IT SYSTEMS AND CONTENT MANAGEMENT

ASG TECHNOLOGIES 2021 SURVEY REPORT: WHAT’S SLOWING MODERNIZATION?

Barriers Hindering Enterprise IT Systems and Content Management
We’re living in the age of modernity – from the digital economy to data-powered business – yet surprisingly few enterprises have completely “modernized.” Many companies have taken on transformation projects leveraging artificial intelligence or data analytics but their content management and IT systems remain years, if not decades, behind. This bottleneck is compounded by several hurdles: from content sprawl and privacy regulations, to rapid cloud migration and a mainframe skills gap. Companies must identify, prioritize and address the barriers slowing their journey into the future.

To help enterprises modernize, in January 2021, ASG Technologies surveyed approximately 250 professionals who manage content and enterprise IT systems about the barriers they encounter in their work. Based on the findings, enterprises have several pathways toward modernization: content governance must be prioritized in data management and compliance strategies. The mainframe and hybrid cloud must remain pillars of infrastructure and operations, and they must evolve to support the digital acceleration of modern organizations. Most important, enterprises must sustain the momentum brought on by 2020, fueling transformation and continuously evolving business priorities – not IT projects – through 2021.

WHO TOOK THIS SURVEY?

- IT management
- Project managers
- Data architects
- Application managers
- Network designers/engineers/managers
- Business analysts
- Storage/SAN administrators
- Database administrators
THE VALUE OF CONTENT REMAINS UNREALIZED

IT professionals know the tagline of the digital economy: information is an enterprise’s most valuable asset. Yet, most enterprises are far from realizing the potential of that asset, especially their content. According to ASG’s survey, more than half (56%) of respondents say their organization has not realized the full value of its content.

Overlooking the value of content is a massive, missed opportunity, given three-quarters (75%) of respondents say at least some of their organization’s data is unstructured. More than four in ten (44%) respondents say almost half or more of their organization’s data is unstructured. That is a shockingly large portion of enterprise’s information being under-utilized. In fact, 30% of respondents say most if not all of their content is “dark” (collected, processed and stored, but not used). Another 11% say about half of their content is dark. This widespread existence of dark content shows that enterprises’ ability to collect information has outpaced their ability to analyze and leverage it. Unfortunately, as a result, insights into product development, customer preferences and business performance are going to waste.

CONTENT (aka unstructured data)
Datasets that aren’t stored in a structured database format. E.g., media, documents, emails, records, images, audio, IoT.

CONTENT VS. STRUCTURED DATA

In 2020, ASG fielded a similar survey, the 2020 Barriers to Success Report, in which 45% of respondents said their organization had not realized the full value of their structured data. While enterprises need to better leverage information generally, it’s clear they have gleaned more value from structured data than content. In 2021, enterprises must focus on addressing content in offensive and defensive data strategies.

CONTENT
56% of respondents say their organization has not realized the full value.

STRUCTURED DATA
45% of respondents say their organization has not realized the full value¹.


56%

44% of respondents say almost half or more of their organization’s data is unstructured.

30%

30% of respondents say most or all of their content is “dark.”
Enterprises may struggle getting their arms around content because it’s scattered across the organization. More than half of respondents say they have content living on Microsoft 365 (58%), shared drives (53%) and email (51%). This trend was likely accelerated by the shift to remote work, as more employees used collaborative services and personal VPNs to store content. While enabling remote work is part of a modern approach, enterprises are only halfway there if they don’t have a content management strategy to match.

Only about one-quarter (26%) of respondents say their content lives in a repository, and shockingly, almost one-third (32%) say content is still existing as paper files! Physical content is the antithesis to the modern enterprise, yet it exists at one in three enterprises.

This content sprawl is the bane of any data governance professional’s job, given few enterprises have the tools needed to govern, redact and encrypt enterprise content stored outside a secure repository. It’s not surprising then that barely over one in ten (11%) respondents say all their content is governed. This significant lack of governance poses huge risk to enterprises, especially as regulations increase around how organizations collect, store and retain information.

**WHERE DOES CONTENT LIVE?**

- **Microsoft 365**: 58%
- **Shared drives**: 53%
- **Email**: 52%
- **Physical files**: 32%
- **Microsoft Teams**: 47%
- **Content repository**: 26%
- **Other**: 1%

**HOW MUCH OF YOUR CONTENT IS GOVERNED?**

- 11% say all
- 22% say almost all
- 28% say most
- 14% say about half
- 16% say some
- 5% say almost none
- 4% say none/I don’t know
CONTENT GOVERNANCE WILL BE A KEY TO SUCCESS

When it comes to content management, the top challenges enterprises face relate to having (or lacking) the right data governance tools and processes. According to respondents, the top challenge is employees saving content on shared drives/personal drives (41%), which we know is happening at 58% of respondents’ organizations. This was followed by migrating to the cloud (38%). Both of these challenges are related to accelerated remote work, which more than one-quarter (26%) of respondents identified as a challenge.

Accelerated remote work exacerbated other content governance problems that existed well before the pandemic. More than one-third of enterprises struggle retaining/storing content too long (37%), limiting control and access to the right people (35%) and retaining redundant/unnecessary information (35%). Each of these challenges introduces more risk to the enterprise.

Consequently, three in ten (31%) respondents identify risk of non-compliance with industry regulations (e.g., HIPAA) as a top challenge, and more than one-quarter (26%) identify risk of non-compliance with privacy regulations (e.g., GDPR, CCPA). The state of enterprises’ content governance strategies is highly tied to these risks – regulatory compliance, financial and reputational, including attesting to CCPA and GDPR compliance.

Yet currently, two-thirds (66%) of respondents say their organization does not have content governance processes in place. Only 41% say they have retention and records management and only 33% have scan/capture tools – which is alarmingly low given the high volume of content enterprises are managing. These capabilities are required to know what content they have, how long they’ve had it, where it is and if it’s in compliance with regulations. Scan/capture tools are particularly critical for finding and managing personal or sensitive information, which is becoming more important as privacy laws empower consumers to make requests around their data. Surprisingly, over the next 18 months only 23% of respondents say their organization plans to implement retention and records management, 19% plan to implement scan/capture tools and a mere 16% plan to implement content governance. This finding highlights again how content, and specifically content governance, must be prioritized as a way to build resilience in the modern enterprise.

TOP 8 CONTENT MANAGEMENT CHALLENGES

1. Employees saving content on shared drives/personal drives
2. Migrating to the cloud
3. Retaining/storing content for too long
4. Limiting control and access to the right people
5. Retaining redundant/unnecessary information
6. Risk of non-compliance with industry regulations (e.g., HIPAA, MFID)
7. Risk of non-compliance with privacy regulations (e.g., GDPR)
8. Accelerated remote work

CONTENT GOVERNANCE GAPS

- 66% of respondents’ organizations do not have content governance processes.
- Only 41% have retention and records management.
- Only 33% have scan/capture tools.
### CONTENT MANAGEMENT PROCESSES

- **Redaction**: 16% planned, 21% in place
- **Content federation**: 16% planned, 21% in place
- **Robotic process automation**: 17% planned, 28% in place
- **Content delivery/distribution services**: 19% planned, 28% in place
- **Scan/capture tools**: 19% planned, 33% in place
- **Content governance**: 16% planned, 33% in place
- **Artificial intelligence**: 25% planned, 34% in place
- **Workflow**: 26% planned, 35% in place
- **Integration with SAP tools**: 18% planned, 36% in place
- **Retention and records managements**: 23% planned, 41% in place
- **Integrations with Microsoft tools**: 25% planned, 41% in place
- **Reporting and analytics**: 23% planned, 44% in place

What content management processes/tools does your organization plan to put in place in the next 18 months?

What content management processes/tools does your organization have in place?
Some enterprises understand that content governance must be a priority. In response to the content management challenges brought on by the pandemic, 41% of respondents say they implemented redaction/retention rules. While redaction/retention are increasingly necessary for content management in the post-pandemic, remote world, it is alarming that the majority of enterprises did not already have these processes in place. That said, 15% of respondents simply ignored content management challenges brought on by the pandemic due to other pressing issues – a reality many enterprises have faced in the past year.

The most popular reaction to the pandemic has involved the growing shift to cloud. More than half (52%) of respondents say their organization increased their focus on migrating to the cloud in response to the pandemic. Accordingly, 90% of respondents say their content management tools work both on-premises and in the cloud. This full coverage will be increasingly critical as enterprises – and their content – expand to new and modern IT ecosystems.

**How did your organization respond to content management challenges brought on by the pandemic?**

- **52%** increased focus on migrating to the cloud
- **43%** created new workflows
- **41%** implemented redaction/retention rules
- **40%** focused on content governance
- **36%** adopted additional content management solutions or capabilities
- **15%** have ignored the challenges due to other pressing issues
- **15%** ignored content management challenges brought on by the pandemic due to other pressing issues
- **3%** don’t know

In response to the pandemic, 52% of respondents’ organizations increased their focus on migrating to the cloud.
THE MAINFRAME IS STILL MODERN

The IT infrastructure supporting enterprises’ content is equally important as the content itself. IT systems and content are two sides of the same coin – and they must be modernized in tandem for organizations to become truly future-proof. Many organizations are stuck straddling two worlds when it comes to IT systems management. While cloud has become the icon of modernity, the mainframe is still the backbone of many industries. There is a gap between what innovation is “supposed” to look like and where it is actually needed – which has affected systems jobs, hiring and the direction of transformation projects.

About half (49%) of respondents say most, if not all, of their core business functions still run on the mainframe. This finding underscores the long-term importance of the mainframe. 58% percent of respondents say their organization has already adopted DevOps on the mainframe, and another 30% want to – meaning 88% of respondents see that mainframe is vital and here to stay. By applying a modern methodology such as DevOps, respondents are solidifying and investing in the mainframe as a piece of modern IT infrastructure.

HOW MANY CORE BUSINESS FUNCTIONS RUN ON THE MAINFRAME?

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<th>Percentage</th>
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<tr>
<td>49%</td>
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<td>21%</td>
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<td>16%</td>
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<td>21%</td>
<td>21% say some</td>
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<td>7%</td>
<td>7% say almost none</td>
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<td>7%</td>
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That said, enterprises must update the mainframe to ensure it operates optimally in a modern IT environment. 35% of respondents believe the biggest challenge with their mainframe performance/optimization is increasing workloads on the mainframe due to distributed and cloud systems.

88% of respondents’ organizations have adopted DevOps on the mainframe or want to.

27% of respondents say the skills gap is the biggest challenge with their mainframe performance/optimization.
Additionally, more than one-quarter (27%) of respondents say the skills gap is the biggest challenge with their mainframe performance. As seasoned mainframe professionals retire — bringing their tribal knowledge with them — too few emerging IT pros are filling their positions. People matter just as much as technology and processes when it comes to finding mainframe success.

**WHAT IS THE BIGGEST CHALLENGE WITH YOUR MAINFRAME PERFORMANCE/OPTIMIZATION?**

- 2% don’t know
- 6% say pressure from other departments to move away from mainframe
- 7% say manual processes and lack of automation
- 23% say remote work
- 27% say skills gap
- 35% say increasing workloads on the mainframe due to distributed and cloud systems

To modernize their IT infrastructure, enterprises are investigating tools. When asked which tool their organization needs most, 31% of respondents say performance management. Interestingly, though, the need for performance management fluctuates based on the type of IT infrastructure. Only 28% of respondents working with a hybrid cloud infrastructure say they need a performance management tool, versus 39% of respondents working with a cloud-only infrastructure. This breakdown underscores that cloud is just one piece of a modern ecosystem, not a silver bullet for enterprises to rely on.

**WHICH TOOL DO YOU NEED THE MOST TO MODERNIZE YOUR IT INFRASTRUCTURE?**

- **Performance management**: 31%
- **Applications management**: 20%
- **Value stream management**: 23%
- **Digital automation**: 22%
- **Not adopting new tools to modernize IT infrastructure**: 3%
- **Don’t know**: 2%

Totals to 101% due to rounding.

**IT SYSTEMS OF THE FUTURE**

To modernize their IT infrastructure, 23% of respondents believe their organizations need value stream management, and 22% believe their organizations need digital automation. Both of these capabilities show that IT pros believe the mainframe delivers significant business value — and will continue to in the future.
HYBRID CLOUD BECOMES MAINSTREAM

As many enterprises have shifted to cloud – pre- and post-pandemic – hybrid cloud is the IT infrastructure of the future. 67% of respondents have a hybrid cloud infrastructure. 52% of respondents say their organizations have a hybrid cloud ecosystem that includes the mainframe, and another 34% want one that does.

WHAT MAKES UP YOUR IT INFRASTRUCTURE?

- 67% hybrid cloud approach
- 13% multi-cloud
- 8% on-premises only
- 8% private cloud only
- 5% public cloud only
- 1% don’t know

Totals to 102% due to rounding

In a hybrid cloud IT infrastructure, where are enterprises running their workloads? 68% of respondents say they are moving most, if not all, of their workloads/applications from the mainframe to the cloud. To be clear, these workloads are not core business functions. Enterprises are moving multitudes of commodity workloads/systems of engagement – e.g., HR, finance, office productivity, etc. – to the cloud because it’s more cost-effective and efficient. However, they are keeping systems of record that provide a competitive advantage (e.g., customer data, business IP, business-critical applications based in COBOL, PL/1, Assembler, etc.) on the mainframe. These latter workloads would be too time-consuming, expensive and risky to migrate to the cloud. They are safer on a more reliable, available, serviceable, securable and economical platform such as the mainframe.

When asked why they are migrating workloads to the cloud, 75% of respondents say it’s because the cloud offers more flexible capacity. Again, this benefit applies to commodity workloads that don’t require the mainframe. It is not cost-effective for enterprises to run HR software on the mainframe when they can pay for cloud capacity. By removing workloads that don’t need to be on the mainframe, enterprises can devote the extra capacity to mission-critical processes. This capacity is increasingly important as more customer-facing innovations, such as mobile banking apps, rely on the mainframe.

HYBRID CLOUD OPTIMIZES CAPACITY

With hybrid cloud, enterprises can shift commodity workloads to the cloud and dedicate more mainframe capacity to mission-critical processes that accelerate the digital economy.
Other respondents say they are migrating workloads to the cloud because the cloud offers better performance for certain workloads (70%) or better access with remote work (43%). 34% of respondents say the mainframe is outdated for certain workloads. Again, this refers to workloads that are now better suited for the cloud, while the mainframe handles billion of transactions for mission-critical workloads.

**WHY YOU ARE MIGRATING WORKLOADS TO THE CLOUD?**

- 34% mainframe is outdated for certain workloads
- 43% better access with remote work
- 70% better performance for certain workloads
- 75% more flexible capacity

For these reasons, many enterprises had already started migrating to the cloud – though the pandemic certainly expedited the process. 56% of respondents say COVID-19 accelerated their move to the cloud by months. 10% say it accelerated their move by years. This rapid cloud adoption is one way in which the pandemic forced many enterprises to tackle digital transformation ahead of schedule.

**HOW MUCH DID COVID-19 ACCELERATE YOUR MOVE TO THE CLOUD?**

56% of respondents say COVID-19 accelerated their move to the cloud by months.
A NEW KIND OF LEADER

A modern organization calls for modern leaders. As enterprises shift priorities for transformation, content management and IT systems, so must the C-suite. 77% of respondents believe the role of the CIO is changing to be more business focused, aligning the business and tech sides of the organization.

The role of the CIO must evolve to address the challenges and seize the opportunities that come with transformation. Content governance, cloud, DevOps on the mainframe – each IT and business initiative must operate in tandem for enterprises to drive the best results and prepare for a post-pandemic world.

CONCLUSION

Modernization cannot be achieved on a project-by-project basis. Enterprises must assess the organization holistically, understanding how IT impacts business and where information and systems converge.

The digital economy will only introduce more complexity – from new data privacy regulations, to a more permanently remote workforce, to increased pressure to deliver more innovation faster. Enterprises must be able to leverage every asset available to them to gain a foothold in the modern world. They must realize the full value of content to inform decision-making and inspire new products, features and services. They must ensure IT systems, from the mainframe to hybrid cloud, are fully optimized to run the workloads and applications that will bring these big ideas to life. With these components, enterprises can realize their potential as digital businesses – fully compliant, well governed, high performing and more resilient than ever.

Barriers can be addressed with the tools. Content sprawl, dark data and ungoverned content are reined in by content management solutions with scan/capture, retention/redaction, workflow and federation capabilities. IT infrastructures will be future-proofed with IT systems management solutions focused on value stream management, performance management and digital automation. If 2020 was the fast track to transformation, 2021 is the foundation for the future. Enterprises that lay down the right mix of modern processes, solutions and strategies will cement their competitive edge in the long run.

LEARN MORE

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  Barriers to Success with Information-Powered Business
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  5 Crucial DevOps Strategies for Cloud and Mainframe
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