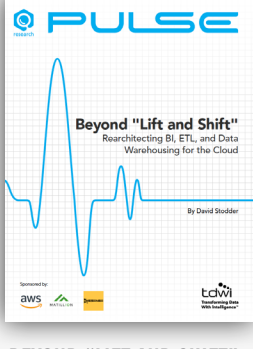


TDWI PULSE REPORT BEYOND LIFT AND SHIFT: REARCHITECTING BI, ETL, AND DATA WAREHOUSING FOR THE CLOUD



BEYOND "LIFT AND SHIFT":
REARCHITECTING BI, ETL, AND DATA
WAREHOUSING FOR THE CLOUD

Cloud migration can accelerate the use of data and analytics to accomplish essential business goals. Although a simple "lift and shift" of existing systems and practices to the cloud can reduce costs and improve performance, data-driven business innovation demands more.

Organizations need an architecture that takes full advantage of the benefits of cloud-based BI, analytics, transformation, and data management. Enterprises must evaluate how they can rearchitect key processes such as data extraction, transformation, and loading (ETL) and rethink existing data warehouse and data lake practices to support growth in business-driven, self-service data interaction with the help of the cloud.

WHAT'S DRIVING ENTERPRISES TO THE CLOUD?

Cloud-based BI, analytics, data transformation, and data management can accelerate business-critical projects that languish with traditional on-premises systems and practices because they can't scale or are slow and expensive to modernize. What else is driving enterprises to the cloud?

Leading drivers for cloud-first or cloud-migration strategies include:



Lower up-front investment for expanding data use



Need to expand self-service BI and analytics to new types of users and projects



Shorter data preparation



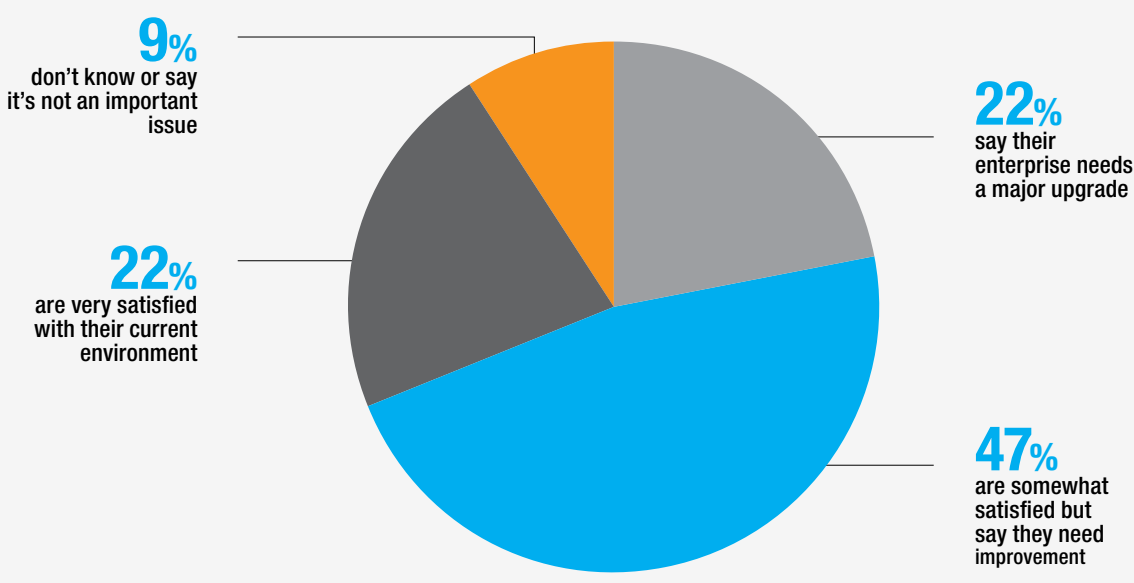
Better alignment of data storage and management with users' data access patterns

Source: Page 5

TRADITIONAL ETL IS A CHOKE POINT FOR CLOUD MIGRATION

Getting data moved to the cloud can be tricky. ETL processes often require lots of data movement and manual IT work, slowing cloud migration and data availability for BI and analytics. In a recent TDWI survey, 38% of respondents said data loading, movement, and integration is one of their biggest challenges in trying to augment or replace on-premises systems with new cloud-based services.

How satisfied is your organization with your current cloud-based services for self-service data loading and movement?

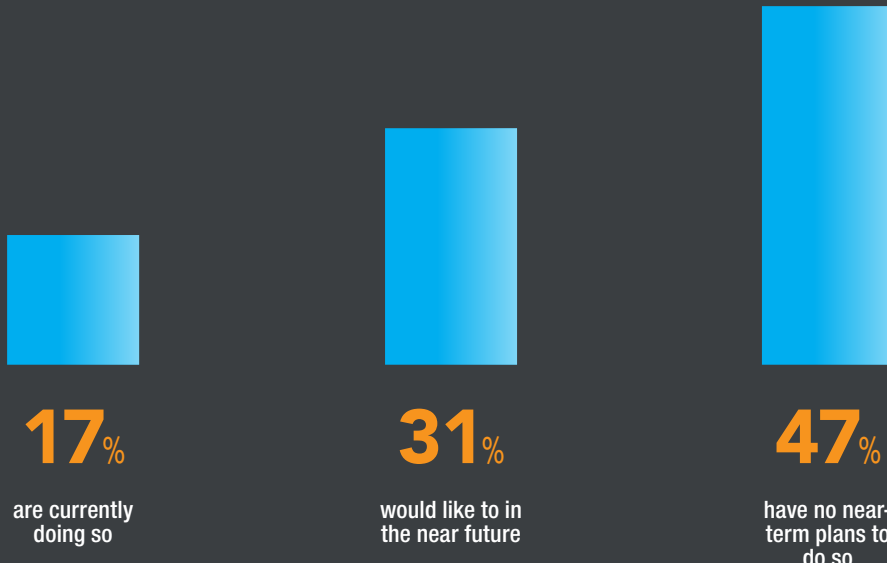


Q3 2020 TDWI Best Practices Report: Evolving from Traditional Business Intelligence to Modern Business Analytics, figure 6, page 18

CLOUD MIGRATION CAN EXPAND SELF-SERVICE DATA TRANSFORMATION AND PREPARATION

Cloud-based solutions today allow data pipelines that load, transform, and prepare data to be reusable so that "citizen" data professionals who are not in IT can access data sooner. TDWI research finds room for growth; nearly one-third would like to perform self-service data prep, transformation, and pipeline development in the near future.

How many enterprises are performing data preparation, transformation, and pipeline development in self-service mode (that is, with little or no IT involvement)?

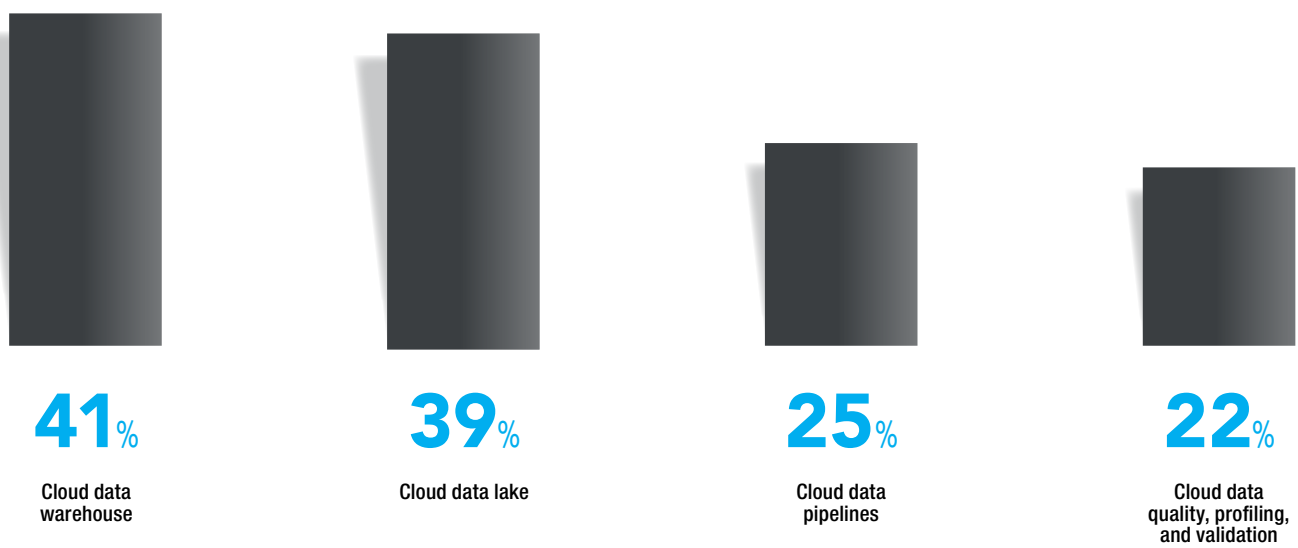


Source: Page 16 (including footnote)

USE ELT WITHIN A DATA LAKEHOUSE TO ACCELERATE INNOVATION AND IMPROVE GOVERNANCE

Organizations can innovate faster by more tightly integrating their data warehouse and data lake. With this cloud "data lakehouse" combination, organizations can use ELT for both traditional BI data warehouse workloads and AI/ML workloads that need a broader selection of data from the warehouse and lake. Organizations can also govern data and track data lineage more effectively. This is critical; in a recent survey, 43% of respondents say a lack of visibility into data-related activities for governance is one of their biggest challenges in trying to augment or replace existing on-premises systems with cloud-based services—something that the holistic view provided by an integrated cloud data lakehouse would help solve.

In your organization, which of the following BI, analytics, and data management systems are currently running on cloud-based (e.g., PaaS) or SaaS platforms?



Source: Figure 1, page 6

RECOMMENDATIONS



SWITCH FROM TRADITIONAL ETL TO ELT

With ELT, different types of preparation can interact with the landed data to apply transformation and other preparation routines for their workloads. ELT can use cloud processing platforms to improve speed and efficiency, especially for advanced analytics and machine learning.



MODERNIZE DATA TRANSFORMATION FOR FASTER PREPARATION

Cloud-based data transformation services help users answer questions with less data prep by IT, provide smarter, more automated monitoring of data pipeline workloads, and highlight anomalies and data quality issues.



EMPOWER CITIZEN DATA PROFESSIONALS WITH MODERN AUTOMATION AND USER INTERFACES

These can reduce the complexity and inconsistency that often make data transformation and pipeline development tough for citizen data professionals. Leading solutions offer prebuilt connectors that reduce the workload for those who traditionally hand-code connectivity to extract data.

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