worth its salt will always keep your data easily and readily available on whatever platform the future may hold.

A QUICK NOTE ON COMPLIANCE AND CHANGING REGULATIONS

We'd be remiss if we didn't mention one of the biggest and stress-relieving benefits to digitizing records - compliance.

Industry and legislative regulations are constantly changing, with many enacting stricter rules on how businesses manage data. Organized, accessible data makes compliance easier to achieve, which can prove significant when facing the possibility of millions of dollars in fines.

Modern data storage compliance is arguably more important to the long-term vitality of your business than it is for any digital transformation initiative and thus worth mentioning.

PART THREE SUMMARY

CHANGING THE WAY YOU MANAGE DATA: ONE STEP CLOSER TO DIGITAL TRANSFORMAITON

You can't make good business decisions if you don't know what information you have.

Data lifecycle management strategies give you a firmer understanding over what information your business owns and where it's located. By having a management system in place, one that includes data restoration and migration, it will be easier for your team to extract insights, a key to digital transformation.

PART FOUR: CHOOSE THE RIGHT STORAGE

OPTION(S) FOR YOUR ORGANIZATION

After you've completed your data lifecycle management strategy, it's time to discover what storage options work best for your company.

Since every company is different, we've put together a list of pros and cons for each of the various storage options.

KEEPING YOUR DATA ONSITE

Pros: Onsite storage is far and away the most convenient storage option. There's no third-party involvement. There's no need for offsite data transfers. There's no risk of someone else's downtime affecting your business. In short, you're the master of your own domain.

Cons: Thanks in large part to dramatic increase in device usage and the IoT, data creation is predicted to swell to a total of 175 zettabytes (ZB) by 2025. While more data presents greater opportunities to extract insight and achieve digital maturity, doing all of that while storing onsite is only possible with significant investment, largely by way of building out infrastructure and hiring additional staff.

Ask yourself: Do the benefits of complete onsite data storage outweigh the costs of perpetual staff and infrastructure build outs?

KEEPING YOUR DATA IN (COLLOCATED) DATA CENTERS

The pros and cons of the data center usage when it comes to digital transformation are more or less the inverse of keeping your data onsite.

Pros: Shared data centers provide an attractive operating expense model with the ability to quickly scale up or down, access to the provider's space and power as well as staffing for 24-hour security and support.

Cons: You will need to use a third-party. You will have to transfer your data to that outside location. There is a risk (albeit a small one) of someone else's downtime affecting your business.

By choosing a data center storage option, there are lower total costs of ownership compared to private data center build outs. It also frees up IT staff so they can focus on more dynamic, higher-value projects.

Offsite data storage also has a higher degree of guaranteed security and protection from both man-made and natural disasters.

KEEPING YOUR DATA IN THE CLOUD

Take the biggest benefits of data center storage and you have the cloud. With greater flexibility, scalability and reliability,there's no maintenance and upkeep expenses. Cloud storage is ideal for today's remote workers who need on-demand access. For these employees, cloud storage makes collaboration easier and reduces capital expenditures for business leaders looking to reduce expenses.

There's also a considerable flexibility within the cloud that can make for an intriguing storage option. For example, it can be used as a backup for active data or it could be used similarly to tape, where legacy data is archived.

Of course, cloud is not without its drawbacks. Given that it is so accessible to anyone with a computer, there are vulnerabilities that make it more susceptible to a breach. If you choose to go with cloud storage, your organization must weigh sacrificing some degree of security against easier access to data.

However, not all cloud solutions are equal.

Many providers have built solutions that emphasize storage volume and scalability, while others were designed specifically for enterprise data management. The latter tends to prioritize security. So, if you're looking for a cloud storage solution to optimize your digital transformation's data storage, it's probably a good idea to opt for it.

KEEPING YOUR DATA IN "OLDER" STORAGE

When it comes to legacy data storage, it doesn't make much sense to opt for a solution that promises 24/7 connectivity and on-demand access to data, as you'll ultimately be paying for features you don't need.

Stripped down of the extra bells and whistles of colocation and the cloud, comparatively older data storage methods are less costly to buy and maintain and offer lower energy consumption and total cost of ownership than any of the above storage options.

We'll (briefly) look at two of the most popular:

Disk

- Rapid recovery. Finding a particular file with a disk system is faster than with a tape data backup system.
- High-level security. One undeniable virtue of disk-based data backup solutions: A data center is hard to misplace. You need not worry about secure data transportation, because the data's not travelling anywhere.
- Efficiencies from deduplication. This process removes duplicate copies of saved data to free up space. Deduplication means you can store data more quickly and perform full backups less often.

Tape

- High-capacity storage. LTO (linear tape-open) is the leading tape backup format, able to store terabytes of data on a single tape.
- Low cost. Tape media costs are low-in fact, tape is the least expensive option for enterprise storage needs. Tape's cost per gigabyte is less than $0.01.
- Low energy. Once an enterprise stores its data for the long term on tape, it no longer requires electricity. Disk systems, on the other hand, are always on and require constant cooling.

PART FOUR SUMMARY

THREE WAYS STORAGE CHOICES' IMPACT ON DIGITAL TRANSFORMATION

Yes, the choice you make for how to store your company's data matters. Here, we've outlined the three ways storage choice affects your digital transformation:

1. Many digital transformation efforts depend on the insights you are able to extract from your data. Strategic storage makes data access and analysis more streamlined.

2. Modern data storage methods make your organization faster and more agile-the whole purpose of digital transformation in the first place.

3. Outsourcing data storage relieves IT of the burden of managing onsite infrastructure, thereby freeing them to focus on more high-value initiatives related to business intelligence.

PART FIVE: PROTECT YOUR DIGITAL TRANSFORMATION

INVESTMENT

Completing steps one through four may put your office in a state of minor upheaval for a while and that's not necessarily a bad thing.

Investing time into a digital office transformation is akin to spring cleaning but with a far greater payoff. You've inventoried your entire backlog of paper records, digitizing, destroying and storing where necessary. You've automated key workflows. You've created a data lifecycle management strategy and stored your data in a way that's not just cost-effective but ideal for any data-led initiatives you wish to pursue.

To get faster, leaner and more agile to better meet your organization's goals, you may decide to upgrade your technology with new laptops, tablets, smartphones, etc.

There's also the chance you may come across boxes and boxes of unused and outdated IT equipment lying around. Either way, you're undertaking such massive changes and there's no reason to let that old technology continue to pile up. Make sure you're securely disposing- if your assets still have value-in a secure, compliant and eco-friendly way.

Let your digital transformation efforts transform your workplace too.

CONCLUSION

There's no escaping it. Every organization in every public and private industry is affected by digital transformation.

Research firm McKinsey & Co. says as a result of the COVID-19 crisis most organizations have accelerated their digitization of business processes. This has occurred in at least some business areas to protect employees and serve customer-facing mobility restrictions. Data shows we have leaped five years forward in consumer and business digital adoption in the span of about eight weeks. Organizations had to reinvent their business processes to expedite decision making, reduce fraud issues and more. As a result, they turned to modern data and information management - the foundation from which all these digital transformation efforts are made possible.

We hope this guide sets you on the right path for your digital transformation. To help get you started on your journey or simply for expert guidance, Iron Mountain is here to help. Contact us, today.

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ABOUT IRON MOUNTAIN

Iron Mountain Incorporated (NYSE: IRM), founded in 1951, is the global leader for storage and information management services. Trusted by more than 220,000 organizations around the world, and with a real estate network of more than 85 million square feet across more than 1,400 facilities in over 50 countries, Iron Mountain stores and protects billions of information assets, including critical business information, highly sensitive data, and cultural and historical artifacts. Providing solutions that include secure storage, information management, digital transformation, secure destruction, as well as data centers, art storage and logistics, and cloud services, Iron Mountain helps organizations to lower cost and risk, comply with regulations, recover from disaster, and enable a more digital way of working. Visit www.ironmountain.com for more information.

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