CLOUDERA

THE CHALLENGES AND OPPORTUNITIES OF EXTRACTING VALUE FROM HYBRID CLOUD ENVIRONMENTS

UNLOCKING DATA VALUE

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Key Takeaways:

- The vast majority (68%) of organizations store data in a hybrid environment. Most (92%) are planning to move more data to the cloud over the coming years, but at the same time others (76%) are planning to repatriate some data back to on-premises environments — indicating security, compliance and lock concerns are becoming more prominent.
- Of those respondents using the public cloud, 72% have a multi-cloud model, and are working with two or more hyperscalers. This in turn is creating additional complexity.
- Almost three-quarters (72%) of organizations say having data in a hybrid environment across both cloud and on-premises makes it complex to extract value. On average, global organizations are only able to use a third of their data effectively, with unstructured data presenting a particular challenge.
- Analytics tools are increasingly seen as the primary means to achieve data-driven insight — helping to enhance cost reduction, business transformation, productivity and customer service. But tool sprawl is a concern for 69% of organizations, driven in part by their lack of visibility into data analytics environments.
- Data silos are another major roadblock to better business decision making. Around two-thirds of respondents believe these barriers have impeded decision making (65%) and cost them money (66%).

Executive Summary

By 2025, IDC predicts that the total volume of global data will exceed 180 zettabytes, having grown each year since 2018 at a compound annual growth rate of 61%. Driven by ongoing digital transformation projects, this data explosion offers a potentially significant competitive advantage to organizations capable of harnessing it in a cost-effective manner. The challenge is no longer about storing such huge volumes of data. It's about managing and optimizing it effectively, even as data is being created across the distributed enterprise, from on-premises servers to the public cloud and network edge.

Extracting value from these hybrid cloud environments to support enhanced decision making, business agility and growth, is the Holy Grail for modern organizations. But getting there isn't easy.

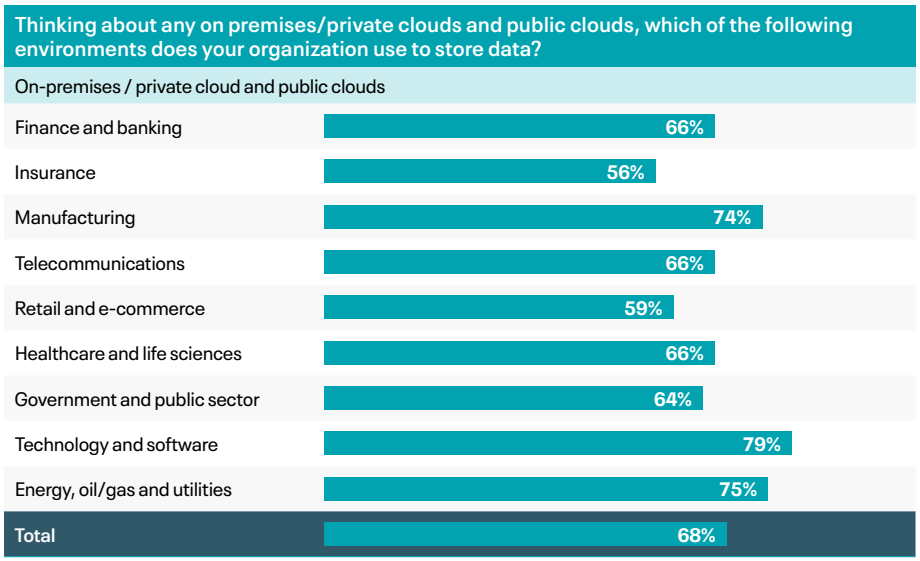
Research Methodology

Conducted by Coleman Parkes Research, Cloudera's survey evaluated the opinions of 850 IT decision makers with responsibility for data analytics and tooling in their organization across the UK (200), France (200), Germany (200), Spain (100), Italy (100) and the Middle East (50). Respondents came from organizations with more than 1,000 employees within the following industries: finance, banking, insurance, manufacturing, telecommunications, retail and e-commerce, healthcare and life sciences, government and public sector, technology and software, energy and utilities. The research was conducted between March and April 2023.

01 The State of Hybrid Cloud Adoption

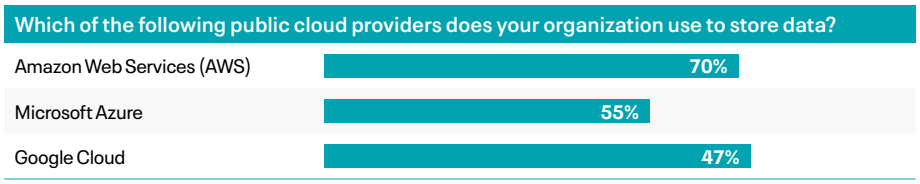
Hybrid is King

Over two-thirds (68%) of global organizations currently store data across both on-premises/ private clouds and public cloud environments. This figure rises even higher for energy, oil/gas and utilities firms (75%) and technology and software players (79%).



Public Cloud Means Multi-Cloud

Complexity is a natural part of any enterprise and the very nature of data and analytics often leads companies to having hybrid and multi-cloud environments. Of those respondents using public cloud, 72% use two or more hyperscalers.



72%

of organizations are using two or more hyperscalers

Most Organizations are Moving More Data to the Cloud

Public cloud migration has been a popular strategy. Over the past 12 months, 80% of organizations say they moved more of their data to these environments. And there's no sign of a slowdown. Over the next one to three years, 92% are planning to move more data to the cloud.

Percentage of organizations that have move more data to the public cloud.

Country / Region	
UK	77%
France	76%
Germany	82%
Spain	87%
Italy	71%
Middle East	66%
Total	80%

What are your main reasons for migrating data to cloud?

To improve data accessibility	48%
To optimise data storage and backup	44%
To reduce costs	38%
To enable faster innovation	37%
To improve sustainability	35%
To increase flexibility	34%
To enable us to provide a better customer experience	33%
To increase scalability	28%

The Cloud is Not a Panacea

However, the cloud is not a silver bullet. While only 4% of organizations have moved cloud data back to on-premises in the last 12 months, three-quarters (76%) plan to repatriate data from the cloud in the next three years.

76%

of organizations plan to repatriate data in the cloud to on-premises

The main reasons for not migrating more data to the cloud:									
Sector									Total
Finance and banking	Insurance	Manufacturing	Tele-communications	Retail and e-commerce	Healthcare and life sciences	Government and public sector	Technology and software	Energy, oil/gas and utilities	
Data governance and compliance concerns									
55%	58%	56%	60%	62%	53%	55%	41%	56%	55%
We are fearful of cloud lock-in, which will make it difficult to move platforms in the future									
62%	50%	45%	58%	61%	61%	54%	48%	47%	54%
Non-compliance related cybersecurity concerns									
42%	62%	59%	51%	44%	57%	56%	54%	51%	52%
Performance issues when processing large datasets in real-time									
51%	38%	58%	49%	39%	43%	52%	60%	53%	50%
IT complexity and integration challenges									
51%	38%	53%	54%	48%	42%	43%	55%	46%	48%
Cloud is too expensive									
38%	35%	23%	23%	38%	33%	28%	33%	32%	31%

Compliance concerns are often more pronounced in EMEA than in the US, where most major cloud providers are based. However, when it comes to performance-related issues, organizations should trust the data. Workload analytics can reveal important information about the performance of a workload to help inform decision making. Workloads which are more predictable and consume a relatively stable level of resource are often cheaper to run on-premises. Customer-facing services that are more variable will likely benefit from the elasticity of the cloud.

"Organizations need the capability to securely extract value from their data, regardless of where it resides. But with the emergence of modern data architectures, organisations can drive more value from their data and optimise their cloud costs at the same time."

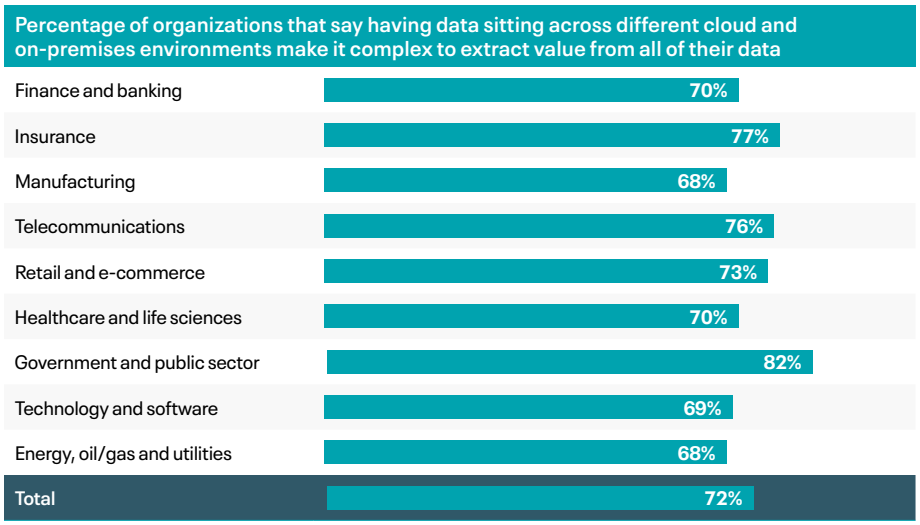
Romain Picard,
Senior Vice President EMEA at Cloudera

02 The Challenges of Driving Data Insight

Deriving Data Value is Tough

Organizations have access to a wider variety of data sources than ever. But when this data sits across a distributed environment, it can be challenging extracting value and insight .

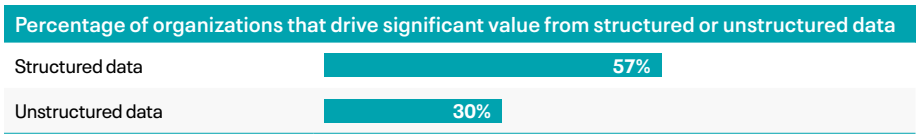
Nearly three-quarters (72%) of respondents say that having data sitting in cloud and on-premises silos makes it difficult to extract value. In the government and public sector it's even higher (82%). This is why adoption of a modern data architecture is increasingly critical to ensure organizations can connect data across silos, without needing to copy or move it.



Unstructured Data Presents a Major Headache

Whereas in the past, organizations may have focused on collecting a specific type of data in a limited number of formats, today's data environments are far more expansive — with typical sources ranging from IoT devices and business software to social media. This also adds to IT complexity, as the use of some data types is easier to optimize than others.

Over half (57%) of respondents say they can drive "significant value" from structured data. However, just 30% say the same about unstructured data.



On average respondents stated that on average a third (33%) of their data is not being used effectively.

"Whilst different departments want to harness the power of data analytics to gain a competitive edge, deploying multiple point solutions can add layers of complexity and silo insight."

Romain Picard,
Senior Vice President EMEA at Cloudera

03 Data Analytics Challenges and Opportunities

Analytics Drive a Range of Benefits

To extract more value from their data, organizations are increasingly embracing data analytics.

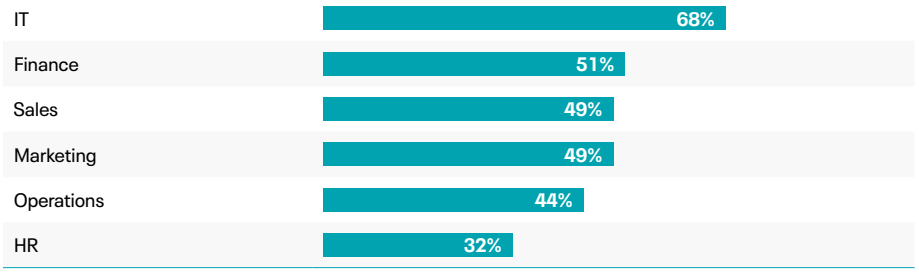
Among the key business drivers of initiatives are:

- Increasing productivity (47%) — rising to 58% in energy, oil/gas and utilities
- Digital/business transformation (43%)
- Cost reduction (40%)
- Enhancing customer service (36%)
- Increasing revenues (33%), rising to 42% for financial services, banking and insurance

What are the key business objectives that drive analytics initiatives in your organization?

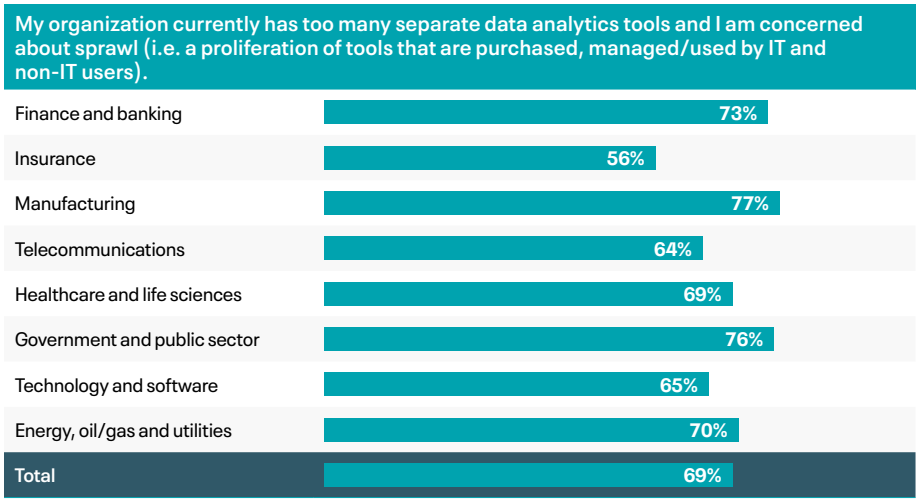
	Sector								
	Finance and banking	Insurance	Manufacturing	Tele-communications	Retail and e-commerce	Healthcare and life sciences	Government and public sector	Technology and software	Energy, oil/gas and utilities	Total
Increase productivity										
	38%	49%	51%	47%	45%	50%	36%	49%	58%	47%
Digital/business transformation										
	45%	46%	47%	42%	39%	38%	44%	47%	44%	43%
Reducing cost										
	39%	31%	36%	35%	48%	36%	49%	40%	41%	40%
Enhancing customer service										
	28%	44%	28%	37%	47%	40%	31%	38%	30%	36%
Ensuring ESG and regulatory compliance										
	38%	46%	39%	29%	34%	29%	39%	34%	33%	35%
Increasing revenues										
	46%	33%	31%	37%	35%	41%	30%	27%	24%	33%

Which of the following departments has the greatest need for data analytics?



Visibility Challenges Feed Analytics Sprawl Fears

Unfortunately, managing data analytics tools within the enterprise can also be a challenge, especially when they're being used in siloed ways by individual departments. That's why over two-thirds (69%) of organizations are concerned about data analytics tools sprawl, rising to 77% of telecommunications firms and 76% in the government and public sector.



Part of the challenge with tool sprawl comes from not knowing where analytics products are being used in the enterprise. Less than half (45%) of organizations are fully confident about the number of data analytics tools they have. Those that are "very" or "somewhat" confident have on average five different tools in use. Multiple tools could create complexity, add cost and deepen silos between enterprise functions.

45%

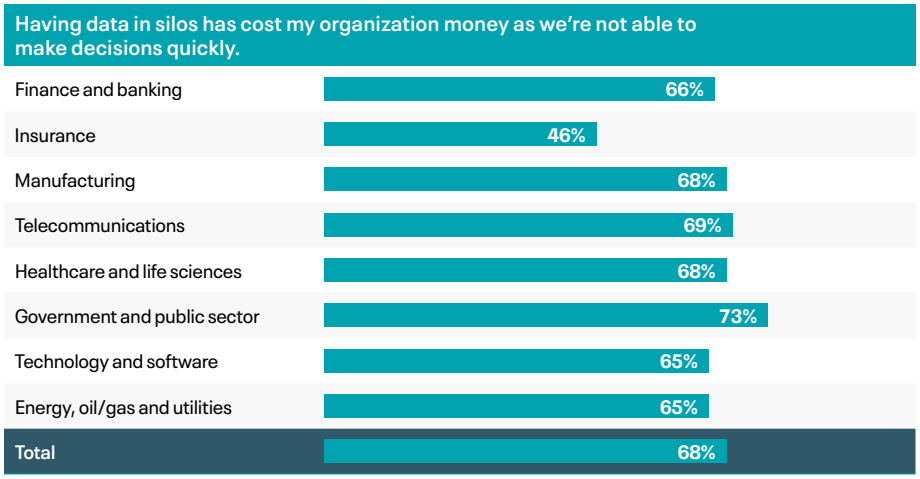
of organizations are very confident about the number of analytics tools they have

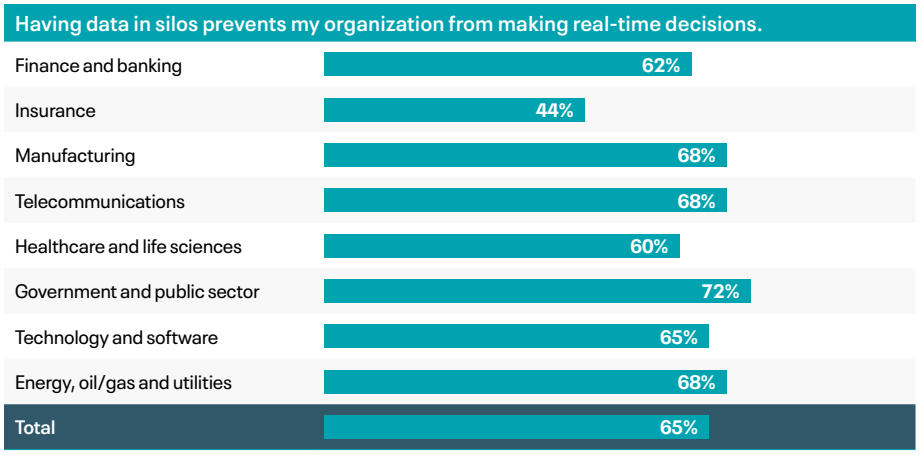
04 The Impact of Data Silos

Siloed Data Impacts Decision Making and Costs Money

Whether it's due to the uncoordinated use of multiple analytics tools, or other technical and organizational reasons, enterprise data silos can have a serious impact on the business:

- 65% of respondents say silos prevent the organization making real-time decisions, rising to 72% in the government and public sector
- 66% say that an inability to make rapid decisions due to data silos has cost the organization money, rising to 73% in the government and public sector





"At a time when all organizations today want to move faster, they need to stay ahead of the data curve. Those that are capable of harnessing their data in a rapid, cost-effective manner – no matter where it is located – will find they have a significant competitive advantage."

Romain Picard,
Senior Vice President EMEA at Cloudera

Conclusion

Modern enterprises are increasingly built on a complex blend of on-premises and cloud-based architectures. They're generating a wide variety of different data types in large volumes from a huge number of sources across this distributed environment. The result is that it can be challenging for organizations to manage and optimize use of this data to extract the insight they need. Silos remain a stubborn barrier to business success.

This is why building a modern data architecture is critical for today's enterprises — enabling organizations not only to deliver crucial data-driven insight, but also optimize their cloud costs. Here are four key components to look for:

- The ability to operate on-premises, across public clouds and at the edge, so workloads and data can flow friction-free without the need for rewriting or refactoring
- Portability of services across different infrastructures without the need for redevelopment
- The ability to handle all data types — structured, semi-structured, and unstructured; in real-time, streaming and batch processing formats
- Built-in security and governance — such as data encryption in motion and at rest, and strong authentication

Capitalize on the Value of All Your Data

At Cloudera, we help businesses manage and analyze data of all types — machine data, structured data, transactional data, and unstructured data — with data anywhere. In clouds like AWS, Azure, and GCP. In on-premises data centers. And at the edge where machine data originates.

We deliver cloud-native data analytics for data distribution, data engineering, data warehousing, transactional data, data science, and machine learning that are portable across infrastructures. We enable you to bring the right analytics to the right cloud at the right time.

Just imagine the possibilities.

About Cloudera

At Cloudera, we believe that data can make what is impossible today, possible tomorrow. We empower people to transform complex data into clear and actionable insights. Cloudera delivers an enterprise data cloud for any data, anywhere, from the Edge to AI. Powered by the relentless innovation of the open source community, Cloudera advances digital transformation for the world's largest enterprises.

Learn more at cloudera.com

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