

White Paper

The Migration from Paper to Digital: Why Digitization Remains Elusive

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REALIZING THE PROMISE OF THE PAPERLESS OFFICE

All organizations are in a race to digitize their office environments, but not everyone is traveling at the same speed. Digital transformation (DX) continues to be a priority for many organizations, with some transitioning to a paperless office more quickly than others due to several variables and challenges they face. IDC's 2019 *Document Processes Survey* found that although organizations claim they are moving towards a paperless office, knowledge workers still use a lot of paper while completing their daily activities (see Figure 1).

FIGURE 1

Paper Is Highly Entrenched in Today's Office

1. 55% of knowledge workers reported using paper most to extract content to integrate into new documents
2. 40% of knowledge workers reported spending 21–30% of their week on document-related tasks (paper and digital)
3. 30% of documents used each day are paper documents
4. Knowledge workers create 23 paper-based documents per week compared with 21 electronic documents per week

n = 300

Base = all respondents

Source: IDC's *Document Processes Survey*, May 2019

Indeed, several business-critical horizontal processes across industries remain primarily paper based. For example, paper persists in customer and employee onboarding processes, applications processes, expense reporting, sales operations, purchase orders, content review and approval processes, and document sharing.

Paper-based processes are also more prevalent in certain vertical markets, such as healthcare, insurance, banking, and public sector. In healthcare, patient onboarding and consent forms, as well as prescriptions and pharmacy records, continue to be primarily paper based. While fax technology seems somewhat antiquated these days, healthcare organizations continue to rely heavily on it. Underwriting documents in insurance and mortgage applications in banking are typically paper based.

The use of paper is also critically important in terms of communication and collaboration. Internal and external communications for most organizations are typically handled through several channels. Internal or cross-company communications efforts are mostly controlled and digitally born, while external communications are more likely to be paper based. According to IDC's research, almost 70% of knowledge workers most often distribute documents among stakeholders within their organization via email.

Of course, not all information shared within an email is digitally born as attached documents often originate from scanned originals. In fact, scan to email is one of the most common scanning applications used with today's MFPs. IDC's *Document Processes Survey* found that digitally born documents that are most often printed include emails, reports, spreadsheets, and bills/invoices. In many cases, businesses are stuck in a circular workflow where paper-based documents are scanned and distributed only to be printed again.

The preponderance of paper within legacy business processes creates challenges for organizations looking to drive digital transformation efforts. Indeed, many businesses are stuck in their overall digital transformation journey and often confused about where to move next.

IDENTIFYING ROADBLOCKS

There are several reasons why the shift to digital remains a challenge for many organizations. In some cases, company policies mandate the printing of certain documents as part of the legacy process. This can include documents that are created digitally and then printed for additional processing (e.g., documents that require approval by a physical signature). In this scenario, documents must often be converted back to digital format for archival purposes. Another example includes processes that require paper-based documents to trigger inbound communication, such as forms to be completed and returned by the end customer.

Use of paper is also highly influenced by the habits and preferences of knowledge workers. According to IDC research, the desire to have a hardcopy document for use at home or while traveling is the top reason why knowledge workers print. Employees can be set in their ways, and attempts to curb this behavior through change management practices are often met with resistance. In many cases, employees create workarounds rather than abide by paperless initiatives, which in their view are inefficient, difficult to implement, or have a negative impact on productivity. To overcome these obstacles, businesses must work to gain employee trust through programs that demonstrate management buy-in as well as a clear understanding of the benefits that can be derived, both for the company and the employee.

User behavior and preference are also critical factors in the use of paper for many business-to-consumer (B2C) applications. In the healthcare industry, for example, some patients continue to prefer discharge instructions and procedural documents provided to them in paper format rather than logging in to an online patient portal to access information. Another use case involves job applicants – some are quite comfortable with online application and resume submission, while others prefer to submit a traditional application with a cover letter. This latter preference may deter certain applicants from applying to a job that accepts only online applications.

While user behavior and corporate policies represent significant hurdles, limitations in technology and infrastructure most likely play the most prominent role in hindering DX initiatives. Many organizations continue to use paper because of incompatible document management systems and lack of interoperability between new digital systems and the legacy business. The fact is that most organizations continue to operate in a hybrid office environment, with some combination of paper and digital content intermixed within the same workflows. Many DX strategies start to break down because of a failure to integrate new digital processes with legacy business processes.

A good paperless strategy should focus on digitizing business inputs that arrive in paper format and those that are unnecessarily printed during the workflow. A great paperless strategy does the aforementioned while including elements to improve business processes and enable access to critical information trapped in paper documents. This explains why scanning and digitization technologies play the most critical role in any DX strategy.

FACTORS DRIVING THE NEED FOR DIGITIZATION

The following factors are driving the need for digitization:

- External requirements
- Business requirements
- User experience (employee and customer)

External requirements such as compliance, security, privacy, and regulations greatly impact digital efforts. Examples of regulations in the United States include the Health Insurance Portability and Accountability Act (HIPAA), the Sarbanes-Oxley Act, Federal Information Security Management Act of 2002 (FISMA), Family Educational Rights and Privacy Act (FERPA), Payment Card Industry Data Security Standard (PCI DSS), and the Gramm-Leach-Bliley Act (GLBA). Regulations such as these establish requirements that are intended to improve the information security level of organizations within a specific industry. The General Data Protection Regulation (GDPR) began as a set of guidelines for European businesses to provide data protection and privacy for all individual citizens of the European Union and the European Economic Area.

Digitization efforts can help organizations achieve regulatory compliance while significantly reducing risks associated with cybersecurity, data privacy, and data protection. Once content is digitized, businesses can more effectively leverage data analytics and business intelligence tools to improve compliance and implement more adaptive compliance procedures and policies.

Business requirements are also driving the need for digitization. The need to digitize content is fueled by organizational desires to streamline and automate workflows through data extraction as well as sorting and classifying documents. According to IDC research, 42% of knowledge workers indicated that paper-based workflows that are highly manual make their daily tasks (document workflows) less efficient, costlier, or less

productive. Digitization drives better business outcomes through faster response times, improved customer experience, and increased productivity, enabling more efficient workers and business processes.

The user experience of both employees and customers is also impacted by digitization efforts. By streamlining workflows, employees can perform their jobs more easily, enabling them to focus on more important tasks. This leads to improved employee experience and overall employee satisfaction. Organizations also face continuous pressure from competitors to improve customer experience and drive customer service and satisfaction levels. By digitizing business content, organizations can provide faster responses, improve data accuracy, and complete transactions more quickly. These are important and measurable benefits across organizations of any size and industry segment.

ROLE OF SCANNING IN DIGITIZATION

Scanning and digitization technologies are crucial to all content-centric business-critical functions today. Backfile conversion, for example, involves replacing large volumes of paper documents (in paper archives) with digital formatted documents. This process is completed by leveraging high-speed production scanning methods to convert legacy documents into digital images to be archived and stored. Backfile conversion is typically taken as an interim step to bring legacy documents into digital format after day-forward scanning has been implemented.

Day-forward scanning strategies are necessary to fully eliminate paper, wherein all new records from a selected date forward will be scanned, and the company will no longer retain the paper records. The digitized records will typically be stored in a new, more efficient document management system. In both cases (backfile conversion and day-forward scanning), scanning is used for document digitization, which is essential to any DX project.

TECHNOLOGIES ENABLING DIGITIZATION

It is important to distinguish between digitization (converting from paper to digital) and the process of capturing and extracting content to enable downstream business processes. An optimized scan solution is obviously the most critical component needed to enable effective digitization of paper-based content. But there is much more for organizations to consider beyond the basic need to convert from paper to digital content. A scanner should have the intelligence to scan directly into existing business workflows and back-end systems and in the file format that is needed.

In today's business climate, scanning has moved from being mostly a back-office requirement to a process that is utilized by nearly every office employee. As ad hoc scanning has become more pervasive, it has also fostered increased inefficiencies in the way that organizations work with information. Mountains of paper documents are scanned and converted into static digital files that cannot be manipulated, making it virtually impossible to edit and collaborate the way users can with hardcopy documents. Although this could be a significant drain on worker productivity, static digital files still enable organizations to replace physical filing cabinets (thus saving space and reducing costs), offer access to information for employees from any location at any time, and offer compliance advantages such as access control.

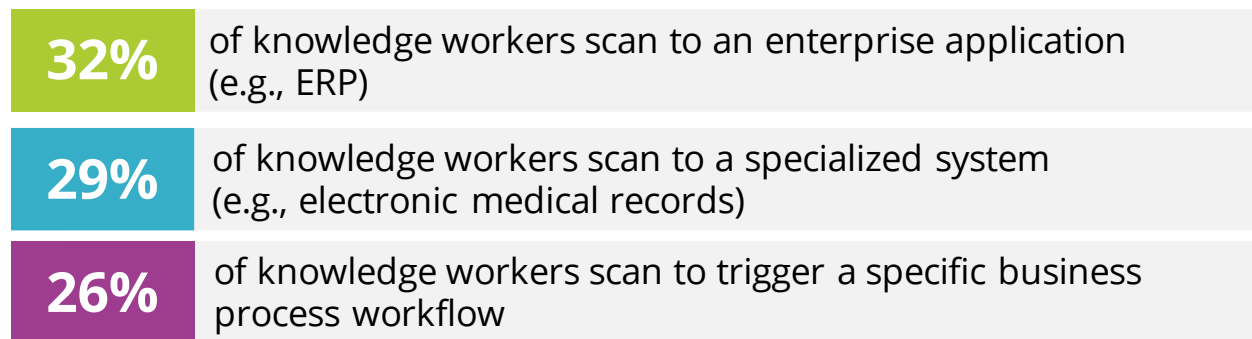
Overall, however, paper is the original collaboration tool, so the most effective digital conversion solutions should enable users to work with electronic documents in the same ways that they work with paper: annotate, collate, and collaborate. Scanning solutions that convert paper-based documents into editable, searchable text files would fit this bill.

While digitization primarily represents the conversion of paper-based content into digital format, scanning technology is also leveraged to capture and extract content for porting into specific workflow processes. Organizations utilize intelligent capture technology to extract data from paper-based documents and convert it into structured information that can be fed into enterprise applications or other downstream processes. IDC expects scan workflow to account for the majority of scanning use cases within the coming years.

Examples from IDC's survey of how knowledge workers use scanning are included in Figure 2.

FIGURE 2

Uses of Scanning



n = 300

Base = all respondents

Source: IDC's *Document Processes Survey*, May 2019

In addition, technologies are enablers for digitally originated content. For example, electronic signature (eSignature) technology enables users to sign documents in digital format, removing paper from the process altogether. Mobile devices are also enablers for digital business processes because knowledge workers can use their mobile device (such as smartphone or tablet) to easily view information, sign documents, and even take notes, rather than printing documents or using paper in general.

Paper-based forms, records, and communications are impacted by advancements in digital technologies, changing how we work with documents and information. Invoices, purchase orders, statements, and more are increasingly created, saved, and distributed as PDF documents instead of hardcopy prints. With advanced document management solutions, intelligent information management (IIM) solutions, or other solutions, organizations can reduce paper usage and better control their document environment. Many organizations are already taking advantage of such technologies to improve workflows (see Figure 3).

FIGURE 3

Adoption of Software by Knowledge Workers for Weekly Document Activities

1. eSignature technology (e.g., DocuSign, Adobe Sign)	42%
2. Content sharing and collaboration (e.g., Box, Dropbox, Google Drive)	39%
3. Team collaboration software (e.g., Microsoft Teams, Slack, Atlassian)	39%
4. ECM software (e.g., IBM FileNet, OpenText Content Suite/Documentum, Hyland OnBase, Microsoft SharePoint)	37%
5. Security authentication and authorization software (e.g., McAfee, Kaspersky)	37%

n = 300

Base = all respondents

Source: IDC's *Document Processes Survey*, May 2019

Document management software and IIM software simplify processes for saving, organizing, and managing digital content. Using scanners or mobile capture, users can convert paper to digital format and scan directly into document management and IIM systems.

OPPORTUNITIES, CHALLENGES, AND GUIDANCE FOR TECHNOLOGY BUYERS

Paper remains entrenched in today's business processes, and numerous barriers continue to hinder the ongoing migration from paper to digital. Whether because of a lack of management around paperless initiatives or because workers are not ready for cultural change, workflows across industries are still heavily paper based. Despite ongoing efforts and focus on the benefits of going paperless, most organizations continue to report that they are behind in their digital transformation efforts.

To meet digital transformation goals, organizations need to enable technologies to reduce the use of paper and shift to digital workflow processes. Scanning is the first necessary step on the way to pure digital by converting paper-based documents to digital formats. It's important that organizations digitize paper records to really create a paperless environment going forward.

There are many benefits to a paperless office, driven by external requirements, business requirements, and user experience. These advantages include increased security and compliance, reduced costs, saved time and space, and improved productivity and efficiency. With less paper, cost savings are incurred through a decrease in manual processes, a decrease in time spent on filing and searching for documents, and a decrease in physical space needed to store such documents. Reducing printing volume and overall infrastructure also saves money. Further, going paperless leads

to better control and management of content, enabling organizations to increase security efforts by implementing access rights and policies, creating audit trails, and redacting confidential information. Digitizing content and automating workflows also ease the exchange of information and communication, making processes more efficient and resulting in increased productivity and overall employee satisfaction. These benefits drive high value for businesses of all sizes and have a direct impact on both the top line and the bottom line.

Meanwhile, digitally enabled businesses are simply more agile and competitive in today's landscape and are better positioned to serve customer needs. As organizations progress in their digital transformation journey, a growing number of documents will be born digitally, and it is essential for organizations to prepare for this shift to ensure a smooth transition for both employees and customers.

Is your organization prepared for the coming onslaught of digital information? More importantly, are you putting the proper technologies, systems, and tools in place to enable a more effective transition to the digital office of the future?

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