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NEW CAMPUS DYNAMICS DRIVE INTEGRATIONS IN PRINT FLEET AND CONTENT MANAGEMENT

By BPO Media for Canon



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NEW CAMPUS DYNAMIC DRIVES INTEGRATIONS IN PRINT FLEET AND CONTENT MANAGEMENT

Abstract

Content, both printed and digital, is critical to higher education, and print and content management services are needed to support the modern learning environment. When campus dynamics change, as they have during the COVID-19 pandemic, it is necessary to ensure these services endure during the crisis and continue transparently under the new dynamics that define the future. Higher education institutions can maintain continuity and manage costs by leveraging the cloud and integrating a one-platform print, scan, and device management solution with content storage and management solutions. This can help create an ecosystem that enables institutions to manage, monitor, and control the costs of delivering print services to on-campus and remote populations. It can also help make content delivery, management and collaboration more efficient and convenient, enable use of data security features, and help make compliance efforts easier and more manageable.

Investments in a single platform that can perform print, scan, and device management and the integration of that solution with cloud content storage and management services can allow higher education institutions to meet the new challenges such as those created by the coronavirus pandemic. This can also help in easing some financial concerns and provide other long-lasting benefits.

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Published by BPO Media

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Changing Campus Dynamics

College and university students value modern, convenient, secure, and adaptable learning environments. Yet, while the technologies and solutions exist that enable institutions to deliver on those expectations, financial pressures are always present. When a crisis such as the coronavirus pandemic happens, those pressures increase. Making financial decisions on how best to meet the needs of the student, faculty and staff populations based on the new campus dynamics introduced by the crisis can be difficult. While many of the same services are still needed, delivering those services has changed.

Print management and content management are services that are part of everyday operations, and still needed during the coronavirus crisis. Addressing the delivery of these services based on the changing dynamics in campus life can mean the difference between meeting a short-term goal during a crisis or investing in solutions capable of returning longer-term benefits and financial return on investment (ROI).

This paper covers how the COVID-19 pandemic has changed the dynamics of what higher education institutions need to deliver in document and information sharing services and print management solutions. It provides a brief explanation of why the cloud provides a long-term answer to providing solutions in these areas, what can be delivered through seamless integration between the right print management and cloud content management solutions, and why integrating the two can help with data security and compliance efforts. With this information, higher education technology decision-makers can evaluate their portfolio of solutions for its ability to align with their organizations stated goals and respond to current needs as well as evolving education delivery demands.

The Cost Control Problem

Financial pressures are ever-present for higher education institutions. Controlling costs while delivering the necessary services to students, faculty, and staff has always been important. The COVID-19 pandemic created major disruptions that intensified the financial concerns of higher education institutions around short-term and long-term financial viability.

The [National Conference of State Legislatures](#) noted some of the unexpected financial challenges caused by COVID-19 that higher education institutions face include:ⁱ

- Room and board refunds to students
- Higher dorm cleaning costs due to the need to clean and disinfect dorms and other facilities
- Increased technology costs associated with moving to online courses

An enormous amount of revenue was lost from tuition refunds, room and board and other fees. Some institutions may offset these losses through large endowments, but most colleges and universities are not as fortunate.ⁱⁱ

"INSTITUTIONS ARE SUFFERING FROM LOST REVENUE TO PARTIAL TUITION REFUNDS, ROOM, AND BOARD, FEES, ETC. FOR EXAMPLE, THE PENNSYLVANIA STATE SYSTEM OF HIGHER EDUCATION, WHICH OVERSEES 14 UNIVERSITIES ... IS PROJECTING A \$100 MILLION LOSS ... AND THE UNIVERSITY OF WISCONSIN AT MADISON IS ESTIMATING A \$100 MILLION LOSS DUE TO COVID-19 IMPACTS. WHILE A SELECT FEW INSTITUTIONS HAVE LARGE ENDOWMENTS TO HELP THEM NAVIGATE THROUGH THIS UNPRECEDENTED PERIOD, THE MAJORITY DO NOT."

MICHAEL HANSEN,

CEO OF [CENGAGE](#) IN [FORBES](#)

In a recent [survey of almost 300 college and university presidents](#), 22% said their most pressing concern is the short-term financial viability of their institution, while almost double that number – 43% – reported that their institution's long-term financial viability was the most pressing challenge. In that same survey, it was found that 92% of institutions increased technology investments in response to the COVID-19 pandemic. ⁱⁱⁱ

Making technology investments in the best of times requires a clear understanding of the specific problem or problems that need to be addressed and a thoughtful review of the long-term ROI the technology solution provides. In times of crisis, this process is even more important in order to look for investments that won't just cover the short-term crisis needs but can also deliver long-term benefits. Many times, the problems that need to be addressed during the crisis are unchanged; the new dynamics simply require new methods of dealing with them. Two examples of campus dynamics challenges that colleges and universities have always faced, but which have intensified as a result of COVID-19 are:

1. Providing efficient access to critical information for faculty and staff while making content more accessible for sharing and collaboration between faculty and students
2. Affordably providing and managing printers, multi-functional devices (MFD) and print services to support the printing needs of faculty, staff, and the student body

Responding to the pandemic using remote staff and replacing live classroom instruction with online learning did not fundamentally change the needs in these two areas; they were simply intensified. The changed dynamic is the need to deliver solutions that effectively and transparently support both remote and on-campus faculty, staff, and students.

Content storage and management systems not bound by the limitations of proprietary on-premise servers hold the key to enabling content storage, sharing, collaboration, and workflow management for these distributed populations. Cloud-based content storage and workflow management solutions enable faculty and staff to access day-to-day operational information from campus offices or from any remote location. These systems can also provide students with seamless access to content for sharing, editing, and collaboration, whether they are in a campus classroom or learning from home.

During the pandemic, printers and MFDs in the campus fleet may not be used as much since fewer students are on campus. However, there are always essential faculty and staff on campus who continue to print, and in some instances there may be a need to provide a printer to remote personnel. Additionally, there is a continued need to use scanning as a way to capture paper documents and store them in a managed file repository.

A cloud-based print and scan management solution that enables both on-campus and remote access to printers and MFDs lets an institution continue to deliver needed printer fleet services while continuing to actively monitor and manage the associated costs of those services. A print management solution that also supports MFDs' scanning functions and integrates into content storage and management services can provide a robust solution for faculty, staff and students to capture, share, and manage information that resides on paper.

Technology investments in these type of cloud solutions can help colleges and universities continue their operations and educational missions during a crisis like COVID-19. These investments also help reduce IT management costs, keep print costs under control, improve data security and produce long-term efficiency dividends after the crisis is finally over.

Moving to the Cloud

The use of cloud services has increased significantly during the past few years. Results from the "[Flexera 2020 State of the Cloud Report](#)" show that 93% of enterprises use some form of multi-cloud services, up from 84% in 2019.^{iv} According to [IDC](#), by 2024, 63% of enterprise infrastructure hardware spending will be dedicated to cloud technologies.^v Gartner forecasts spending on worldwide cloud services will increase from [\\$196.7 billion in 2018](#)^{vi} to more than [\\$364 billion in 2022](#).^{vii}

The growth of cloud services in all areas of IT, including print management and content storage and management is due to the realization of the benefits the cloud provides. Those benefits include:

- IT cost savings from eliminating high cash outlays for on-premise data center equipment, improving license management costs, and reducing or eliminating application update and upgrade costs
- The ability to rapidly scale IT services up and down as institution and student needs change
- Flexibility and mobility in delivering services to employees anywhere and at any time
- Operational sustainability as IT and others focus on the execution of business processes rather than managing IT issues
- Security, loss prevention and disaster recovery by housing applications and data in secure authorized cloud services that provide a central point of control, prevention, and backup/recovery in case of a disaster

BY 2024, 63% OF ENTERPRISE
INFRASTRUCTURE HARDWARE
SPENDING WILL BE DEDICATED
TO CLOUD TECHNOLOGIES

– [IDC](#)

"AT THIS POINT, CLOUD
ADOPTION IS MAINSTREAM."

– [GARTNER](#)

The acceptance and use of cloud services has accelerated since the onset of COVID-19, with Gartner stating, "Any debate around the utility of public cloud has been put aside since the onset of COVID-19. For the remainder of 2020 organizations that expand remote work functionality will prioritize collaboration software, mobile device management, distance learning solutions and security, as well as the infrastructure to scale to support increased capacity. At this point, cloud adoption is mainstream."^{viii}

As colleges and universities continue to deal with the pandemic situation, they are also preparing for the future and the continued use of a hybrid learning and support model for on-campus and remote students, faculty and staff. This new model can be effectively supported by leveraging the cloud.

Print Management and Cloud Content Management System Integrations

Most universities and colleges are using some form of print management solution. Actively managing the use of the printer and MFD fleet has been shown to reduce printing expenses by up to 30%^{ix} (Gartner, 2013) and provide a way to recover actual usage costs. An effective print management solution can be used to manage devices and reduce IT printer support costs. Such solutions can also assist with printer and MFP security by requiring user authentication, enabling secure printing, enforcing encryption, and providing a variety of reports.

Some print management solutions have mobile print capabilities that enable users to print directly from their mobile devices. A cloud version of a print management solution can extend the ability of remote students and faculty to print to on-campus devices while still allowing the institution to track and manage print usage. What may be overlooked is that the right print management solution, whether on-premise or cloud-based, should also support the scanning functions of today's MFDs.

The increased use of cloud applications like Google Workspace and Office 365, and cloud-based content management solutions such as Dropbox, Google Drive™, Box, Microsoft OneDrive®/ OneDrive® for Business, Evernote®, and Microsoft SharePoint® Online, means users can do their work, distribute documents and collaborate on files no matter where they are located. Many MFDs integrate with these systems, allowing users to scan directly to an application or cloud storage location. A single platform print, scan, and device management solution allows the college or university to have management and tracking control over these functions as well. These types of platforms can provide a flexible answer to supporting student, faculty, and staff print and scan needs whether they are on-campus or remote, and while giving efficient access to information for operational, file sharing and collaboration purposes. Technology investments in solutions like this can carry cost-saving and efficiency rewards today and into the future.

Security and Compliance




THE AVERAGE COST OF A DATA BREACH IN THE EDUCATION SECTOR WAS \$3.9 MILLION DURING 2019

- Ponemon

Data security is one of the top five digital transformation trends in education. Good security practices can help protect student and employee data and regulatory compliance efforts with regulations like HIPAA (Health Insurance Portability and Accountability Act), FERPA (Family Educational Rights and Privacy Act), GDPR (General Data Protection Regulation), and the CCPA (California Consumer Protection Act). Additionally, managing device access and usage and implementing data and records security practices can aid efforts to reduce the risk of a costly breach that can negatively impact an institution's ability to carry out its mission.

The Ponemon Institute reported in the 2020 "[Cost of a Data Breach Report](#)" that the average cost of a data breach in the education sector was \$3.9 million during 2019. Malicious cyberattacks were the root causes of 48% of breaches, while the remaining 52% were caused by human error (26%) or system glitches (26%). Surprisingly, the same report showed that only 51% of education sector organizations have implemented security automation.^x Investing in print and cloud content management solutions that have been designed with security features can help an institution address some core concerns. Mitigating these issues has the potential to reduce the threat of a costly data breach or cyberattack.



49% OF EDUCATION INSTITUTIONS HAVE NOT IMPLEMENTED SECURITY AUTOMATION SOLUTIONS.

- [PONEMON INSTITUTE](#)

When unmanaged, networked printer and MFD fleets have the potential to present a security risk. Data breaches can happen through unauthorized use of a device, print output left in an exit tray, or an employee unwittingly scanning and sending a document containing confidential information to the wrong destination. By using an integrated

solution that combines print, scan, device management and security features, an institution can help mitigate these risks by:

- Ensuring only authorized users have access to printers and MFDs
- Requiring authentication via campus card to release a print job (the print management solution should seamlessly integrate with campus card systems like Blackboard/CardSmith or CBORD and support multifactor authentication)
- Requiring authentication via campus card to scan a document and enabling the institution to control the destinations of where the scan can be delivered
- Encrypting print and scan data both at rest and in transit to help prevent hackers from accessing sensitive information. (The print and scan management solution should be FIPS 140-2 compliant, use AES-256 and RSA encryption, support SSL 3.0 and TLS 1.0 or higher to create secure connections, and support OAuth).
- Seamlessly integrate and leverage security capabilities of cloud applications like Google Workspace, cloud utilities such as Microsoft Universal Print, and cloud content management solutions such as Dropbox, Google Drive™, Box, Microsoft OneDrive®/ OneDrive® for Business, Evernote®, and Microsoft SharePoint® Online.
- Having the ability to automatically halt a print or scan job that contains an identified sensitive keyword or term, and notify IT or other key institution personnel to determine if a confidential data breach was about to occur
- Providing an audit trail in case of a data breach caused by a printed document to determine what was printed, when, and by whom

CANON SECURE AND MANAGEABLE INTEGRATED PRINT/SCAN SOLUTIONS

- uniFLOW
- uniFLOW Online
- Box
- Therefore
- Therefore Online
- Kofax Power PDF
- imageRUNNER ADVANCE MFDs
- imageCLASS MFDs
- imageWARE Secure Audit Manager
Express

These kinds of security features and automation can be transparently implemented so that users simply present credentials, just as they normally do in other campus activities, and select print or scan.

Popular cloud content management systems (such as Box, Dropbox, or Microsoft OneDrive) can provide centralization of content using data encryption methods, provide ways to monitor and manage access to data (even revoking a user's access if necessary, or setting expiration limits on the data), and more. Integrating this type of system with a robust print, scan, and device management solution makes the sharing and printing of documents more convenient and manageable while addressing security in the new hybrid distributed campus mode. It also creates an efficient data sharing and protection ecosystem that can help with compliance efforts and deliver consistent security and risk management features at much lower operational complexity.

The benefits of this type of ecosystem allow an institution to deliver on its objectives of providing convenient access to information to faculty, students, and staff while helping to protect data and IT assets. Institutions can also see positive benefits to their ROI on technology investments that can mitigate potential risks and costs associated with cyber security incidents.





Summary

The mission of higher education has never been more important. Universities, colleges, trade schools and others have a fundamental impact on the standard of living and overall welfare of communities, regions and states. Financial concerns that are always present and that have been exacerbated by the COVID-19 pandemic make decisions difficult when considering technology investments that can help an institution deliver the learning environment and necessary services students, faculty, and staff expect. Understanding the core services used before the crisis and still needed during the crisis, as well as the new dynamics that have changed the delivery of these services is the first step in making sure technology investments can help with cost control and can potentially contribute to long-term financial viability.

Print, scan, and device management are still needed for higher education institutions to monitor, manage, and control printer and MFD fleet costs. A unified platform solution that seamlessly integrates with cloud content management solutions meets the print, scan and collaboration needs of the school's on-campus and remote population, while also addressing data security concerns. Investment in these types of solutions can provide an excellent way to relieve an aspect of an institution’s short-term and long-term financial concerns in these areas.

Learn more about the solutions mentioned in this article:

<https://www.usa.canon.com/internet/portal/us/home/explore/industries/education/>

Content Management	Print Management	Intelligent Email	Security
			

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