

# DataOps Strategy Helps Optimize a Data Fabric Approach

## The 451 Take

The seemingly simple definition of 'data fabric' has evolved over time, with several potential interpretations. These interpretations historically could depend on a data fabric's architectural alignment with data storage approaches. But today, we often think of data fabrics more broadly – focusing less on physical storage location, and emphasizing architecture that spans elements of data integration, metadata management and cataloging, governance, virtualization, and federation. Data fabrics today speak to business needs. The overarching desire for a unified view of data – and more unified enterprise governance and control of that data – is increasingly undeniable. 'Proactive' motivations to leverage data for competitive gains and more 'reactive' requirements such as compliance, are converging in a big way.

Despite varied interpretations, use of the term 'DataOps' is increasingly acknowledged and widespread. 451 Research generally defines DataOps as agile and automated approaches to data management implemented to help facilitate organizational data-driven decision-making. According to our custom survey associated with this report, about four out of five respondents (78%) reported they are both familiar with and currently use the term DataOps.

Most enterprises are actively pursuing this DataOps journey. We asked our survey respondents to rank their organization's agile development and data management practices – their ability to continuously create, deliver and optimize data products. On a 1-4 scale from 'low' to 'high,' over half (53%) of respondents ranked their organization's ability as a 4. But challenges in DataOps remain, particularly with regard to data management. Most common pain points include data privacy concerns (42%), data security (41%), regulatory compliance requirements (33%), and accessing and preparing data (33%). Many of these pain points are highly intertwined.

### Expected Business Benefits From DataOps Methodology



Q: What are the most significant business benefits your organization would expect from more agile and automated approaches to data management? Please select all that apply.

Base: All respondents (n=600)

Source: 451 Research's State of DataOps 2022 survey, commissioned by Hitachi Vantara

However, the expected business benefits from a more agile and automated approach to data management, in alignment with DataOps, are largely forward-looking with long-term goals (see chart above). Past independent survey results from 451 Research suggest that short-term goals such as 'lowering costs' and 'increasing sales' used to prevail as leading priorities. However, the economic turbulence over the last two years marked a dramatic shift in organizational objectives, evident here as well. In short, DataOps today isn't simply about business requirements; it's about long-term business sustainability and resilience.

## Business Impact

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**Planned investment in DataOps technology is robust, with simultaneous areas of priority.** Overall, 85% of survey respondents reported that their organization has planned increases in DataOps technology investment over the next 12 months. Top reported priorities include data virtualization (43%), analytics and self-service data access (42%), and migration to public cloud data lakes and lakehouses (42%). The absence of a clear winner in terms of priority speaks to the multifaceted nature of integrated DataOps efforts.

**Machine learning (ML) efforts and challenges speak to the present state of DataOps.** Currently, the top reported challenge in using or adopting ML is 'accessing and preparing' data (56%). Access and preparation of data is fundamentally a DataOps challenge, tightly intertwined with the delivery and flow of reliable data through the business.

**Data governance is fundamental to consistent, compliant insight. Challenges span people, processes and technology.** In our survey data, 41% of survey participants reported 'process challenges' as their primary data governance barrier. Processes being 'too complex' was the most common complaint, though respondents cited other pain points including compliance and approval workflows – a close parallel to data management pain points, which often include privacy and security issues. Top technology challenges in data governance include connectivity/integration challenges, and top people issues underscore staff and personnel shortages.

**Data fabrics gain traction, with DataOps strategy as a key supporting data management practice.** Thirty-one percent of survey respondents reported that their organization has a data fabric in use, and another 37% said that a data fabric is in proof of concept. In addition, 84% agreed to some extent that DataOps is an accelerator for the [organizational] adoption of a data fabric. Speaking to pain points mentioned above, data fabrics are often perceived to help with consistent data access and prep.

## Looking Ahead

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The desire to ensure consistent data access and use across the organization, in a safe and guided manner, is essentially a constant today. As more workers consume and depend on data in their daily roles, the efficiency and reliability of internal data delivery mechanisms become tantamount to sustained business agility and success. The simple availability of data is not enough. Data needs to be trusted, navigable, appropriately protected, and understood and enriched in context with other data sources and formats. Not only do DataOps practices help ensure the resiliency and efficacy of the organizational data 'supply chain'; they can support architectural practices, such as data fabrics, that seek to increase the availability of governed data for all relevant users.

Data-related regulations, meanwhile, will continue to proliferate, as will the number of consumers and sources of data within the enterprise. The key to organizational success with data is the adoption of processes and technology that support the firm and consistent governance of data, regardless of use case. The metadata-driven automation mechanisms inherent in a DataOps approach are essentially necessary to control data at modern scale. Data fabrics, then, can be a valuable resource to leverage these mechanisms to ensure the delivery of reliable, trusted data to those that need it.

Business agility will increasingly become synonymous with the effective leverage, utilization and monetization of data – not cyclically, but in a continuous and iterative manner. Organizations must protect and manage data as the enterprise's most valuable asset, while maintaining data's accessibility and usability.

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