The 2021 State of
Cloud Data Governance

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1. EXECUTIVE SUMMARY

Organizations are focused on two important trends in data management. First, the adoption of public cloud platforms for data lakes and data warehouses has heightened the need for a robust, hybrid approach to implementing DataOps best practices. Second, increasing pressure around data security, privacy, and regulatory requirements is driving discussion of data governance initiatives to the highest levels of executive leadership.

As a result, data engineers, data stewards, and data consumers, along with the increasingly common Chief Data Officer, stand at the frontier of cloud data governance, combining those two trends together. What does data governance look like in the cloud? How do organizations plan on moving forward with cloud data governance? What are the challenges and obstacles to cloud governance success?

Organizations can manage and provide access to their data more efficiently when companies have reliable cloud data governance. However, while many organizations have started such programs, achieving the promise of cloud governance remains elusive. DataOps can help; it weaves cloud data governance activities together, supplying critical data effectively, while reinforcing necessary data governance policies and procedures to ensure regulatory and security requirements.

DATAVERSITY® partnered with Zaloni™ in 2021 to gain such insights about cloud data governance by asking a wide range of data professionals (397 in total) about their experiences with data governance in general, and cloud governance specifically.

This study demonstrates that many organizations are embracing data governance, with over 70% agreeing that data governance improves the time it takes to get data for analytics.

However, fully implementing cloud governance remains unfulfilled, often due to a lack of knowledge, both for executive buy-in and overall organizational data literacy. About two-thirds of those surveyed said that a lack of understanding around governance (and especially the cloud) presented one of the most significant challenges.

To forge ahead, organizations need to educate team members about cloud data governance and implement data governance through a DataOps approach, so they can get timely, trusted data supplied to end users. From there, companies will come closer to achieving their data quality and business analytics goals, as dependable governance is necessary for both.

Some of the report highlights include:

- Data quality (74%) and Analytics/BI (57%) are the primary drivers for investment in data governance

- 71% agree that data governance improves the time to get data for analytics

- More than two-thirds of respondents said lack of understanding around governance is the biggest challenge they face

- 40% said cloud agnostic technologies provide them with the most flexibility

- Skills to manage new cloud technologies, growing cloud ecosystem complexity, and increased data sprawl were the three biggest challenges implementing data governance in the cloud

- Data quality, data catalogs, and business glossaries are the top three data governance capabilities organizations need most

2. INTRO TO CLOUD DATA GOVERNANCE AND DATAOPS

A. Scope of Research

Cloud data governance spans a collection of practices and procedures when an organization uses public cloud providers to store, manage, and consume data. As organizations migrate their data to the cloud, they have seen their data architectures grow more complex, requiring extensive tribal knowledge to find and access stored data.

Cloud governance takes a unified and systematic approach toward:

- Comprehending all of an organization's data

- Protecting privacy

- Ensuring legal and regulatory compliance

- Delivering high quality data sets

Meeting the cloud governance objectives mentioned above requires a well-developed infrastructure. As judges, juries, lawyers, and courthouses characterize legal applications and the justice system, IT staff, data pipelines, and platforms underlie a cloud data governance structure.

How well these pipelines and platforms pass along and store data according to cloud governance policies is a key component of DataOps. In the DataOps world, data usage varies according to who can view and extract data, the quality of that data, and allowable activities with that data. Cloud governance defines rules and policies around quality, privacy, and access for these different use cases and how to handle them.

For example, a data engineer may need to inventory and prepare a new data set according to business rules. However, a data analyst working on a specific project may need to obtain high-quality data sets to answer a particular business question in a project. Concurrently, a data steward needs to do data profiling, including the data set used by the analyst, to obtain metrics about its data quality.

DataOps aims to handle all these specific use cases — simultaneously, efficiently, and effectively. DataOps integrates all data management activities into a unified data supply chain. When done well, DataOps also unifies these critical cloud data governance activities:

- Cataloging (discovering and inventorying data and defining what it means)

- Controlling (profiling the data, improving data quality, and obfuscating sensitive data to meet security needs)

- Consuming (retrieving reliable and usable data)

A. Report Methodology

The foundation of this report is an online survey, with 21 questions, that was conducted in the spring of 2021. Researchers recruited participants through an email marketing campaign.

Those who went through the survey did not have a time limit nor did they receive any compensation, lending to objective results. Any results and analysis in the paper come only from respondents of this survey and our experts.

A wide variety of people responded to the survey, making up a solid representation across a range of different factors. Those who completed the questionnaire came from over 35 countries worldwide and spanned diverse job functions and industries.

Respondents came from North America, South America, Europe, Asia, Australia, and Africa. About half of the participants worked in information or data governance, while some of the top industries included consulting (13%), government (13%), technology (10%), finance (8%), and education (8%). Other industries also included oil and gas, accounting, manufacturing, retail, and many more.

Although many respondents came from very large organizations with over 10,000 people (28%), or mid-sized companies, employing between 1,000 and 4,999 workers (22%), those surveyed represented all possible sizes.
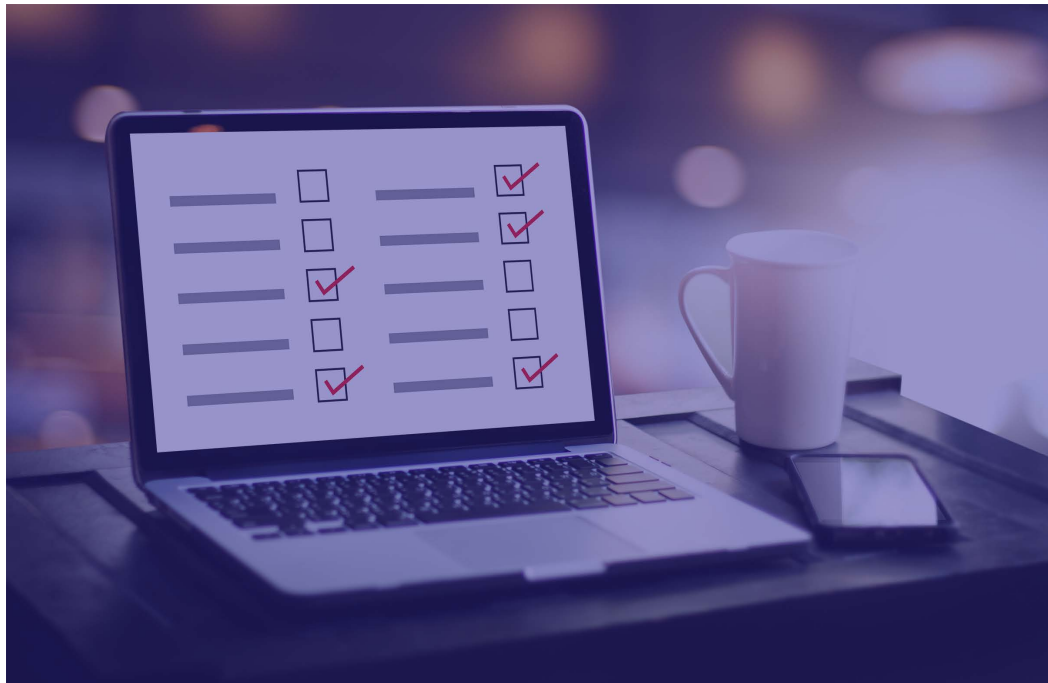
3. ACCEPTANCE OF DATA GOVERNANCE IMPORTANCE IN THE CLOUD

Businesses seem to understand that data governance is essential to manage data better. But how that translates to the cloud is still being questioned, as many organizations do not yet have mature cloud governance in place.

About 60% of those surveyed planned to spend over $49K on data governance technology and tools in the next one to two years. Also, over 80% say that at least one person in the organization actively engages in data governance, with the highest number being one to five people at 44% [Figure1]:
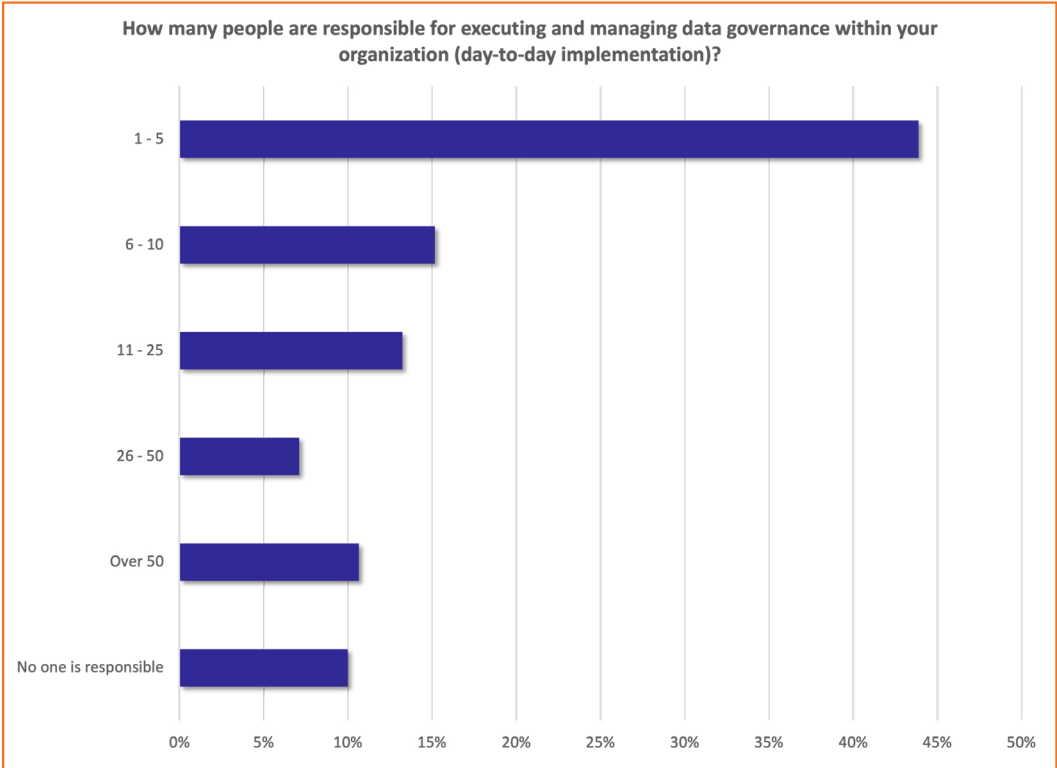

Figure 1: People Implementing Data Governance

When asked who is responsible for executing and managing data governance within an organization in terms of day-to-day implementation, at least three-quarters could point to a specific role [Figure 2]:
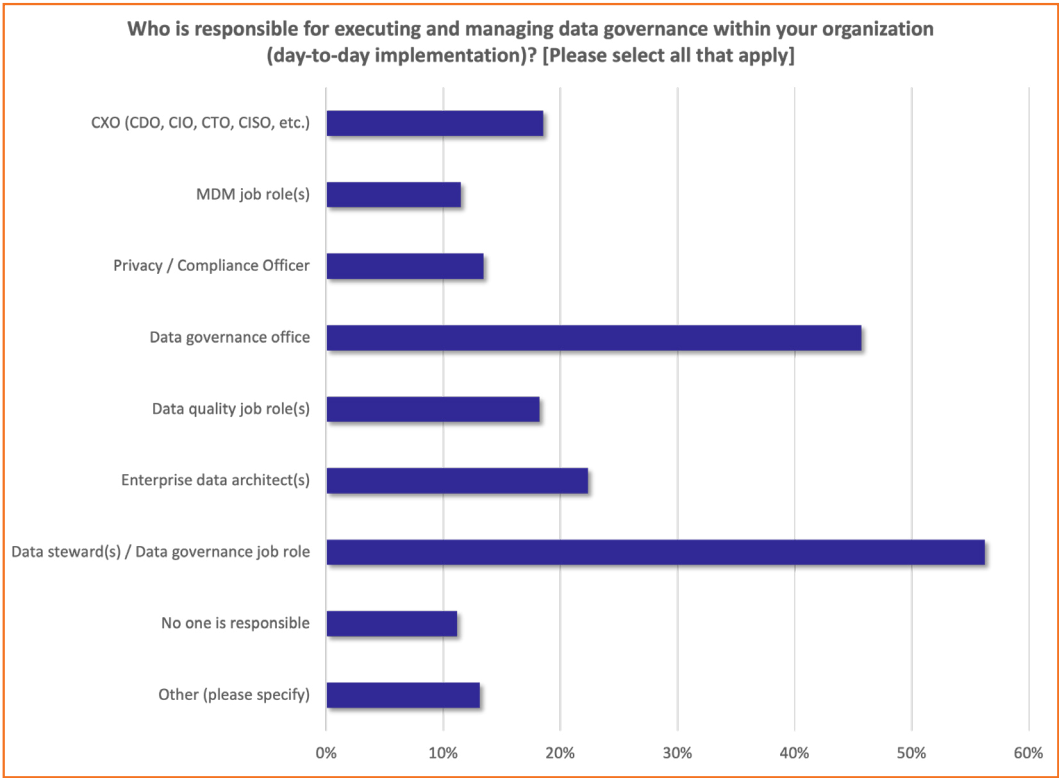
Figure 2: Who is Responsible for Data Governance

So why do companies plan on investing in and contributing resources to cloud governance? Our analysis shows that organizations supporting data governance programs want to improve data quality, obtain faster business analytics, and leverage self-service access that meets security needs.

A. Data Quality

Businesses need adequate data quality and usable information to exist and thrive. This valuable data must offer enough accuracy, consistency, and accessibility for the business to use it in a timely and trustworthy manner.

As organizations see the number of data values and sources expand, many into the cloud, they struggle to meet and maintain reliable data quality. So, they turn to data governance. When asked about data governance technology and tool drivers, about 74% of respondents chose data quality as their primary driver around implementing governance [Figure 3]:

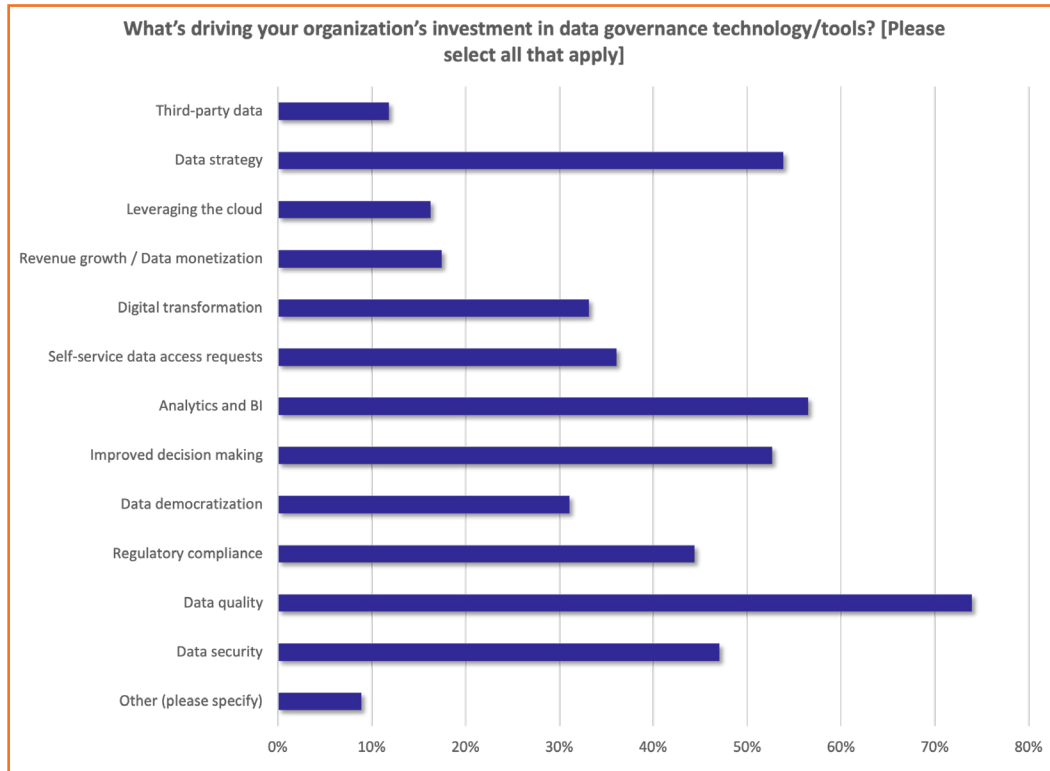Figure 3: Driving Data Governance

Organizations expect that their data governance efforts will payout with better data quality, too. The survey respondents ranked data quality (83%) at the top of the list of most crucial data governance capabilities [Figure 4]:

Which data governance capabilities are most important to you? [Please select all that apply]
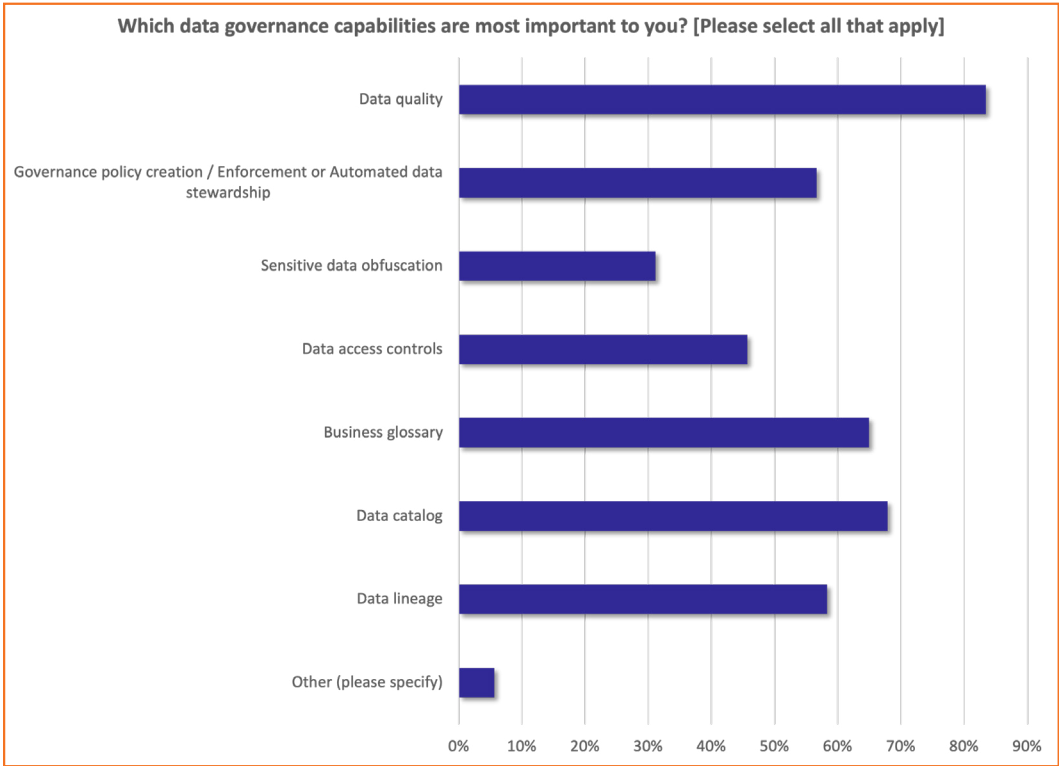
Figure 4: Data Governance Capabilities

Furthermore, participants consider this organizational data quality imperative as the measure of cloud data governance success. Participants chose consistent data quality (71%) as their primary data governance value metric [Figure 5]:

How are you measuring the value of data governance? [Please select all that apply]
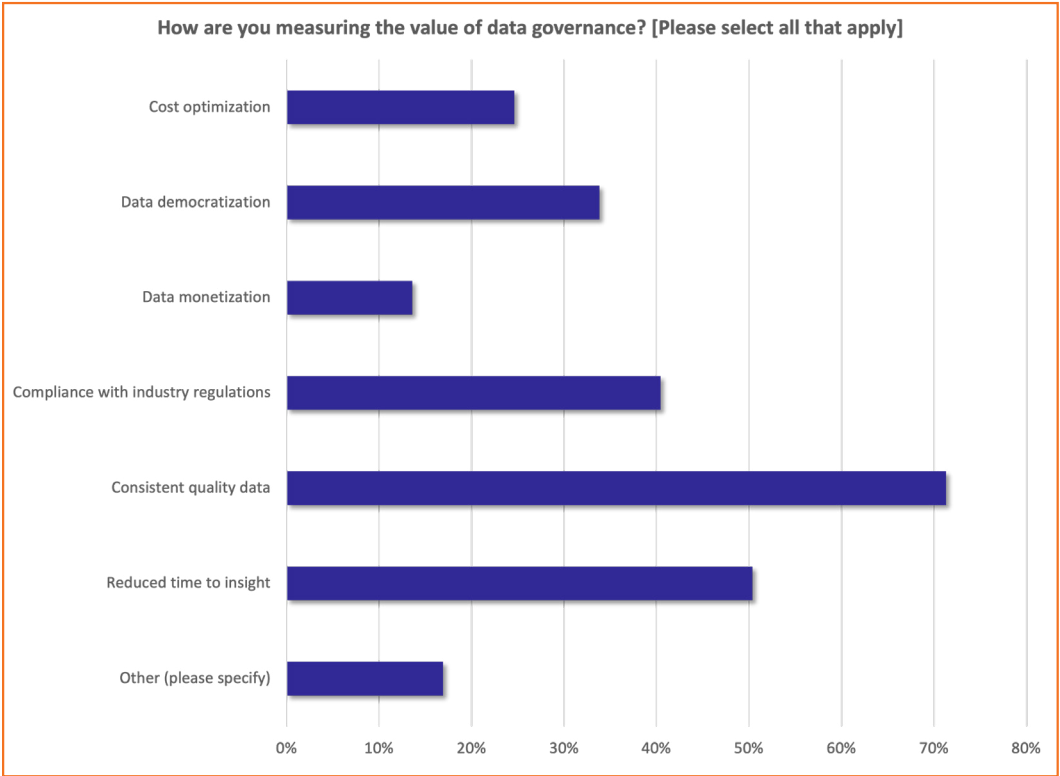
Figure 5: Measuring Data Governance Value

A few of the respondent comments around their data governance journey included:

- "We are at the beginning of our data governance journey, working towards reducing waste — due to time and quality improvements."
- "We are attempting to monetize our data governance by measuring the time we are taking out of the business for people scrubbing bad data."

Businesses unmistakably are turning to data governance to obtain good quality data, both on-premises and more recently in the cloud.

B. Faster and More Trusted Business Analytics

Along with data quality, companies want data governance to generate faster and more reliable analytics. Organizations recognize that they need timely data to make good decisions. Getting the most relevant business insights faster than their competitors means companies can be more competitive and survive in a fluctuating business environment.

In the past, the employees of many organizations often perceived data governance as a cumbersome process. The stories around failed governance initiatives have filled up many a white paper and industry blog post. As agile teams needed data on the fly, taking the extra time to figure out how to get the data and awaiting permissions required by data governance policies added additional steps. So, it would be easy to think that many in our survey would see data governance as slowing business analysis down.

However, when asked about their perception of data governance, 71% responded that data governance improves the time to get data for analytics, and only 8% said that data governance slows down business analytics [Figure 6]:

What is your perception of data governance?

Other (please specify), 20.38%

It slows down the time it takes to get data for analytics, 8.46%

It improves the time it takes to get data for analytics, 71.16%
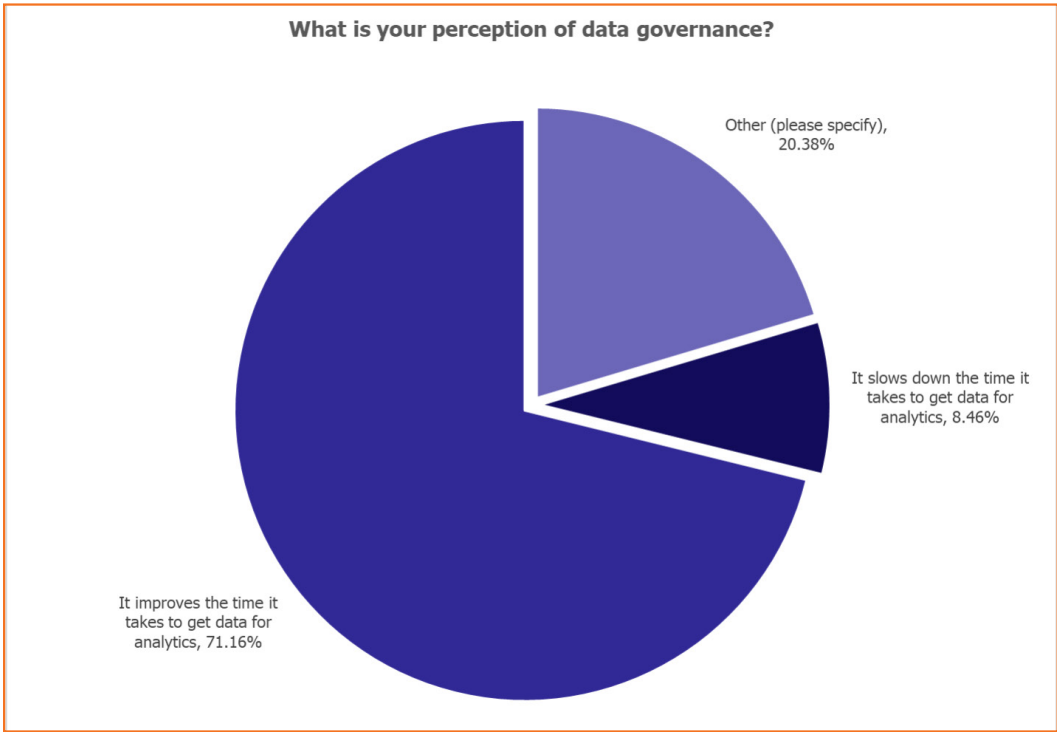
Figure 6: Perception of Data Governance

Furthermore, about 57% responded that analytics and business intelligence (BI) drove their organization's investment in data governance technology and tools (see Figure 3). This analysis shows that people consider data governance leading to faster business analytics.

To dig deeper into why those surveyed believe this, we turn to their in-survey comments. Many stated that governance takes time, but eventually speeds up the overall analytics process as it progresses. Comments included:

- "Initially, as data governance is set up, it might slow things down. However, once data quality improves, and self-service is implemented, data governance will speed up the overall time getting business analytics."

- "In the beginning, data governance can slow down the delivery of analytics. However, as data governance becomes established, it improves the timeliness and quality of data and analytics."

C. Self-Service Data Access

When it comes to cloud data governance, obtaining appropriate access as fast as possible shows its value. Since businesses frequently use software as a service (SaaS) to get their data, users need ubiquitous and seamless data permissions.

To learn more about how a typical organization handles these data requests, we asked a question about governing (SaaS) data sources [Figure 7]:
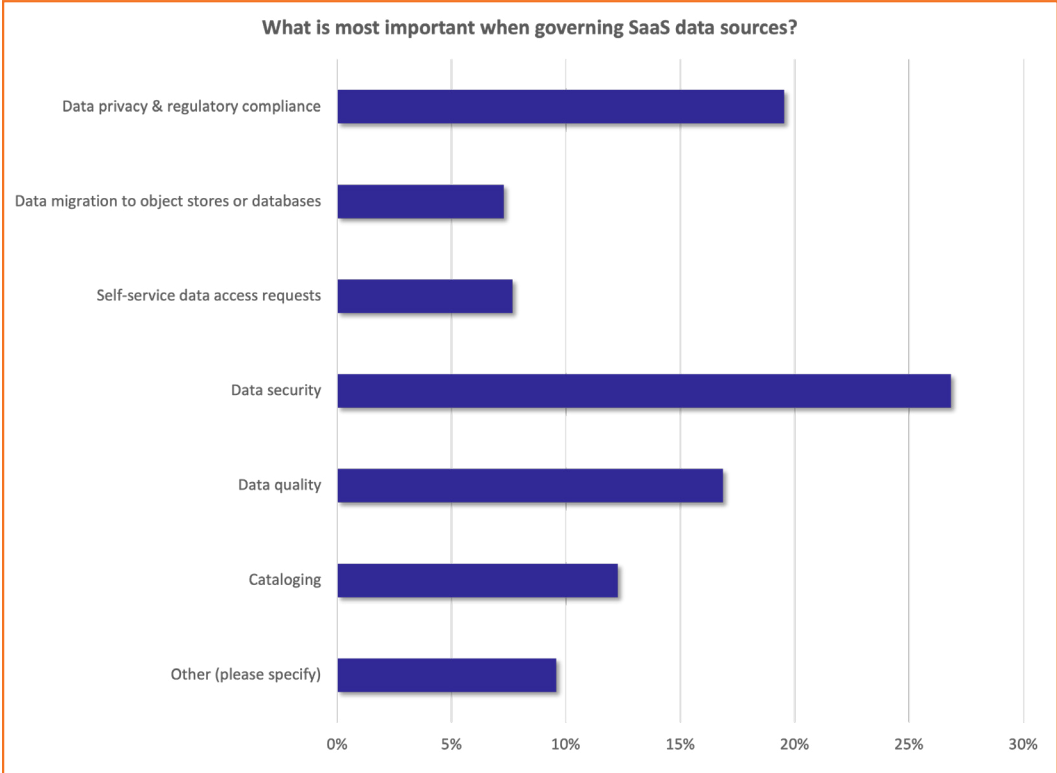

Figure 7: SaaS Data Sources

While we noticed that respondents chose self-service as less important, we know the typical user conceives this demand as either security, privacy, or compliance, all components of self-service access. Again, going back to our graph, we see that 46% percent of respondents chose either data security or data privacy and regulatory compliance. So, nearly half of those surveyed saw data governance as important in handling self-service data access.

When asked about how data governance needs to be changed for on-premises vs. cloud data, many stated a greater concern for cloud security and privacy. Comments included:

- "Security and privacy are a bigger concern for cloud data; especially, if the data is hosted outside of the country."

- "When using the cloud, our contracts for services must allow for audits and oversight of data security. In some cases, we chose not to upload restricted or personally identifiable information in a cloud environment operated by a third-party."

- "Pushing potentially sensitive data to the cloud does result in stricter security controls for data in transit and at rest."

No, we don't believe so. One of the analysts for this paper, Nikhil Goel, a Senior Product Manager at Zaloni, observed that "security and privacy come into the forefront when someone is requesting access in the cloud." So, when a company stores its data with a cloud provider, its security worries can overtake access concerns.

However, within this desire for security in the cloud, participants implicitly assume that they will quickly have access to the data they need. Those surveyed believe that a cloud service is more likely to compromise data than on-premises data technologies.

To make sense of these contradictions, our analysts understand the cloud governance drive for self-service access, automating, and streamlining data permissions in a way that protects sensitive data. The quote above best expresses this demand, explaining that the organizations want to oversee the secured data while restricting it from third-party access, thus ensuring proper security and compliance around sensitive data assets.

So, when a company stores its data with a cloud provider, its security worries can overtake access concerns.

4. INCOMPLETE UNDERSTANDING OF DATA GOVERNANCE AND THE CLOUD IS A MAJOR CHALLENGE

As businesses invest, create, and update their data governance programs to get better data quality, faster business analytics, and self-service access, they remain perplexed as to how to better accomplish these. The survey asked respondents about their organization's biggest challenges in traditional and cloud data governance. About two-thirds chose "Lack of understanding around governance," indicating a data literacy problem [Figure 8]:

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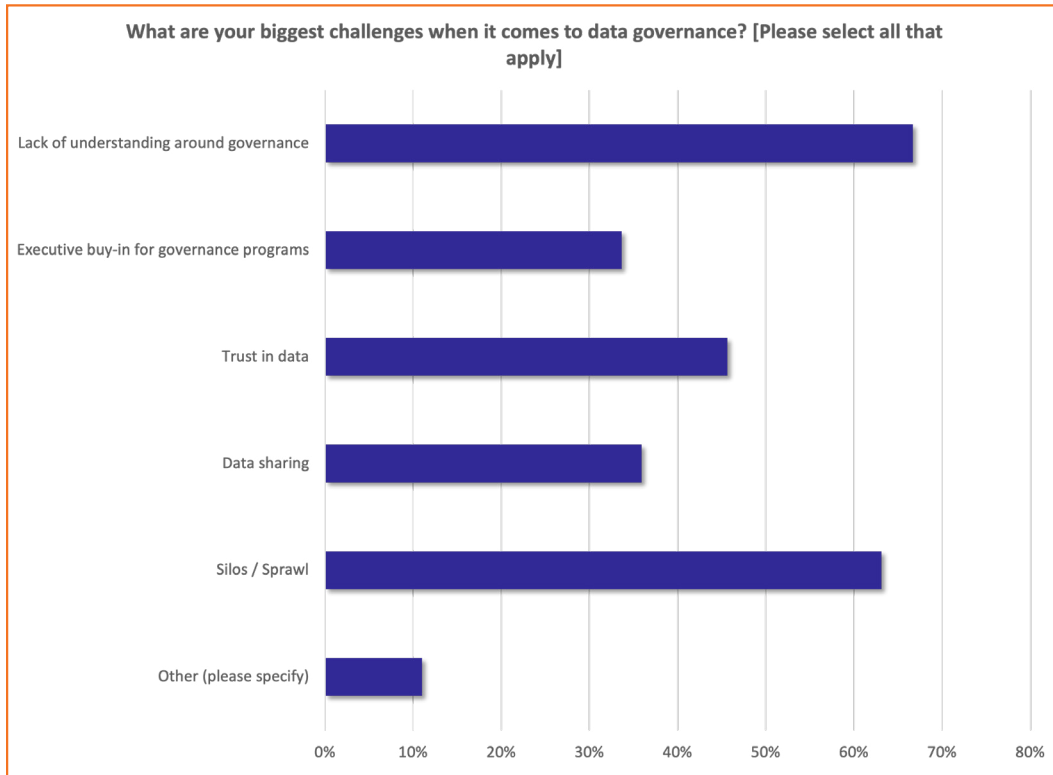

Figure 8: Data Governance Challenges

Throughout the study, results and analysis reinforce this as an obstacle toward cloud data governance. For example, when respondents commented about how their organization executed data governance, many still remain unsure. We wanted to understand where participants saw these data literacy gaps in data governance and the cloud.

A. Want Data Quality, But How?

Data quality drives the need for data governance, as shown in Figure 3; however, participants have different ideas of what technical capabilities (see Figure 4) are needed and how to attain them. Data quality (83%) is the top selection, while data catalog (68%), business glossary (65%), and data lineage (59%) score quite a bit lower. Why is this?

Data catalogs, business glossaries, and data lineage all improve data quality at an enterprise level and describe how to get and maintain good quality data. But a significant gap of 15% or more exists between the "data quality" capability and the rest of the capabilities listed.

Nikhil Goel commented that:

> "Data governance and data quality consist of various processes and procedures, and are commonly considered an enterprise-wide initiative. Survey participants relate less to an abstract idea of data governance, but understand the data governance pieces that they are responsible for on a daily basis. Basically, by saying 'data quality,' those taking the survey want the components relevant to their work, and a smaller percentage likely are thinking about other capabilities such as glossaries, catalogs, and lineage and the larger data governance picture. This could clearly be construed as a data literacy issue as well."

So, conceptions of data governance's effect on data quality differ from person to person, depending on their role and responsibilities. The person's data literacy gap lies in knowing how their specific data quality issue gets solved in a comprehensive data governance framework.

B. Want Faster Analytics Over Time, But How?

Like data quality, the need for faster analytics drives cloud governance, but organizations get confused about how that needs to happen. Our analysts saw this outcome clearly in the question about data governance perceptions (see Figure 6).

The data clearly shows organizations think data governance speeds up analytics; however, the comments from those who selected "Other" (20%) suggest skepticism. Those surveyed stated:

- "Data governance either slows down or improves the time it takes to get data for analytics can be true. It depends on the data in question."

- "Data governance should improve the time a business takes to get data for analytics."

- "Data governance can be an enabler of faster analytics with an adaptive and agile implementation."

Understanding how faster analytics happens with cloud governance presents a significant learning area for businesses, especially among their management. Improved data literacy programs could help this.

One of Zaloni's customers, a top ten global bank, faced challenges with data silos and lack of data access, resulting in delayed time to insights. By implementing a centralized governed data platform along with a DataOps approach, the bank was able to reduce the time it took to deliver data to end users from three months to six days.

C. Data Stewards Handle Data Governance, But How?

Organizations put data stewards, the people responsible for the effective control and use of data assets, in charge of daily governance activities. The survey shows "data steward(s)/ data governance job role" at the top of the list (56%) for taking responsibility in daily data governance tasks.

However, envisioning a cloud data governance framework with data stewards taking care of various tasks eludes many. Responses around this issue included:

- "We are in transition from data quality toward data stewards that have support from the data governance committee."

- "We only have a part-time data steward."

- "Many people take a de facto role as data stewards, but very little data governance is formalized."

Comments following other questions, such as the one about the most significant data governance challenges, also show confusion about structuring data stewardship. One respondent expressed:

- "Data stewards (at this point in our development) have a 'day job' as their main responsibility and no specific job roles."

Such results demonstrate that organizations know they need data stewards in cloud and traditional data governance, but do not know how to implement such important roles.

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D. Want Executive Buy-In, But How?

Executives continue to show hesitance in buying into data governance when the business needs their backing to meet governance objectives. As indicated earlier, a lack of understanding among some executives remains a significant challenge. Additional factors relating to difficulty in gaining executive buy-in include:

- Governance initiatives are not linked to corporate objectives

- Lack of agreement and sponsorship from both IT and business

- Poor identification of the best employees to champion the data governance adoption

- No clear definition of metrics to prove ROI/success

- Data governance is linked to a project and not an enterprise-wide initiative

- Data stewardship roles are not clearly defined

"To overcome these common cloud data challenges, it's critical companies invest in a cloud service provider and partner technologies that simplify and streamline data management and governance, in some cases in a low-code or no-code manner, to help overcome the skills gap."

Adding to this reluctance, a steep learning curve with cloud technology management makes it even harder to sell. Over the last few years, many companies have added their data to new cloud platforms, and so a lack of employee skills needed to manage such technologies have become an even bigger problem. Set cloud governance into that equation with a lack of data literacy, along with further executive hesitance, and the issue is exacerbated even more.

Forty-seven percent of the respondents in our study felt that skills needed to manage new cloud technologies presented a critical challenge with data governance in the cloud. Complexity of cloud ecosystems (36%) and increased data sprawl (36%) were the other top choices [Figure 9]:

Figure 9: Cloud Data Governance Challenges

Shashi Raina, Partner Solutions Architect at AWS, noted:

> "To overcome these common cloud data challenges, it's critical companies invest in a cloud service provider and partner technologies that simplify and streamline data management and governance, in some cases in a low-code or no-code manner, to help overcome the skills gap."
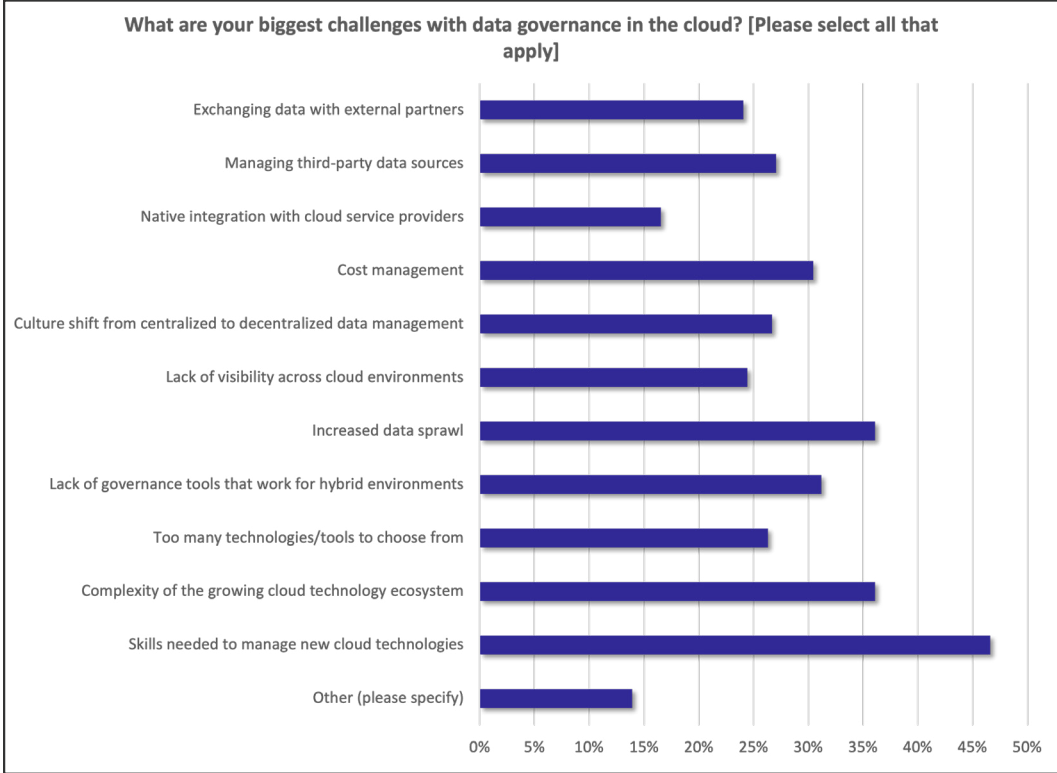
In thinking about the typical executive's busy schedule, we understand the difficulty in gaining skills to manage new cloud technologies. But, in the meantime, executives make up the core decision-makers in funding cloud and traditional data governance. According to the survey, 80% of C-suite managers take responsibility for purchasing data governance tools and technologies [Figure 10]:
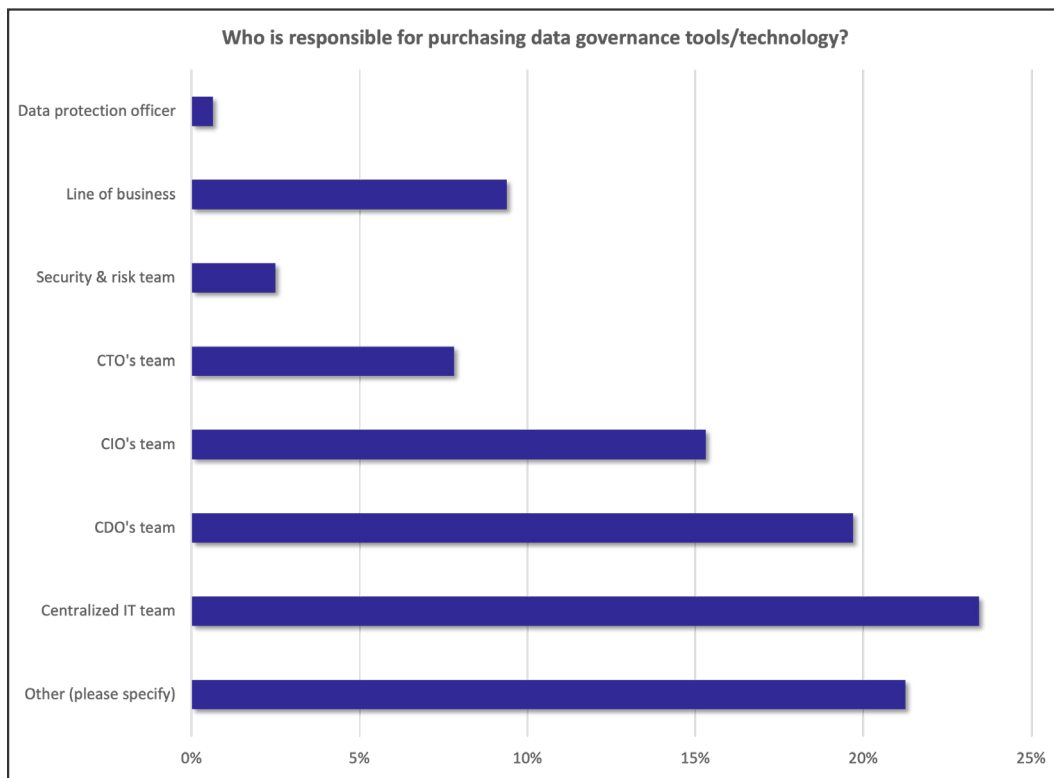

Figure 10: Responsibility for Purchasing Governance Tools and Technologies

So, those who understand how to leverage cloud governance for their required organizational capabilities get frustrated in sharing this knowledge with senior/executive managers because of a lack of time and understanding of their efficacy. A few more comments further demonstrate this difficulty:

- "Cloud data governance is difficult to implement. It is hard to get executive sponsorship."

- "It is tough to get traction. Over the last one and a half years, I have been advocating for data stewards, and still no people!"

- "Poor corporate culture, lack of data literacy, and lack of a corporate mandate represent the biggest challenges with data governance in the cloud."

5. DATA GOVERNANCE WISH LIST FOR THE CLOUD

As mentioned throughout this paper, organizations accept that data governance is necessary, but seem confused on how to attain essential data governance goals. Some even still have various levels of distrust in the data governance process.

Our analysts wanted to get a better picture of the hesitation around data governance and how that translates into cloud governance as well, since the two are so connected. We found that concern with reasonable costs, flexibility, automation, and measureable business outcomes underlie a cautious approach toward cloud governance.

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A. Reasonable Costs

When looking at a business balance sheet, managers see data governance as an expense to reduce, and not a source of revenue. Data governance plays a supportive role in generating more sales and customers, supporting the brand, and reducing risk. But those numbers do not directly translate to ROI.

Since data governance indirectly contributes revenue, it remains unclear how much cloud data governance tools contribute. Unsurprisingly, our study found that a significant number of our participants want to spend less than $50k on data governance technology (39%) [Figure 11]:
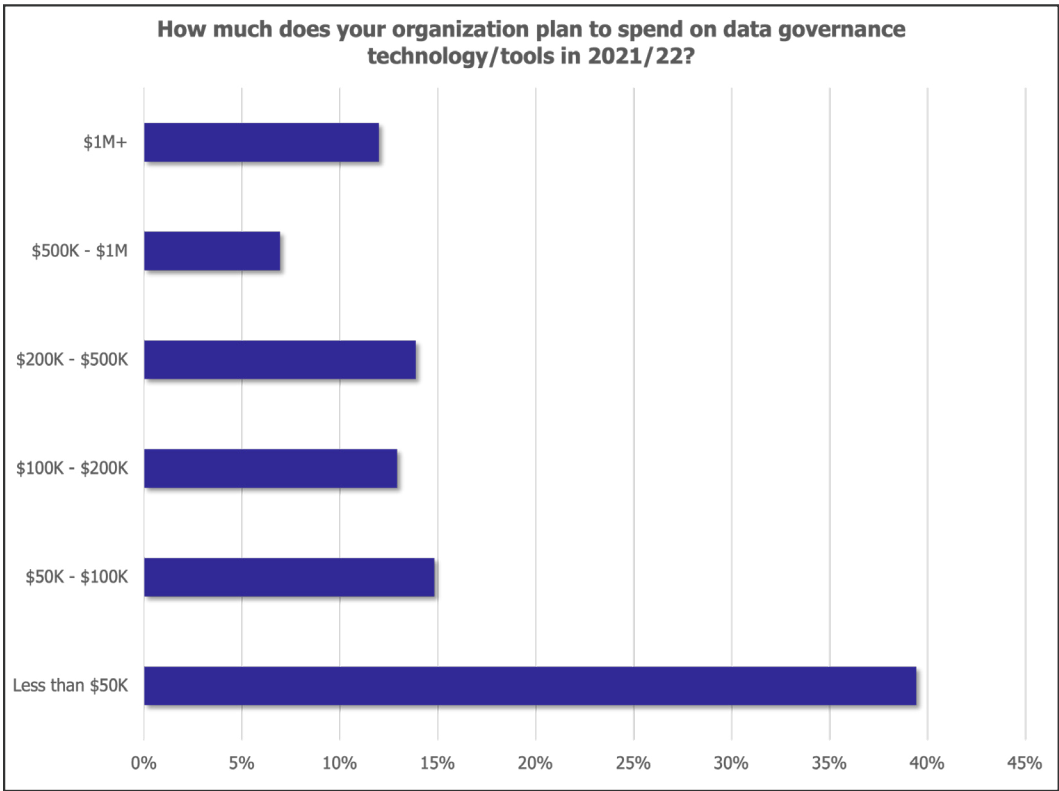

Figure 11: Data Governance Spending

Matthew Monahan, the Director of Product Management at Zaloni, commented:

> "Most data governance tools cost upwards of $100K as an entry point. Since 39% of the respondents want to spend less than $50K, we can see two possible reasons. Either these organizations don't have the budget for cloud data governance, or they do not see its benefit."

He added that respondents seem to see data governance as something different than the data governance tool itself. And in his experience, many managers see data governance as a checklist that existing job roles must complete and cover within existing company expenditures. If that is the case, there is a mismatch between perceived cloud data governance price points and the challenges experienced with current governance initiatives.

B. Flexibility

This paper shows that businesses desire some sort of flexibility in their data governance programs. Many companies want to run their cloud data governance processes as agilely as possible and quickly migrate their data from a cloud vendor to another provider or on-premises as they need.

We see this call for flexibility in the responses to the question "what is your perception of cloud-native vs. cloud agnostic?" About 41% of participants chose "agnostic provides us with more flexibility," as the most frequently selected answer [Figure 12]:
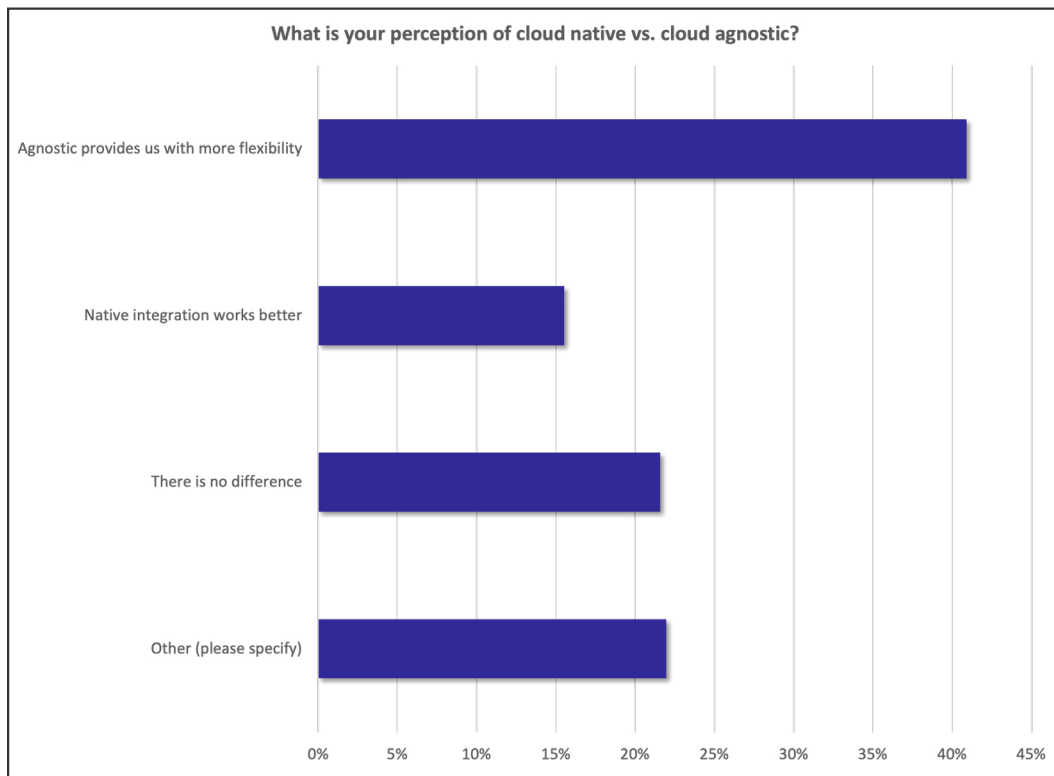

Figure 12: Cloud Native vs. Cloud Agnostic

How organizations want this flexibility remains ambiguous. Participants commented the following:

- Data governance strategy and approach need to shift to composable, modular data governance components that we can toggle on or off depending on the use case. In addition, we need a data governance strategy and approach that responds to the business need for agility and flexibility."

- "We measure data governance by its flexibility and time to understand it."

C. Automation

We can infer from evidence throughout this report that businesses want automation for efficient data governance processes. As mentioned in the "Faster and More Trusted Business Analytics" section of this report, corporate workers have negatively viewed data governance as wasting time gaining data access and slowing business. However, organizations know they need data governance to get faster business analytics and self-service data access.

In DataOps, automation in cloud data governance leads the charge here, providing data governance benefits and quick data access. We introduced DataOps, prior, as a manager of how data gets passed along pipelines and platforms efficiently and effectively.

Through DataOps's handling of data storage and transport, cloud data governance allows any analyst to quickly request, receive access to, and retrieve data for faster data insights. So the data user gets the best of both data governance advantages — faster business analytics and self-service data access — without the frustration of unnecessary waiting and cumbersome processes.

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D. Measurable Business Outcomes

As with any major business initiative, being able to measure value and business impact is critical for understanding success and return on investment. When it comes to data governance, consistent data quality, reduced time to insight, and compliance with industry regulations were the top value metrics for the survey respondents (see Figure 5), but many respondents shared their challenges measuring business outcomes of their data governance efforts, commenting:

- "We're still trying to figure out how to measure our success."

- "We're not, which is part of our problem."

- "Additional insight to capturing metrics supporting Data Governance initiatives would be welcomed."

Developing metrics and key performance indicators (KPIs) in addition to measuring data quality consistency, reduced time to insight, and regulatory compliance is a necessary piece of the puzzle. You can build metrics around: data users, such as the number of data analysts accessing data; technology performance, such as how quickly your platform detects and obfuscates sensitive data; and processes, such as how long it takes for data to move from source to end user. Metrics are important to understand performance and alignment to business objectives.

6. CONCLUSION — HOW TO BUILD CONSENSUS FOR CLOUD DATA GOVERNANCE

This report demonstrates that organizations accept the importance of data governance, but struggle with how to put their data governance activities and processes together in the cloud, leaving many gaps in the effectiveness of their governance as a whole.

Also, companies face skepticism around cloud data governance. Many managers and data professionals have a wish list for reasonable costs, executive engagement, and flexibility, but face continued problems selling their propositions. Based on this, we have put together some recommendations to help your organization.

A. Educate Your Team About Data Governance in the Cloud

Various organizations have started to migrate some, if not all, of their data to cloud environments. So, if your organization does not practice cloud data governance, you need to educate your team members on why it's necessary and the potential risks of not doing so.

Businesses need to understand the value of cloud data governance and to teach team members how overarching data governance processes, procedures, and activities meet individual work needs, both in traditional data systems and new cloud technologies. For example, share how having a business glossary or data catalog implemented for the enterprise meets an individual team member's data quality concerns.

After updating a data governance process, find out who has interacted with that new addition. Then have that person measure the resulting task time in working with, using, or applying the data. Consider implementing key performance indicators (KPIs) such as number of data sets accessed, number of governance polices implemented, percentage of data quality issues resolved, and number of data assets discovered. Use the feedback and KPIs to make cloud data governance more efficient too.

B. Plan to Make Your Data Governance Capable in the Cloud

Knowing that enterprise-wide cloud data governance activities advance data quality and security capabilities helps. But planning for enterprise-level data governance tools such as a data catalog can get more results across the board. As one survey respondent commented, "The functional capabilities an organization uses are not different between on-prem vs. cloud data. The practices are and should be the same." Educate people on this.

Business glossaries, data catalogs, data lineage, data access management, and governance policy creation describe on-premises data governance capabilities that can work just as well in the cloud if the right data strategy and technology is in place. Your organization's data strategy that supports the business will guide you in building and prioritizing these cloud governance competencies. DataOps puts this data strategy into operation with end-to-end governance.

Regularly measure your organization's cloud data governance program for its value. Establish baseline KPIs such as percent of data quality exceptions unresolved, or time to insights. Some of these measurements may include the time it takes for data consumers to access data and data quality scores that can be automated, and happen seamlessly along with regular business operations. Update and use that feedback to continuously improve cloud governance procedures, and your organization will have more reliable cloud governance that can be more easily quantified for further executive buy-in.

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C. Think About Addressing Security with Self-Service Accessibility

Data security pushes the typical organization toward cloud data governance, especially in managing multiple cloud environments and SaaS data sources. But increasing the number or complexity of security protocols, as specified by cloud governance policies, risks slowing down business analytics.

Think about meeting some enterprise security needs with self-service accessibility, where analysts and data scientists can easily find and request access to data, but remaining within your data governance policies by controlling data access through role-based access controls or data access requests. Measure both objectives through the time spans of receiving permission to data and fixing any security problems due to deviance from data governance policy. That way, your organization can have controls required for security and regulatory compliance while providing data consumers with self-service accessibility, reducing reliance on the IT team.

In addition to role-based access controls and data access requests, being able to track data lineage is a key capability required for understanding who has accessed data and what's happened to it over time. This lineage is also beneficial when gathering information as part of a regulatory compliance audit.

D. Integrate DataOps with Cloud Data Governance

Data governance handles data cataloging, control, and consumption to define data, audit that data, and ensure that the business can use data. Throughout these governance activities, data gets created, transformed, stored, archived, and deleted according to governance policies, no matter whether they are on-prem or in the cloud.

So, managing data flow and storage throughout cloud and on-prem environments supports such governance activities. If the information is accessed by an unauthorized individual or data including sensitive or personally identifiable information is not properly handled, then the data is breached, and there could be potential regulatory implications, including significant fines if audited. Additionally, if your business cannot use your data due to lack of access or poor data quality, your company will lack the insights needed for data-driven decision making, innovation, uncovering new revenue streams and reducing costs.

The data management discipline of DataOps treats the flow of data from different sources through various systems and platforms (or a single end-to-end data platform) as a supply chain with trusted data as the final product. DataOps provides a single pane of glass view across your entire data ecosystem. DataOps takes care of how data travels to and from different systems and what pipelines get used, solving "the how" of cloud data governance. And yes, cloud data governance still relies on data stewards and an appropriate understanding of roles and responsibilities.

Using the supply chain analogy, measure the time it takes between data creation to usage across departments in the business. Also, keep track of the number of any resulting issues breaking a data governance policy and the resolution time. Attempt to get small numbers for both to show data governance's efficiency, effectiveness, and ROI.

Organizations rely on efficient and effective cloud data governance to move data smoothly throughout enterprise systems in a way that's trusted and secure in order to deliver high quality data and ensure regulatory compliance. DataOps provides "the how" for companies to meet these objectives by providing the end-to-end visibility and control of the data supply chain, allowing companies to implement and standardize data governance and improve efficiency throughout the supply chain to reduce costs and accelerate analytics.

At Zaloni, we believe in the unrealized power of data. Our DataOps software platform, Arena, streamlines data pipelines through an augmented catalog, automated governance, and self-service consumption, to reduce IT costs, accelerate analytics, and standardize security. We work with the world's leading companies, delivering exceptional data governance built on an extensible, machine-learning platform that both improves and safeguards enterprises' data assets. To find out more, visit www.zaloni.com.

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