



Workflow and Technology in the Modern Workplace

EXECUTIVE SUMMARY

The workplace is rapidly changing. Flexible start times, working from home, mobile workers, and employees who interact daily across international boundaries all contribute to a diverse and sometimes difficult-to-manage landscape. With big data on the rise, security and data management issues are evolving. At the same time, businesses are becoming increasingly aware of the importance of utilizing information guickly and securely, no matter where their employees are based or in what industry they work.

The catalysts for these changes range from advances in technology to the interconnected dynamic of global markets. Translating brand values into real-world behaviors demands a committed and increasingly social team of people that's both flexible and productive. But what does productivity mean in today's technologically knowledgeable and fast-moving office environment?

In a world where robotics and artificial intelligence technologies can outperform humans in many data processing tasks, the answer to this question is multi-faceted. First, a web of industry regulations sets a new bar for privacy rights, security, and compliance—all leading to new challenges as digital markets try to catch up. Government influence in cyber warfare, data privacy, labor laws, and trade agreements are also fashioning how business decisionmakers operate and what levels of risk they're prepared to take.

Second, executive teams seeking to harness further efficiencies from their operations find themselves caught up in what can often be a confusing storm of new expectations and technological changes. Examples include the rise of cloud computing, big data, blockchain digital markets, mobile computing and the ever-present data security threat.

Finally, on a global level, regional differences can have an enormous impact on both the pace and the direction of change in many offices. In other words, advancements can vary from country to country and industry to industry, making it difficult for executives to pinpoint the best course of action to take to advance their business.

All this has real-life implications for document print and management, workflow automation, and the various multifunction printer (MFP)-based functions that keep our offices running. This independent Office Insights 2018 report was commissioned by Canon and conducted by Breaking Blue Research. The objective of the research was to examine insights about trends surrounding office technology and software/solutions. This study also explores how the pace of innovations is impacting the office and the technology used within.

The Workplace Rapidly **Changing**

ABOUT THIS RESEARCH

Office Insights 2018 is based on data collected from 391 technology decision-makers, influencers, and end users in the United States. They reveal a story of evolving needs in the office technology space. In the past, the main point of office technology was to provide basic document services. Today, other factors data management; the importance

of document scanning and automation; the growth of cloud services; and the safer, better use of data—are proving to be significant areas of focus for many businesses. Meanwhile, businesses are showing an increasing pace of change and willingness to adapt to new ways of working and to invest in the office of the future.

METHODOLOGY

Quantitative and Qualitative Research

- » Conducted in the United States in August 2017, balanced by region (Northeast, South, West, and Midwest)
- » Quantitative online survey among 391 IT decision-makers, influencers, and end-users
- » Qualitative data based on 20 in-depth interviews among IT decision-makers and influencers (independent from quantitative sample)

Enterprise Size

- » 38% Small (1 49 employees)
- » 28% Medium (50 249 employees)
- » 34% Large (250+ employees)

· Respondent Profile

- » 52% Management role
- » 54% Work in general office environments
- » 41% Final decision-makers on office technology products (e.g., PCs, printers, and copiers)
- » 22% Influencers of office technology purchases
- » 37% End-users of office technology

46% of decision-makers know the precise cost of a color page

42% know precise cost of a monochrome page

78% are concerned about wasteful printing

PART 1

PRINT: EVOLUTION NOT REVOLUTION

With information living in multiple documents that co-exist in various printed and digital forms and locations from employees' desks and file cabinets to cloud servers and mobile devices it's tempting to think that the function of print is on its way out of many modern offices. However, when thinking about "digital transformation," it's important to distinguish between the movement toward digital as an enhancement to paper-based document processing, such as scan workflows and electronic data interchange and as an outright replacement; in other words, the idea of "going paperless." The latter implies that paper and digital are mutually exclusive when, in fact, they involve independent yet complementary processes that are defining the way we work.

We're beginning to see the remodelling of the office in a new digital form. Today's office is designed around the needs of people collaborating and the insights and services they need to do their jobs. In this new office, the role of the document is decentralized as digitization continues its inexorable march onward. But what evidence is there of this transformation?

In the U.S., 36% of enterprises report that they're printing more often than they were 12 months ago, while only 14% are printing less often. These figures are similar for scanning and copying (40% are scanning more often and 35% are copying more often). While the most common scenario is printing levels that have stayed "about the same" relative to one year ago, the fact remains that U.S. enterprises

appear more likely to increase their use of paper, making a full-fledged shift to "paperless" less likely.

Interestingly, 43% of enterprises consider printers and multifunction devices (with print, copy, and scan functions) to be critical to the operation of their businesses. Moreover, when asked to look ahead three years from now, nearly seven in 10 of IT decision-makers reported that they expect they'll use printers/multifunction devices more than they do today.

While this might seem contrary to the digitization trend, it's important to note that the same percentage (43%) of U.S. organizations report they're also likely to make significant investments in software and solutions to improve document workflows in the next the couple of years. In other words, there's already recognition of the importance of print and its central function within an organization; the next step is making the steady influx of information more readily accessible and user-friendly.

The research reveals that 49% of IT decision-makers expect to spend more on handling virtual documents in the coming three years as compared to today. This is important, because it signifies a move away from the traditional paper-handling ways of the past into newer, digitized ways of working in the future. However, it's unlikely that the re-modelling of document workflows will happen immediately; rather, it will manifest over time as a steady automation of clearly defined, discrete processes.

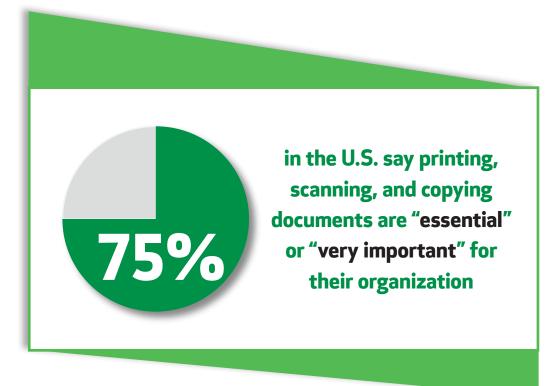
"We haven't gotten to the point of electronic storage ... yet. The fact that we've got too much hard-copy paper would be our limitation, and the next investment should be in an automated storage of electronic documents."

> — Decision-maker in (Accounting and Finance within Wholesale Trades; 10 - 19 employees)

References to "enterprises" and "organizations" in this paper are based on total respondent representation.

Finally, when it comes to print cost tracking, Office Insights 2018 reveals 75% of decision-makers report that they track print costs. This should not come as a surprise—it's generally understood that print-related costs (including the management and provisioning of devices, costs of paper, supplies, and servicing) can represent one of the largest business expenditure items next to payroll and IT. For more than two decades, organizations have been addressing the "true cost of printing" (TCO) by performing cost reviews across an enterprise and acting on the findings.

On the flip side, if 75% is tracking their costs, then about 25% is not, which means squandered opportunities in cost savings. Smaller businesses (those under 50 employees) are particularly lagging in print cost tracking, though it's precisely these enterprises that could arguably benefit most. As this part of the market becomes more aware of the existence of discovery tools that can facilitate print cost tracking and as the use of these tools rise, we expect to see more organizations tracking and managing their print spend. Ultimately, this means unnecessary printing will naturally diminish as organizations move toward more actively managed and streamlined ways of working.



AUTOMATION: THE ROLE IT PLAYS IN STREAMLINING BUSINESS

What do "streamlined" ways of working look like? One way of defining this is through the process of automation and how rapidly automated processes are taken up by different organizations. The rise in the volume and variety of electronic documents requiring processing, the continuing need to handle paper documents, and the ongoing evolution of remote working practices mean enterprises are compelled to begin investing in new ways of working.

At the heart of every business sits information. In this study, 84% of decision-makers state that systems to convert paper documents into digital, editable documents are critical or important. Examples of these systems include workflow apps such as point of sale (POS), customer relationship management (CRM), and enterprise resource planning (ERP) systems. In fact, on average, IT decision-makers believe that approximately 30% of their budget will go toward document processing solutions and software in three years' time.

Much has been written in recent years on the possible impact of automation on the workforce. The broad consensus is that something significant will happen (and, arguably, is already happening) to the job market. We can see evidence now that many jobs—or task components within jobs—are being automated. But how will this affect office life for the majority of people in the long run?

One of the things that became apparent in our research was the fact that document management is a commonly held priority for wider investment. It's seen by IT decision-makers as a key component of the office of the future and digital transformation. In fact, 43% of organizations would like to invest significantly in software and solutions to improve document workflows over the next two years. Also among frequently mentioned areas of investment are Wi-Fi enabled printers/copiers (39%) and cloud-based solutions (38%).

As the speed of digitization rapidly accelerates, so will the pace of change in day-to-day working methods. IT decision-makers and influencers recognize that this makes automation of document management not only necessary, but also "inevitable." There's widespread recognition of automation benefits, not only among IT decisionmakers and influencers, but also endusers. Benefits are interconnected and include everything from productivity and profitability to integrated business analytics to security. The benefits of automation considered to be most valuable are document conversion (31%), document security (30%), and automatic capturing/processing based on information contained within scanned documents (28%). Nevertheless, there's still a way to go before the majority of businesses begin making these changes pertaining to document management. Many business executives are concerned about the initial investment.

"The printer and the multifunction device integrate well with the workflow that is largely electronic. We use it to scan directly to PDF."

—Decision-maker; President in Retail; 1-9 employees)

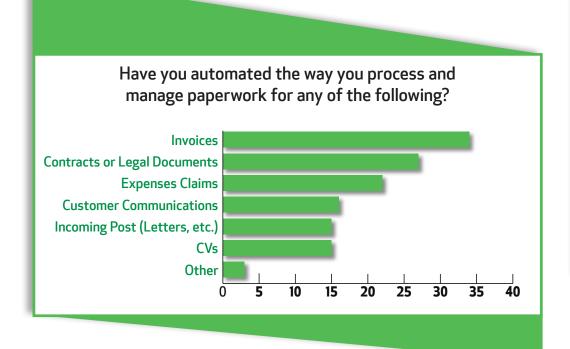
Source: Forbes, The Impact of Automation on the Independent Workforce (May 2, 2017). Much has been written in recent years on the possible impact of automation on the workforce.

implementation headaches, and the retraining involved. Cost remains a large barrier and was the most commonly mentioned impediment (45%). Concerns over training (29%), security (28%), and the time it takes to implement document process automation (26%) also play a role in making automation more of a longerterm goal—it's not something that's likely to happen in the next 12 months.

The current extent of automation is such that 66% of U.S. respondents plan to stop producing hard copies of transactional documents at some future point, with 16% stating this will happen within the next year and seven percent reporting that they've already done so.

However, as noted, our 2017 research reveals no discernible move to "paperless"; the most likely scenario being that printing use will remain the same in the short term as well as scanning and copying. In short, while automation and streamlined processes are certainly gaining traction, they're quite far off from being the norm.

Finally, it's important to note that automation doesn't just refer to singular processes. Effective ERP implementation allows businesses to use a system of integrated applications to automate back-office functions. Currently, about 50% of decision-makers report that they use an ERP system and 75% report that their organizations have automated the processing of at least one type of document. Among total respondents, documents most likely to be automated are financial, such as invoices (34%), and legal, such as contracts (27%).



PART 3

SECURITY: A GROWING PRIORITY

With greater freedom comes greater responsibility, and with information now moving around both physically and electronically, there's more focus on security than ever before. Media coverage of data security breaches, such as Equifax and high profile ransomware attacks like Wanna Cry and Petya, have put a glaring spotlight on IT security. The latest forecast from Gartner savs worldwide information security spending will have grown seven percent to reach \$86.4 billion (USD) in 2017 and will climb to \$93 billion next year.* Such massive investments are likely driven by a sober awareness that security is already being compromised—that this threat is real, present, and damaging as opposed to hypothetical.

Document security challenges are a key area receiving attention. Our study uncovered that about two-thirds of IT decision-makers reported they were aware of instances when documents have gone missing, either inside their organization (65%) or when employees have lost documents while outside the company (64%).

It follows that 72% of senior management says they're likely to upgrade their document security in the next year or two. They're also actively combating unsecure practices, such as leaving behind sensitive documents in output trays (41%) and printing personal documents (32%). Management is recognizing

that the cost of inaction is simply too high, as lax print security will ultimately mean additional spend to reproduce lost documents (55%), contribute to loss of business (21%), and even create the need to enact disciplinary action of internal employees (40%).

As data breaches in the U.S. escalate to an all-time high, organizations operating within a digitally connected economy are more vulnerable to cyberwarfare and hackers than ever before. One quarter of respondents to the 2018 Office Insights survey reported that their organizations have experienced a data breach, defined as the loss or theft of protected personal data in an office technology environment. This is likely a function of the fact that more than half of decision-makers, influencers. and end-users reported that their jobs require them to share documents outside company systems, and 46% of their printed and electronic documents contain sensitive information (on average). Yet more than half of respondents aren't fully aware of their company's legal and compliance responsibilities, and 40% of end-users report that they don't know if their organization has a security policy at all. What's even more alarming is that among those whose organizations do have a formal security policy, 27% report that it does not include copier/printers.

"I am worried that our document and information flow might not be secure. Specifically, I worry about hackers, people stealing identities, and social security numbers. I have a lot of employees' personal information ... [I am also concerned about legal compliance issues.

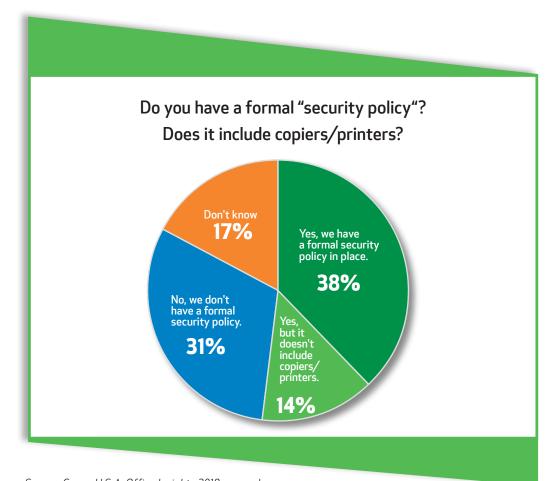
— Decision-maker (Senior Management within Banking, Finance, and Insurance; 1 - 9 employees)

^{*} Source: Gartner press release, "Gartner Says Worldwide Information Security Spending Will Grow 7 Percent to Reach \$86.4 Billion in 2017" (August 17, 2017) https://www.gartner.com/newsroom/id/3784965

One reason why the office workplace is among the most at-risk areas for business data is because multifunctional printing, copying, and scanning devices are akin to a file server sitting exposed in the corner of the office. In addition to the basic lack of awareness that this is a vulnerable security area to be taken as seriously as it is in the PC space, IT teams often don't have governance over printer/ copier devices nor do they have expert knowledge of the proprietary operating environments and languages used for computer printing. As a result, documents that are part of the unstructured flow of business information are rarely

attributed the same level of protection as so-called structured data that resides in databases.

Ultimately, printer/copier security is on the radar for some organizations and, for a notable subset, awareness is being translated into action: 45% of IT decision-makers report that they have consulted an external information security specialist; 25% have consulted a co-worker specialized in this area, and 10% have done both. The latter represents those most serious about security and it's a number that's likely to grow in the coming years.



PART 4

MOBILE AND CLOUD: THE FINAL FRONTIER

The explosion of mobile technology has significantly altered our culture, both inside and outside the workplace. That said, technology often remains ahead of office realities. There's still work needed to create the framework. culture, and IT infrastructure necessary for a seamless mobile/workplace experience. Although tablets and smartphones have allowed people to be accessible 24/7, most workers are still tethered to the physical office. There's not enough secure access to networks and too many documents are still not in electronic form. But this will change radically and quickly, revolutionizing the whole idea of what an office is and can be.

According to IT decision-makers, influencers, and end-users in the U.S., 25% of organizations allow "most or all" employees to work remotely and an additional 33% allow "some" employees to work remotely. About the same percentage are permitted to connect their own personal devices to the company's networks or printers (28%). Respondents are enthusiastic about the potential personal and professional benefits that remote and mobile work can bring. Mobile printing in the workplace is met with particular enthusiasm, with 44% of respondents saying this would provide value to them. Overall, enterprises recognize that the ability to work from virtually anywhere, on devices they're accustomed to, will ultimately make them more efficient, more productive, and more profitable.

As we move from a manufacturing/production-driven society to a knowledge-driven one, office space will be based more on function and less on fixed standards and hierarchies. Status will be defined less by the number of windows in a person's office and more by his or her ability to collaborate. Companies looking for the next generation of space will continue to move away from dedicated offices and workstations into a more free-flowing environment that blurs the lines between work life and private life.

The roll-out of cloud services is also picking up pace, with more businesses using such services for document handling, storage, or transfer. Often these solutions are from well-known global brands like Google and Microsoft. Concerns about security are weighed against the obvious benefits of agility and flexibility that come with mobile and cloud functionality. The majority of decision-makers are aware of cloud-based solutions to help manage document workflows and know the potential benefits they bring in streamlining and improving on existing processes. Although perceived cost remains a barrier for many businesses. the importance of keeping information both sensibly and securely managed suggests that cloud-based solutions are becoming more viable for the majority.

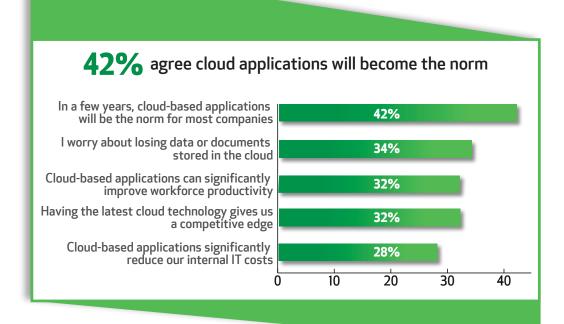
"It is very important [for our users to be able to print from a wider range of mobile devices], and so we've worked really hard [to make that happen]."

— Decision-maker (Associate Superintendent in Education; 50 - 99 employees)

Source: Forbes, The Impact of Automation on the Independent Workforce (May 2, 2017).

The proof is in the numbers: 42% of respondents report that they're currently using cloud-based solutions to manage documents and content, and an additional 15% report that they plan to introduce cloud applications in the coming year. This degree of adoption (both current and planned) is a reflection of organizations across a variety of industries embracing the technology as a means of decentralizing the workforce and increasing the flexibility of enterprise.

Nevertheless, barriers to adoption are still holding some companies back. In addition to the concern about losing data or documents stored in the cloud, cost (28%) and security (28%) are also among the main mitigating factors. Again, though, these issues can be addressed with education as well as the overall awareness that cloud services are about so much more than simply data storage. They can literally transform businesses and office life, allowing workplaces to be designed around people and the way they interact with business data and others, rather than written documents. This is why their adoption is simultaneously slow and yet so widespread.



CONCLUSION

A LOOK TO THE FUTURE

As demonstrated in Office Insights 2018, today's office is expanding beyond its conventional boundaries in a number of ways. The idea that the office is a specific place where our professional lives happen is becoming less universal. Workers can be productive anywhere, thanks to mobile, cloud, faster network access, and a growing number of online collaboration tools. Wherever the office may be, wider and better use of social networks, data analytics, and smart technologies is having a monumental effect on productivity and expectations.

However, this expansion brings with it key challenges, including privacy and security issues posed by a global workforce of people who work digitally, remotely, and with multiple devices. These changes also mean that work spaces—whether they're conventional offices, temporary ones, or conference facilities—must be

made conducive to collaboration. New tools must be made user-friendly, resistant to data loss and, overall, able to streamline work processes.

Our data suggests that, while the "workplace" is being redefined through technology, enterprises will continue to experience a "print evolution." This is happening through an integration of fundamental, print-based processes and improved ways of managing, storing, and accessing data through automation, digitization, and mobility. Security will continue to play a critical role, especially as awareness of office technology vulnerabilities expands beyond the narrow confines of PC security. Ultimately, these trends will define the office of the future. which still rests somewhere between the old and the new

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