Data integration for data-driven outcomes: a technical and cultural challenge

The complexity of data management has never been greater, and organizations that report making most or all of their strategic decisions based on data incur higher levels of data silos:

Organizations with more than 50 data silos

39%
Most data-driven respondents

23%
All respondents

Deriving cohesive insight from this distributed data landscape can pose major challenges.

Barriers to becoming more data-driven

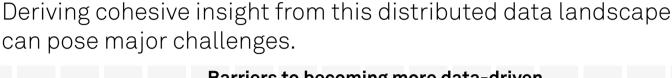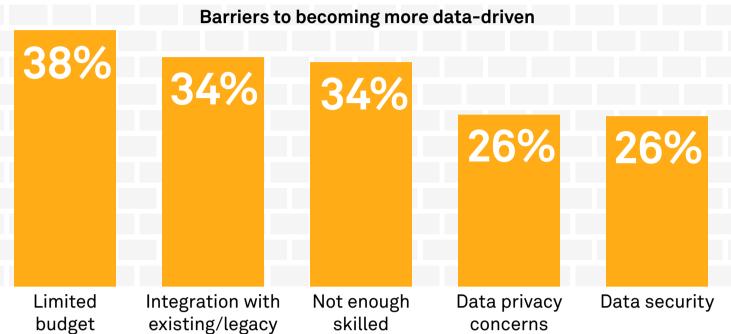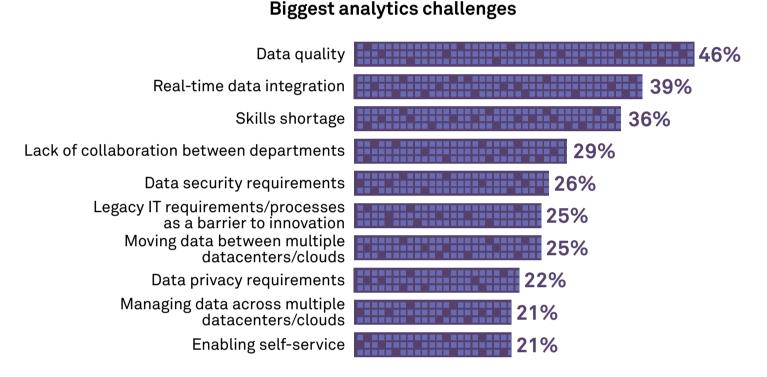| Barrier	Percent
Limited budget	38%
Integration with existing/legacy data architecture	34%
Not enough skilled resources	34%
Data privacy concerns	26%
Data security	26%

It's little surprise that budget is a perennial challenge in attempting to be more data-driven, but **key technical challenges** continue to confound even the most advanced organizations, underscoring the need for broad architectural compatibility.

Biggest analytics challenges

Challenge	Percent
Data quality	46%
Real-time data integration	39%
Skills shortage	36%
Lack of collaboration between departments	29%
Data security requirements	26%
Legacy IT requirements/processes as a barrier to innovation	25%
Moving data between multiple datacenters/clouds	25%
Data privacy requirements	22%
Managing data across multiple datacenters/clouds	21%
Enabling self-service	21%

Within the average business, more individuals are becoming consumers of data, putting additional emphasis on the need for **consistent data quality and real-time integration methodology**. Worker productivity is directly influenced by the availability and interpretability of relevant data.

Most think of efforts to improve data culture as educational initiatives such as awareness and upskilling. Practically speaking, data culture tends to be more product-centric:

Steps taken to improve data culture

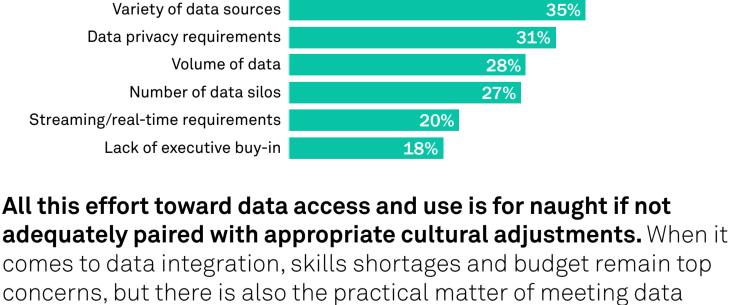| Step	Percent
Invested in new data management products and services	44%
Invested in new analytics products and services	40%
Invested in improving employee data literacy and skills	35%

In a deeply data-driven organization, all workers need to become data beneficiaries and consumers. While historically data was thought to be the realm of IT, current trends indicate that departmental and line-of-business personas are actually prioritized in data access processes and initiatives.

Biggest data integration challenges

Challenge	Percent
Skills shortage	48%
Data security requirements	39%
Lack of budget	36%
Legacy architecture or applications	36%
Variety of data sources	35%
Data privacy requirements	31%
Volume of data	28%
Number of data silos	27%
Streaming/real-time requirements	20%
Lack of executive buy-in	18%

All this effort toward data access and use is for naught if not adequately paired with appropriate cultural adjustments. When it comes to data integration, skills shortages and budget remain top concerns, but there is also the practical matter of meeting data security requirements amid intensifying regulatory demands.

Striking a balance with data access and data protection is key for success.

MarkLogic

Data integration is one of the most complex IT challenges and our mission is to simplify it. By simplifying data integration, MarkLogic helps organizations gain agility, lower IT costs, and safely share their data. Learn more about the highly differentiated MarkLogic Data Hub Platform.