

# Modernizing Your Content: The Key to Digital Transformation

MARKET TRENDS REPORT



# Introduction

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The digital age has ushered in an explosion of new information — from email to social media, video, voice, text and much more. This influx of information has forced government agencies to rethink how they can use data as a strategic asset. That means finding ways to manage data holistically — and without sacrificing anything in the way of cybersecurity.

For a growing number of government bodies, a solution has emerged in the form of modern content services platforms (CSP). These platforms are helping agencies grow into the 21st century versions of themselves by empowering employees with access to the content they need, when and where they need it.

**A content services platform is the evolution of the traditional enterprise content management system, in that it doesn't require the heavy lift of compiling data into a single location.** Instead, a content services platform serves as an information hub that gives agencies the flexibility and scalability to connect and use data — regardless of its location.

These platforms enable agencies to align with federal IT modernization and data strategy efforts. Specifically, content services platforms support the use of capabilities such as artificial intelligence and machine learning to improve data usage and management.

Speaking during a government IT conference, Federal Chief Information Officer Suzette Kent explained that, “big data is powerful, but it has to coexist with sound data management strategies as well.” But how do agencies go about charting that path?

To better understand why agencies need to modernize and how a comprehensive content services platform can help, GovLoop partnered with Nuxeo to produce this report. Nuxeo is the developer of a leading content services platform that is accessible, flexible and scalable — helping agencies keep their data secure. In this report, we highlight the challenges agencies face in managing diverse content, how they can make content more accessible across their organizations and best practices for developing a holistic content management strategy that aligns with IT modernization efforts.

## BY THE NUMBERS

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**2.5**  
**quintillion**  
**bytes** of  
data are  
created  
every day.

Source: Forbes

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*"The Federal Government needs a robust, integrated approach to using data to deliver on mission, serve customers, and steward resources while respecting privacy and confidentiality."*

- [President's Management Agenda](#)

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**While many agencies focus on the 10% of structured data, it is the remaining 90% of unstructured data – content of any size and type – that is most critical to day-to-day operations.**

Source: Nuxeo

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### **December 12, 2017:**

President Trump signed the Modernizing Government Technology (MGT) Act into law as part of the 2018 National Defense Authorization Act. The law creates working capital funds for IT projects at federal agencies and a central modernization fund housed by the General Services Administration.

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**42%**

Digital data will grow at a compounded rate of 42% through 2020.

Source: IDC Research

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*"Big data is powerful, but it has to coexist with sound data management strategies as well."*

- [Suzette Kent, Federal Chief Information Officer](#)

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**20%**

of major enterprise file sync and share and enterprise content management vendors will morph their existing offerings into content services platforms by 2020.

Source: [Gartner](#)

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## THE CHALLENGE

# Managing Diverse Content Sources

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Most agencies are accustomed to managing PDF files, Word documents and other standard text inputs. But traditional systems for managing this type of content are incapable of keeping up with the growing diversity, increasing size and the volume of unstructured content (video, audio and more) that government employees and citizens are rapidly producing.

When it comes to managing content, agencies' top challenges include:

- Content that's scattered across the enterprise
- Too many independent systems in place that store and manage content
- The growing number of content types and delivery channels

"Agencies are getting to the point where there's too much data coming through to effectively classify it and determine what they need to secure and what they need to retain," said David Jones, Vice President of Product Marketing at Nuxeo.

When that data is poorly managed, employees waste time searching for it or end up using data ineffectively. The same is true for citizens who often rely on government data to make personal decisions, such as choosing what neighborhood to

live in or comparing school districts. They expect accessibility and delivery of government data to be on par with what's provided by the private sector.

The anticipated release of the [Federal Data Strategy](#) will address these and other issues. The strategy will create a coordinated approach to federal data use and management that serves the public, which includes making information accessible for researchers, businesses and citizens. Another goal is to improve the use of data for decision-making and accountability for federal agencies in the areas of policymaking, oversight, innovation and more.

For agencies, the challenge is managing the quantity of data coming in and using it in efficient and effective ways. But Jones said agencies can't afford to view data as an issue that needs fixing; instead they must consider the opportunities.

"There is so much opportunity with regard to content and what we can do with it," he said. "If you want to improve citizen engagement, understand your agency better or create new offerings, content is the way that you can do that. Content is the driving force for all of those actions and not just a problem that needs fixing."

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## THE SOLUTION: A SECURE CONTENT SERVICES PLATFORM

**To fully comply with federal modernization requirements and effectively use unstructured data in a secure manner, agencies need a modern approach to content management.** Specifically, they need a platform capable of handling the scale and variety of information they oversee.

Using a content services platform, agencies can better tag, organize, manage and distribute a variety of content. That may include documents, images, emails, video or audio records. Regardless of what type of content your agency needs to carry out its mission, a content services platform takes the stress and manual labor out of finding the right content at the right time.

The traditional idea of managing all content in a central repository doesn't work for many agencies. Instead, agencies

are turning to content services platforms that can connect to their core content repositories, enabling them to manage digital content that's stored in different legacy systems.

Another feature agencies should consider is having the right metadata management in place. This capability allows agencies to automatically categorize any content type and ensure that content is more accurately referenced.

As agencies mature their content management strategies and invest in new capabilities, such as AI and machine learning, they must do so in a secure and thoughtful way. "If you have a rubbish process and you digitize it, what you end up with is a rubbish digital process," Jones said. "Instead, look at modernization from the perspective of citizens and key stakeholders and choose the best possible solution."

## BEST PRACTICES

# Developing a Holistic Strategy for Using a CSP



### 1. Leverage a cloud-native and open-source architecture

To meet your evolving content demands, you need to start with a flexible framework. Part of that includes having a platform you can operate either in your data center or in the cloud. Using a cloud-based platform makes it easier to proactively meet your content needs — whether there's a dramatic uptick in data or a slight dip. Using an open-source architecture, as opposed to a proprietary one, adds additional benefits. Mainly, it allows you to integrate newer platforms with existing applications such as Slack, Microsoft SharePoint and others.



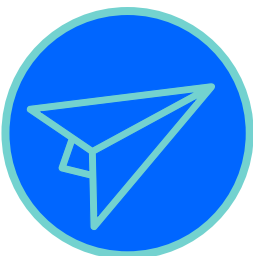
### 2. Ensure the platform scales appropriately

We live in a world where the volume of data hitting us is growing exponentially. Any content services platform needs to be able to cope with this. The needs of a modern agency require the management of potentially billions of items of any file type, stored in any system or repository. If your content services platform does not scale accordingly, it simply will not work.



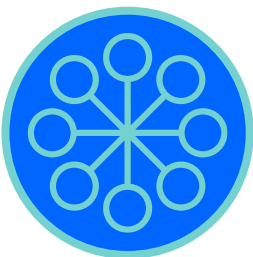
### 3. Enable artificial intelligence functionality

Considering how much content is collected and used by government today, and how much more will exist in the future, artificial intelligence is crucial. Agencies must adopt advanced metadata models that support machine learning for real-time decision-making. Using metadata models, agencies can better track, store and manage information, making it easier for machines to access the right data when it's needed. AI applications are trained using a sample set of data or content and learn how to extract key information from whatever document or systems they crawl. That allows the applications to process large quantities of documents with minimal human interaction — freeing employees to do more mission-critical work.



### 4. Deliver content in context

Make sure your platform integrates with existing systems that house content, apply automated business processes that search the content with specific filters and requirements, and deliver only the relevant information required for end users to process the task at hand.



### 5. Strengthen collaboration across business units, IT and industry partners

Employees working across agency business units want more control over the management of their content — a task that has traditionally been carried out by the IT department. But to ensure that your content services platform is properly implemented and secure, the business and IT sides must work collaborative and closely with industry partners. These teams must take into account their business needs, the modern solutions they can provide to meet those needs, security requirements and also ease of use for employees and citizens.

## CASE STUDY

# A 21st Century Data Success Story

Federal agencies have a lot in common with some of the world's largest commercial enterprises, in terms of size, content objectives and security challenges.

Take banks, for example. Content and data are the biggest assets a bank holds. Banks know everything about how a person behaves, what their lifestyle is because of what they do

with their money and who they spend their money with. Similarly, data is the lifeblood of government and gives agencies insights into what citizens need and want, future trends and more.

Government agencies can relate to pain points felt by one of the top 15 banks in the world. The bank was tasked by its board with improving time to market (from months and years to weeks and days), transforming the customer experience (be more like Amazon) and slashing technology costs. Like many organizations, the bank had to comply with General Data Protection Regulation (GDPR), which redefines the way organizations manage data and approach privacy.

But the bank realized that the real change was not just about adopting new technology but transforming the organization

and its culture. The bank partnered with Nuxeo to create a "Data Vault" or a digital safety deposit box that provided three main capabilities:

1. Make unstructured business documents available to customers
2. Store and view critical personal documents
3. Enhance the use of metadata and compliance with GDPR requirements

The bank needed a problem-solving partner that could bring digital skills to the table and real-world expertise at delivering modernization at an industrial level. The bank was able to enhance the customer experience by delivering a paper-free environment with a single point of access for all information and a Google-like search on unstructured documents. It also used metadata and machine learning to re-examine historical documents and harvest a wealth of information to update data systems.

For all organizations, whether a bank or government agency, it's not enough to just collect information; they must find ways to put this information to intelligent use in an effort to improve the citizen experience.

## HOW NUXEO HELPS

Nuxeo helps agencies modernize their information systems using modern, cloud-native and open source technologies to deliver services with massive scalability and flexibility. For agencies, this means they can connect to their existing core content repositories and manage any digital content in place. With Nuxeo's content services platform, agencies can forgo disruption associated with moving legacy applications onto a new platform.

"Within Nuxeo's open-source content services platform are the capabilities to interact with all types of data, at scale," Jones said. "It's not restricted to just one data type — we handle everything, all within one system. We're open-source and open-standards, so agencies are not locked into proprietary formats. That allows us to integrate with all existing and new systems within a government agency."

*For more information, visit [www.nuxeo.com](http://www.nuxeo.com).*

# Conclusion

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As government employees rely more heavily on content and data to make real-time decisions, improving how that content and data is managed must be a top concern. The key is developing a holistic strategy for content management that accounts for a variety of content types across different systems.

That strategy must also be crafted in a way that prioritizes the security of content and adheres to federal requirements and other policies and regulations. As agencies seek to modernize legacy systems, how they manage and access content must be a central part of that effort.

In a government landscape that sees more content than ever, implementing a modern content services platform isn't a nice-to-have but a necessity.



## ABOUT NUXEO

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Nuxeo, developer of the leading Content Services Platform, is reinventing enterprise content management (ECM) and digital asset management (DAM). Nuxeo is fundamentally changing how people work with data and content to realize new value from digital information. Its cloud-native platform has been deployed by large enterprises, mid-sized businesses, and government agencies worldwide. Customers like Verizon, Capital One, Electronic Arts, and the Department of Defense have used Nuxeo's technology to transform the way they do business. Founded in 2008, the company is based in New York with offices across the United States, Europe, and Asia.

Learn more at [www.nuxeo.com](http://www.nuxeo.com).



## ABOUT GOVLOOP

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GovLoop's mission is to "connect government to improve government." We aim to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 300,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to connect and improve government.

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