

Modernization of Print

Moving print to the cloud is a game changer,
but there is no one-size-fits-all approach.



Robert Palmer
Research VP, Imaging, Printing,
and Document Solutions, IDC

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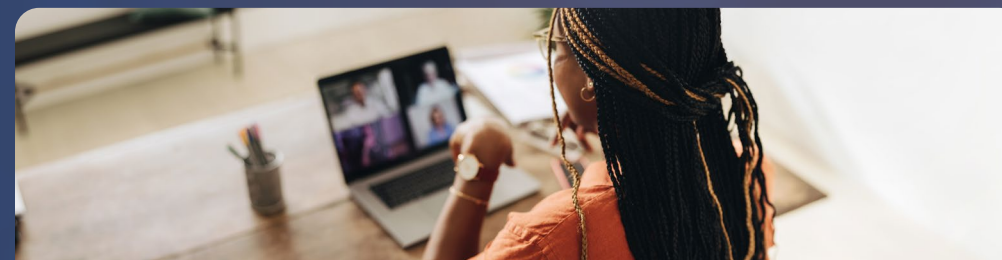
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In this InfoBrief

Companies are looking to modernize IT, but print is rarely considered part of that discussion. As a result, print is often overlooked and can become a hindrance to many of these broader strategic IT initiatives.

Three important factors are driving significant transformation of the print and document infrastructure:

- ▶ **Print Modernization and cloud migration**
- ▶ **Transition to flexible work policies (hybrid work)**
- ▶ **Security and supporting a zero-trust environment**



As flexible work policies become a long-term reality, organizations are forced to rethink existing work processes and IT infrastructure.

Businesses that took short-term measures to equip employees with at-home printers during the initial stages of the pandemic are looking for more effective, long-term solutions for print.

Many organizations are moving to cloud-based print and print management to maximize efficiencies and enable a more secure and productive workforce.

But not all cloud print implementations are the same, and customers have different needs depending upon where they are in their own cloud journey.

Hybrid work is here to stay ... but there are challenges

Businesses are investing in tools, technology, and infrastructure to optimize both on-campus and remote work environments.



45%

of organizations say that remote and hybrid work models will be an embedded part of **accepted work practices** for many industries.



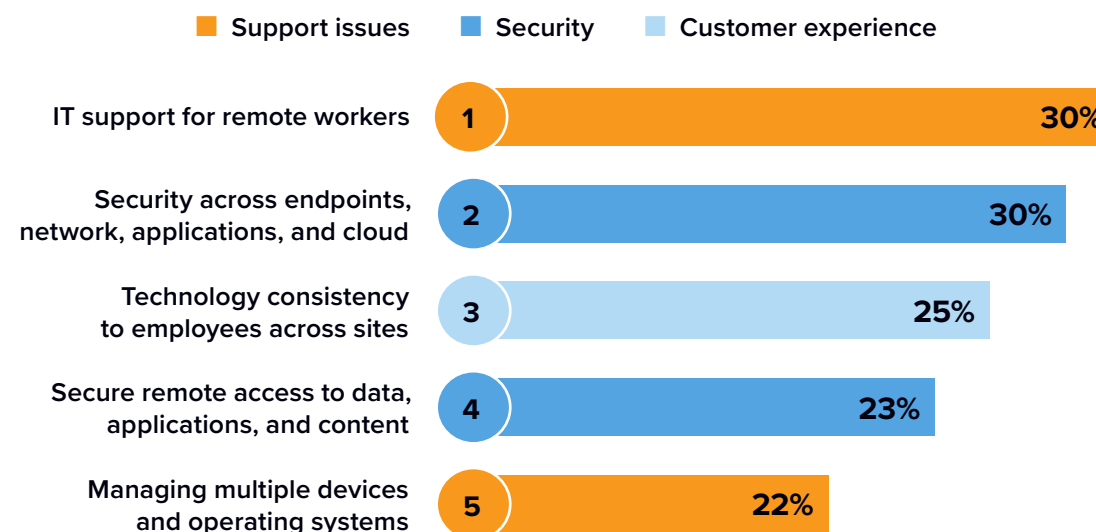
85%

of organizations worldwide invested in the **physical work environment**, despite low occupancy rates in the last 3 years.

Source: IDC Future Enterprise Resiliency & Spending Survey - Wave 11; IDC Future of Work survey, May 2023

Top Technology Challenges for Supporting Hybrid Work

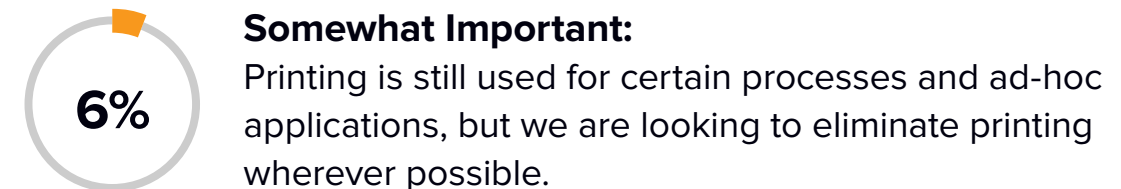
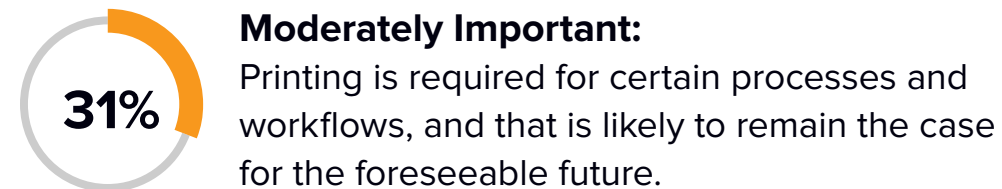
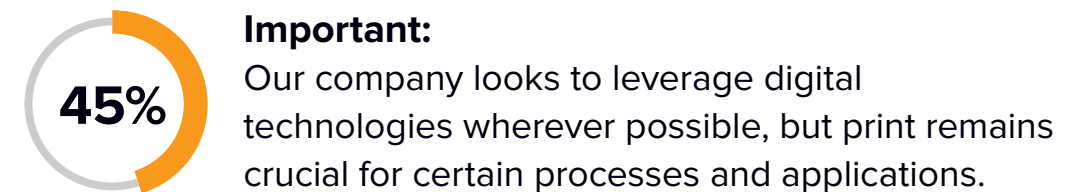
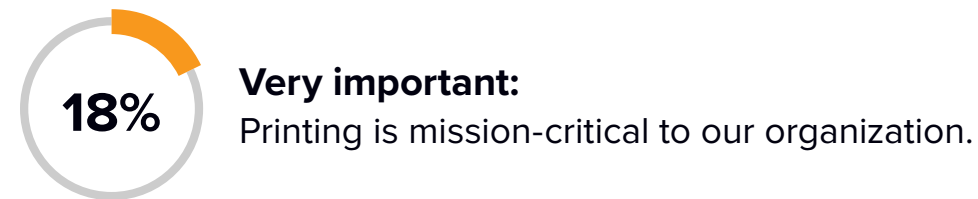
(Percentage of respondents)



The role of print in the office of the future

Printing remains a valuable and integral part of everyday business, but organizations recognize the need to invest in areas to modernize and improve the overall printing experience.

How would you characterize the importance of print and printing capability as a business process within your organization?

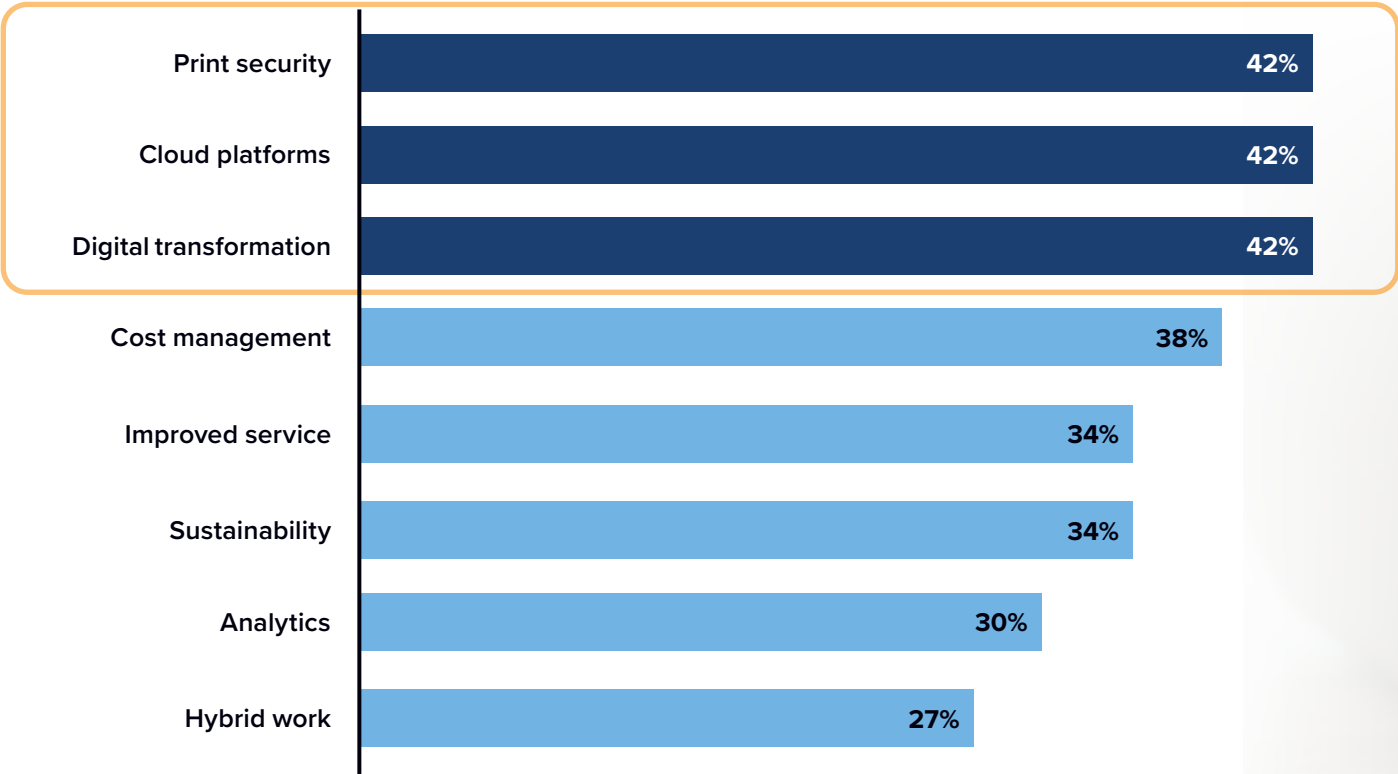


63% of respondents say that print is either **important** or **very important** to their business

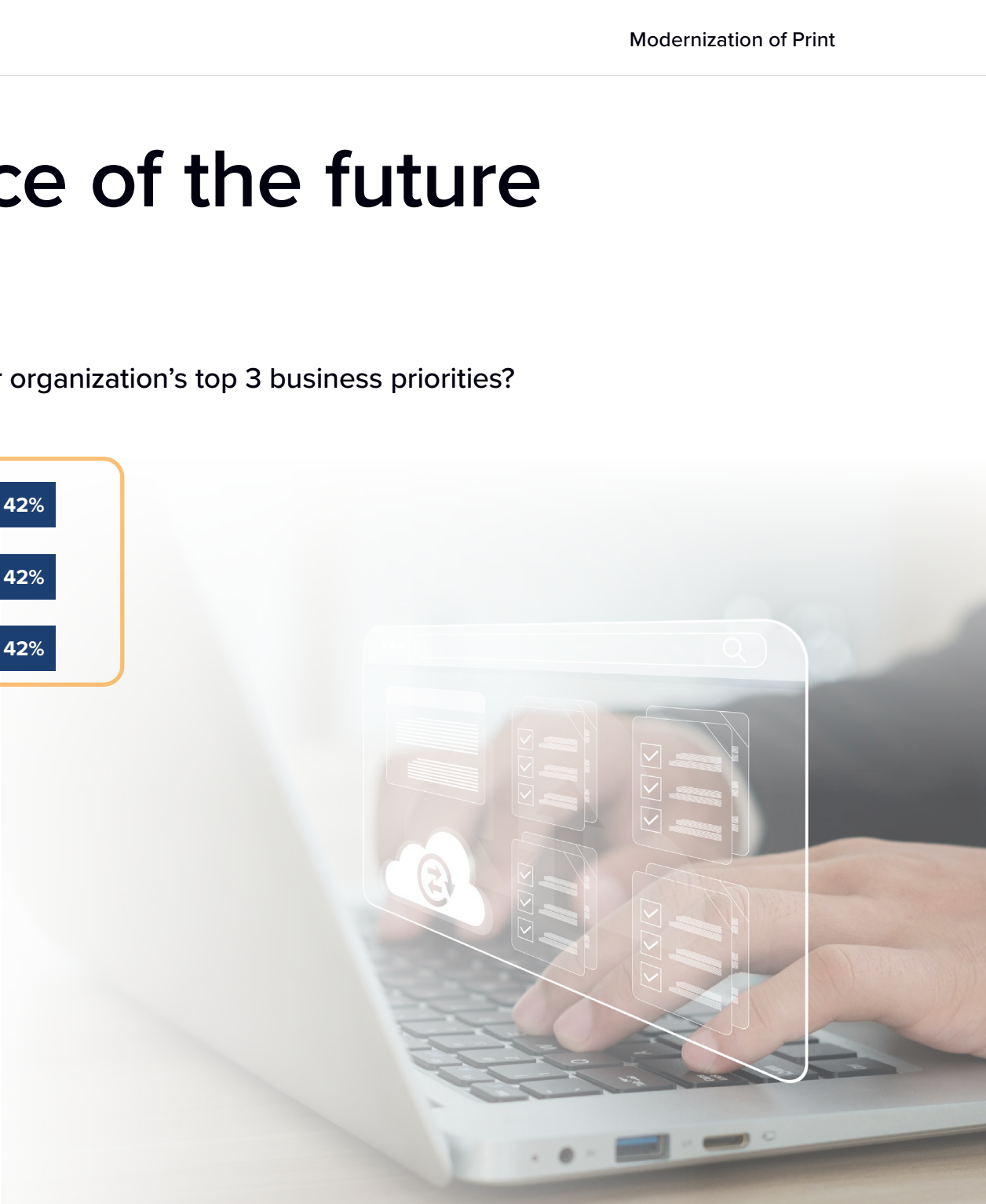
n = 315; Source: IDC's U.S. Print and Cloud Security (Imaging, Printing, and Document Solutions), August, 2023

The role of print in the office of the future (continued)

Thinking specifically of your print and document environment, what are your organization’s top 3 business priorities?



n = 315; Source: IDC's *US Print and Cloud Security (Imaging, Printing, and Document Solutions)*, August, 2023



The future of print is in the cloud

Cloud migration is a top priority for organizations of all sizes. A recent study from IDC noted that cloud as a business model and design point for innovation will become the dominant force in IT as organizations look to innovate and modernize. All technologies, including the provision and deployment of print, will be required to embrace cloud as the future of computing.

IDC says...

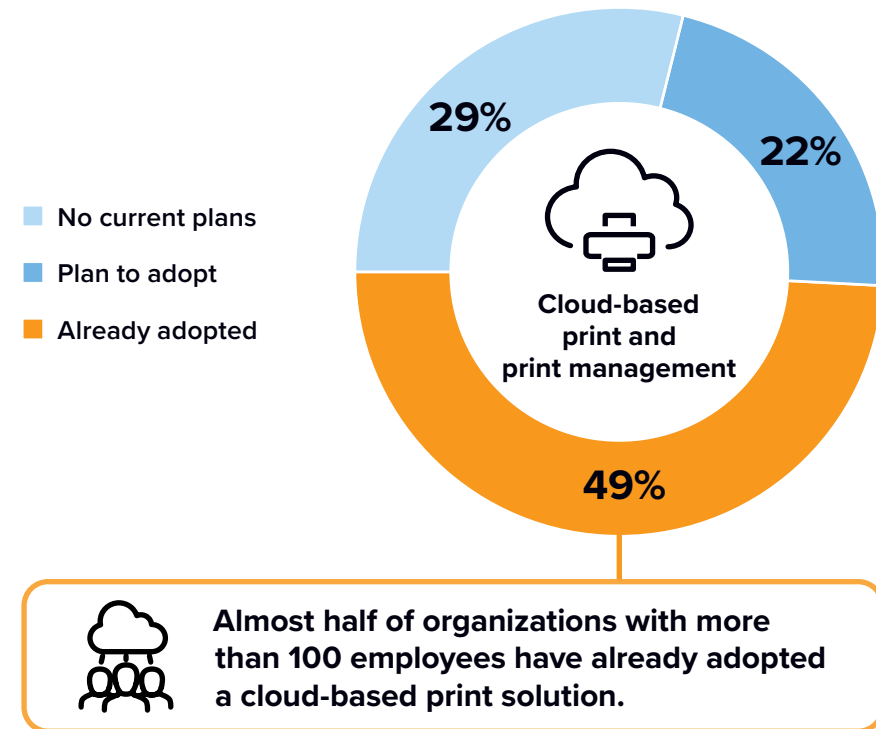


By 2025, 60% of infrastructure deployed to support print within midsize to large organizations will either migrate or originate in the cloud.”

Source: IDC FutureScape: Worldwide Imaging, Printing, and Document Solutions 2022 Predictions.

Thinking of your current print environment, what response best describes your organization’s consideration of moving to cloud-based printing or shifting print infrastructure to the cloud?

(Businesses with 100+ employees)



Source: IDC's US Print and Cloud Security (Imaging, Printing, and Document Solutions), August, 2023

Benefits of shifting print infrastructure to the cloud: improved security, support efficiencies, modernization

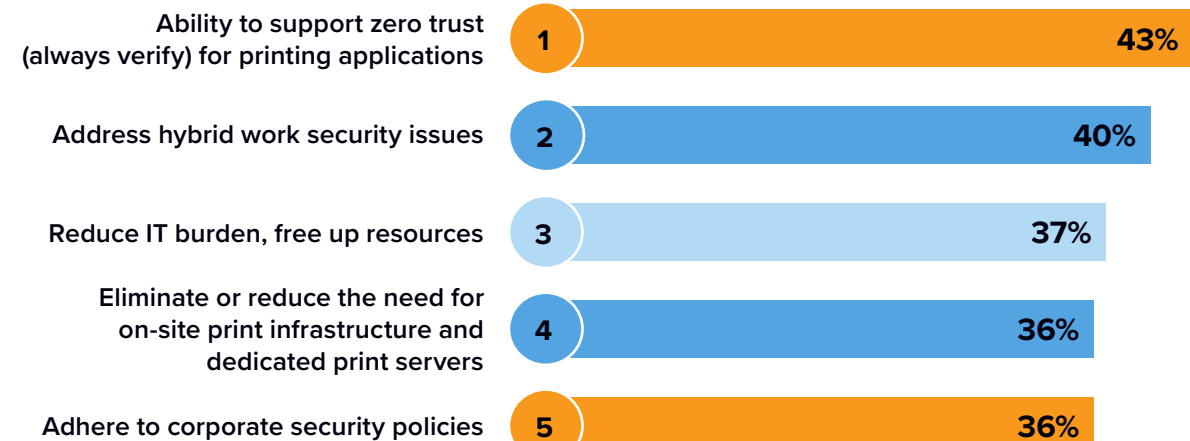
The need to support flexible work policies is a driving force behind the growing interest in and adoption of cloud-based print management tools and services.

Customers are now faced with a diverse set of disparate devices that were acquired and put in place during the pandemic, with little to no visibility into how those devices are being used, what are the true requirements for print usage, and perhaps most importantly, what are the security risks that exist.



What are the most important factors in your consideration for moving print and print infrastructure to the cloud?

■ Improve security ■ Support efficiencies ■ Modernization

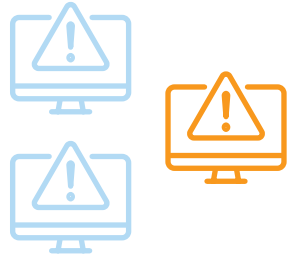


Source: IDC's US Print and Cloud Security (Imaging, Printing, and Document Solutions), August, 2023

Print security is a significant vulnerability for most businesses

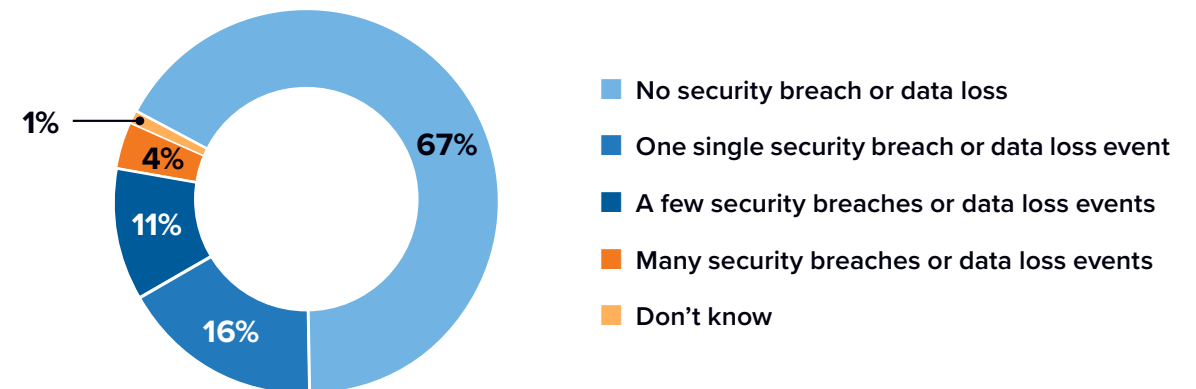
The idea that network security systems can protect endpoint devices is a faulty assumption.

Organizations are only as secure as their most vulnerable point. Nevertheless, many organizations continue to place less emphasis on print security within the organization.



Approximately **one-third** of companies have experienced at least one print-related security breach over the last 12 months.

To what extent has your company suffered a printer/MFP security breach or data loss over the last 12 months that required remediation?



Only **62%** of organizations view print security as **important** or **very important** relative to their overall IT security strategy.

Source: IDC's *US Print and Cloud Security (Imaging, Printing, and Document Solutions)*, August, 2023

The consequences of remaining vulnerable are substantial and potentially fatally harmful to the organization

Beyond the substantial financial impact, productivity loss is cited as the most significant impact resulting from a print security data breach. Negative impact to business continuity and public image are also a significant concern.

The average cost
of a print-related data
breach is
\$658,000.



On average, only
2% of the overall
IT budget is allocated
to print security.



66% of businesses
have identified print
security spending as
a high priority over
the next two years.

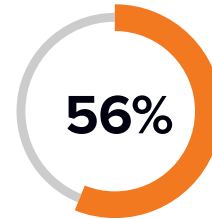


Source: IDC's *US Print and Cloud Security (Imaging, Printing, and Document Solutions)*, August, 2023

The consequences of remaining vulnerable are substantial and potentially fatally harmful to the organization (continued)

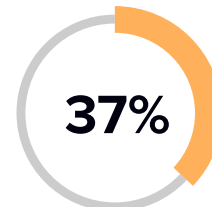


Top 5 major impacts to the organization resulting from any print security breaches:



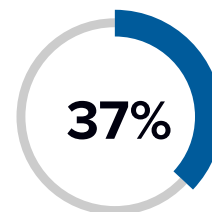
1. Productivity Loss:

Stemming from IT and other resources dedicated to recovery and remediation.



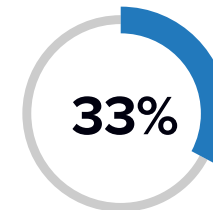
2. Business Continuity:

Restricted access to company resources



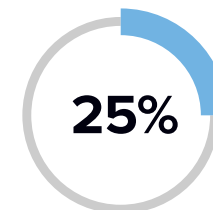
3. Negative Publicity:

Damage to company reputation



4. Intellectual Property Loss:

Sensitive and valuable information leaked to the public domain



5. Data Loss:

Breach of employee or customer data

Source: IDC's *US Print and Cloud Security (Imaging, Printing, and Document Solutions)*, August, 2023

Print security and the cloud: enabling a secure print environment for the hybrid workforce

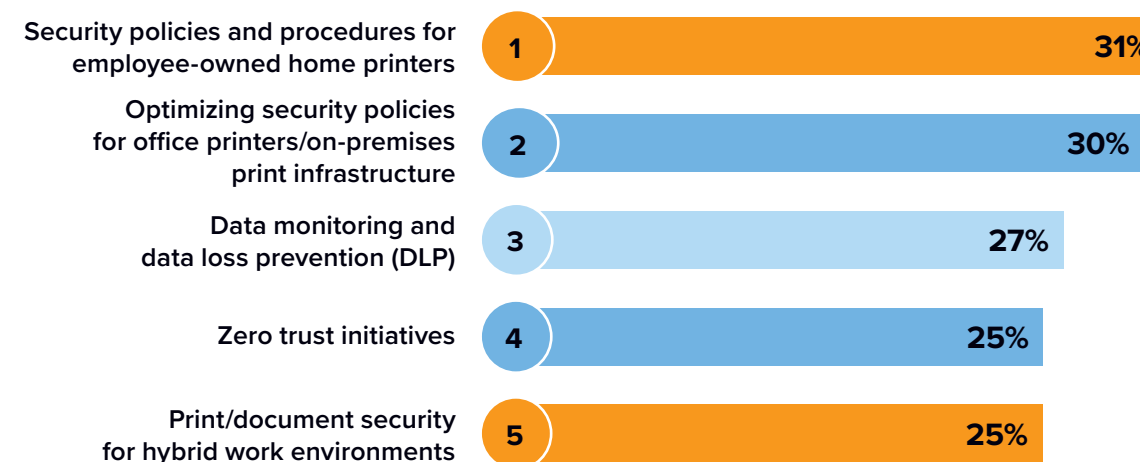
Few organizations have provided guidance to remote employees when it comes to the procurement and use of printers.

Some have advised employees to use their personal printing devices, while others allow employees to purchase new devices that may or may not be company approved. This lack of uniformity across the organization poses significant security risks and has become a focal point for security managers and IT departments. **Cloud is fundamental to enabling a secure “print from anywhere, to anywhere” model for the hybrid workforce.**



72% of businesses say keeping pace with print security issues has become more challenging due to the ongoing shift to hybrid work.

Thinking specifically of your print/document environment, what are your top print security priorities/investments to ensure the security of your print and document infrastructure within the next two years?



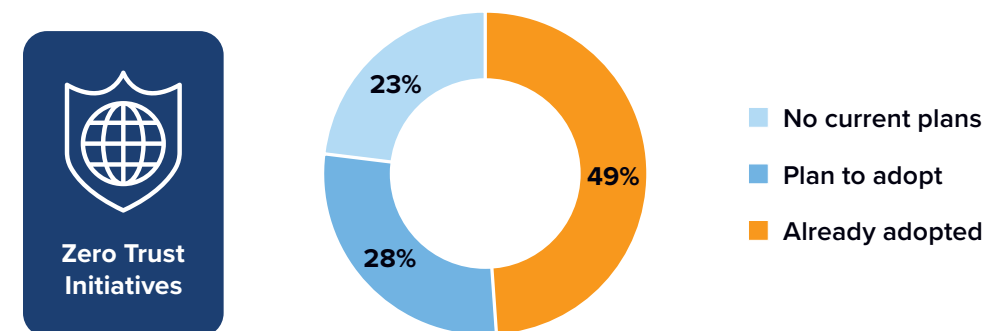
Source: US Print and Cloud Security (Imaging, Printing, and Document Solutions), IDC, August, 2023

With a cloud print solution, organizations can easily adopt zero trust security initiatives for the print environment

The shift to hybrid work is also accelerating a push toward a zero trust security model, driven by the need to support remote users, cloud-based applications, and outside assets.

It is basically no longer safe or even feasible to assume that everything that sits behind the corporate firewall is protected. Instead, each request must be treated as though it originates from an open network. It is important that print fits within the framework of a zero-trust model.

Thinking of your current IT security strategy, what response best describes your organization's consideration for implementing zero trust security initiatives?



Source: IDC's *US Print and Cloud Security (Imaging, Printing, and Document Solutions)*, August, 2023

What is Zero Trust?

Zero trust is a security framework whereby all users, whether in or outside the organization's network, must be authenticated, authorized, and continuously validated for security configuration and posture before being granted access to applications and data. In a zero trust architecture, all devices are treated as potential endpoint security threats within a framework designed to "trust nobody and verify everyone."

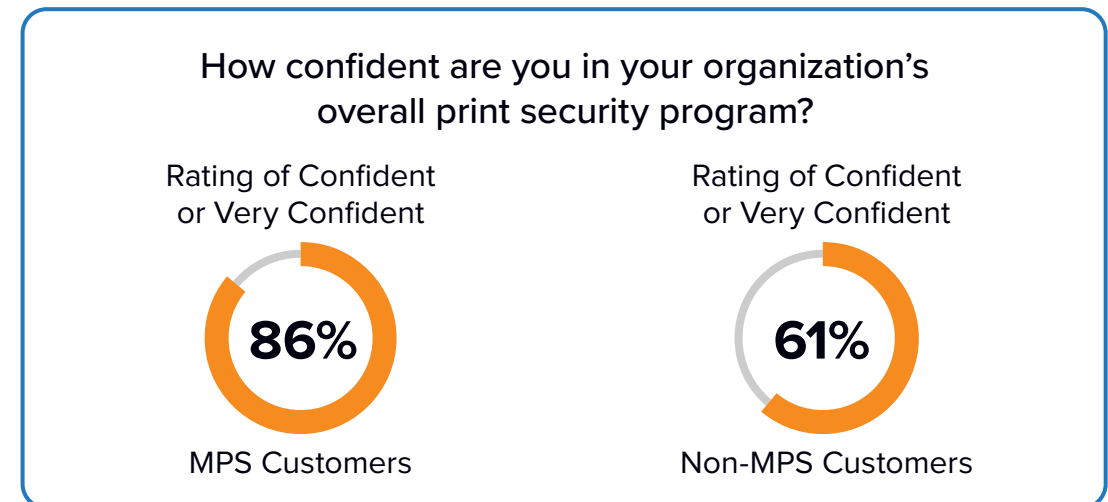
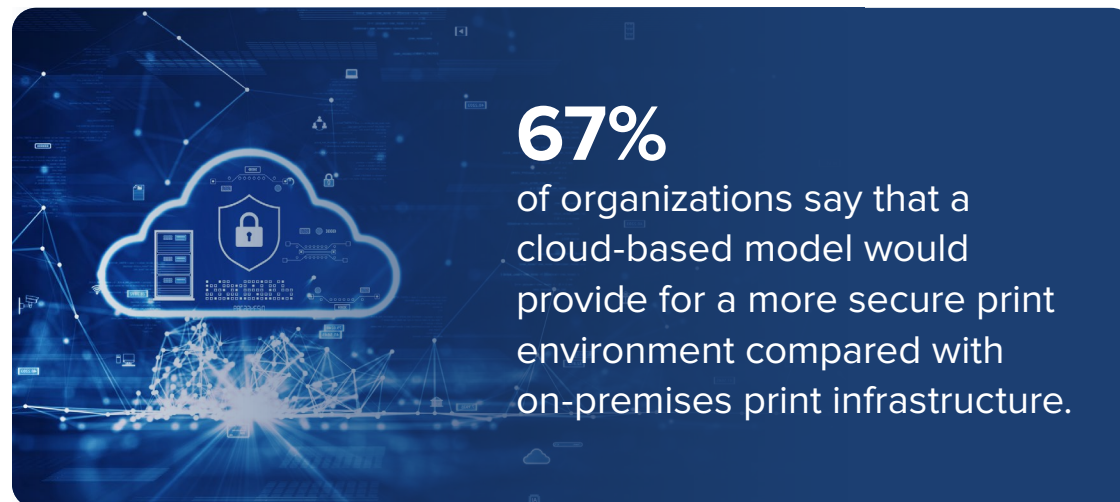
With a cloud-based model, businesses can enable a higher security posture for print

Respondents identify attributes such as data protection, continuous authentication, earned trust, and end-to-end data encryption as the most compelling principals of a zero trust architecture.

When deployed as part of a cloud-based print management solution, businesses can maximize data and endpoint protection ... which is why adoption is accelerating.



Companies that have deployed a print management solution are much more likely to express confidence in their overall print security.



Source: IDC's *US Print and Cloud Security (Imaging, Printing, and Document Solutions)*, August, 2023

Journey to the cloud: it's not the same for everyone

What cloud environment is best for you?

It is important to understand that what works well for some may not be best suited for your organization. Some businesses may benefit from a fully hosted public cloud implementation, due to limited IT infrastructure or resources. Other businesses may have more sophisticated requirements and integration needs and want to optimize for flexibility, data sovereignty, and performance.

Public Cloud



Pros:

- Shared and scalable resources
- Multi-tenant architecture reduces costs
- Minimal configuration complexity and maintenance required
- Highly available and scalable
- Pay as you go or usage-based subscription model
- Highly available and scalable
- Security supports

Private Cloud



Pros:

- Dedicated resources and infrastructure
- The greatest level of control and security
- Resource access limited to a single and secure private network
- Ability to scale without the need for additional hardware
- Manage updates internally

Hybrid Cloud



Pros:

- Greater flexibility with the best of both worlds
- Balance of control, performance, and scalability
- Performance addresses network bandwidth concerns and local computational efficiency
- Security supports strict demands
- Only pay for portions of the public cloud you need

Choose a model that best suits your needs

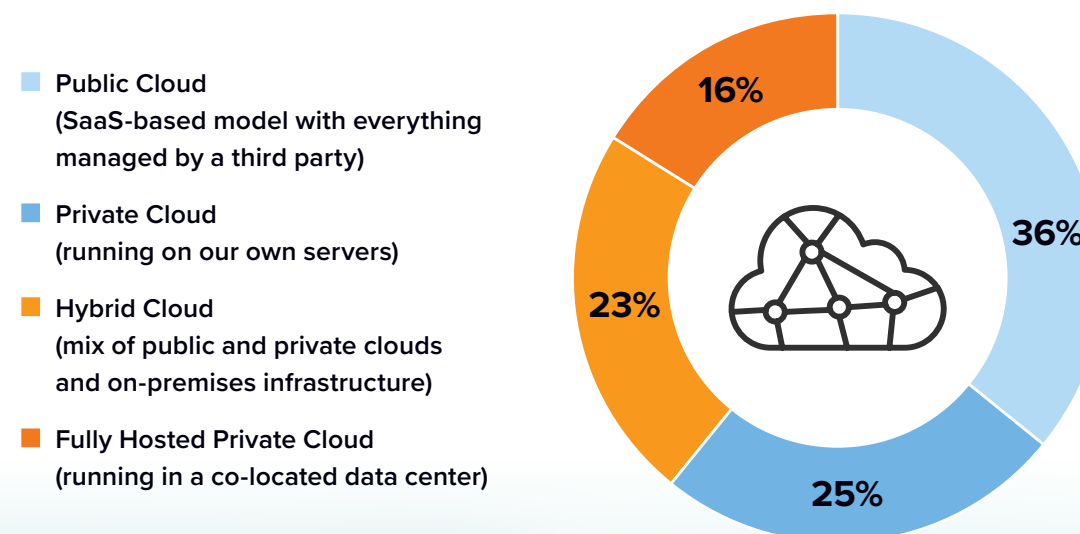
While moving print to the cloud is clearly a strategic priority, each business is on its own cloud journey, and organizational needs vary greatly depending on a variety of issues. When it comes to cloud-based print, there are many important issues to consider.

Cost, location, and security ...

- ✓ Cloud-based print versus print management
- ✓ What are the tradeoffs for public versus private versus hybrid cloud?
- ✓ What are the organizational needs for security requirements and data sovereignty?
- ✓ Print availability — productivity and performance issues
- ✓ Managed service versus a self-managed environment
- ✓ Cost management (financial flexibility and scalability)

No single cloud implementation is preferred

You indicated that you have already adopted a cloud print solution or are planning to do so. What is your current or planned implementation approach for cloud-based printing?



Source: IDC's *US Print and Cloud Security (Imaging, Printing, and Document Solutions)*, August, 2023

Essential guidance/key takeaways

- ✓ By shifting print to the cloud, businesses can expect **cost savings, increased IT efficiency, streamlined workflows, and assurance of protective management of sensitive information.**
 - ✓ **Create an action plan based on existing resources and desired outcomes.** Not every organization will be able to perform a complete “lift and shift” of the entire print infrastructure, so start slow and consider integration with your broader cloud migration strategy.
 - ✓ **The goal is to enable a secure and productive workforce.** A truly secure print and IT environment requires diligence and specific emphasis to remain as secure as possible and achieve a fully optimized print security infrastructure.
 - ✓ Remember the cloud journey: **businesses need a cloud-based print solution** that is well aligned with both near-and long-term objectives.
- ✓ There are important variables for organizations to consider when it comes to implementing a cloud-based print environment. **Businesses need a solution that is not only aligned with existing goals and objectives** but is also flexible and scalable enough to grow as organizational needs evolve.
 - ✓ Look to outsource and find a partner with the technology expertise and experience to help guide you through all phases of your transition to cloud-based printing. A recent study from **IDC’s Future of Digital Infrastructure Agenda** shows that **81% of organizations expect to partner with vendors and service providers for operations and infrastructure support.**

About the IDC analyst

**Robert Palmer**

Research VP, Imaging, Printing,
and Document Solutions, IDC

Robert Palmer is Research Vice President with IDC's Imaging, Printing and Document Solutions team. He is responsible for written research, forecasts, and analysis in multiple practice areas covering managed print services, document solutions, business workflow automation and optimization, and hard copy transformation. Mr. Palmer's research also includes a particular emphasis on the office imaging channel and transformational strategies and technologies impacting the future of the office imaging market.

[More about Robert Palmer](#)

Message from the sponsor



There are new challenges impacting your workplace print environment: the global adoption of hybrid working practices, emerging security threats from bad actors, and the ongoing and inevitable adoption of cloud infrastructure for print management.

The old approach to your print environment won't be enough in the future. New, modern ways of managing your print stack are required.

At PaperCut, the modernisation of print has already begun. The company builds software today for the next big change in terms of how print is acquired, defined, and delivered to your employees.

For more than 25 years PaperCut has made industry-leading print management software that reduces paper usage and saves trees. PaperCut gets all your users printing, and gives you powerful visibility and control over who prints what (and how much) in your workplace.

If you're ready to act on the information contained in this InfoBrief, PaperCut is ready to help you, wherever you are in your cloud journey.

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IDC Research, Inc.
140 Kendrick Street, Building B, Needham, MA 02494, USA
T +1 508 872 8200



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