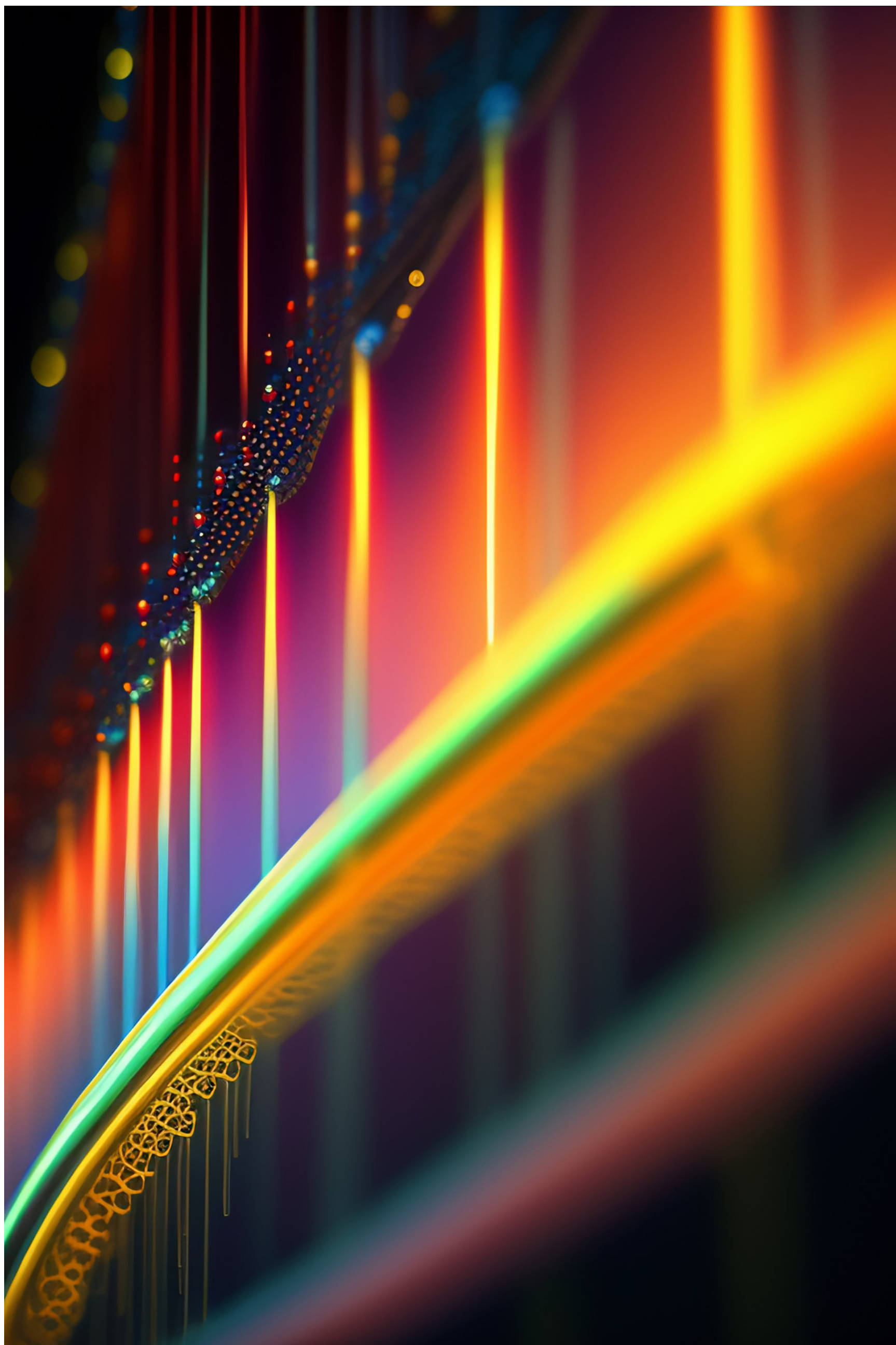


Lesson 3

What is data management and why is it important?



Key vocabulary for the reading activity #3:

"What is data management and why is it important?"

Data management

The practice of collecting, organizing, protecting, and storing an organization's data so it can be analyzed for business decisions.

Data preparation

The process of cleaning and transforming raw data into the right shape and format for analysis, including making corrections and combining data sets.

Data pipelines

Automated systems that enable the transfer of data from one system to another.

ETLs (Extract, Transform, Load)

Processes built to extract data from one system, transform it, and load it into the organization's data warehouse.

Data catalogs

Systems that help manage metadata to create a complete picture of the data, providing a summary of its changes, locations, and quality while also making the data easy to find.

Data warehouses

Places to consolidate various data sources, contend with the many data types businesses store, and provide a clear route for data analysis.

Data governance

The establishment of standards, processes, and policies to maintain data security and integrity.

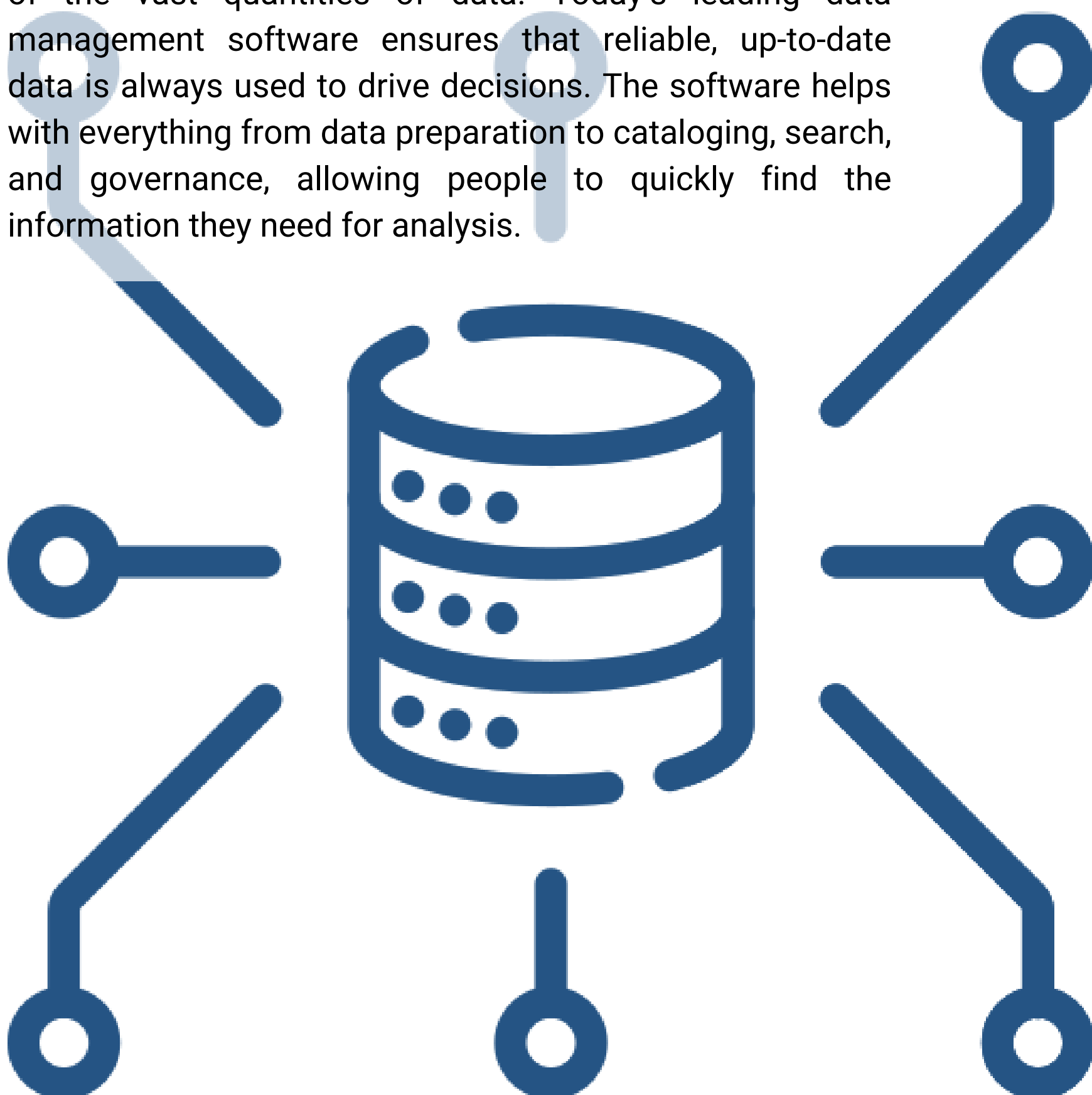
Reading activity #3:

"What is data management and why is it important?"

In today's digital economy, companies have access to more data than ever before. This data creates a foundation of intelligence for important business decisions. To ensure employees have the right data for decision-making, companies must invest in data management solutions that improve visibility, reliability, security, and scalability.

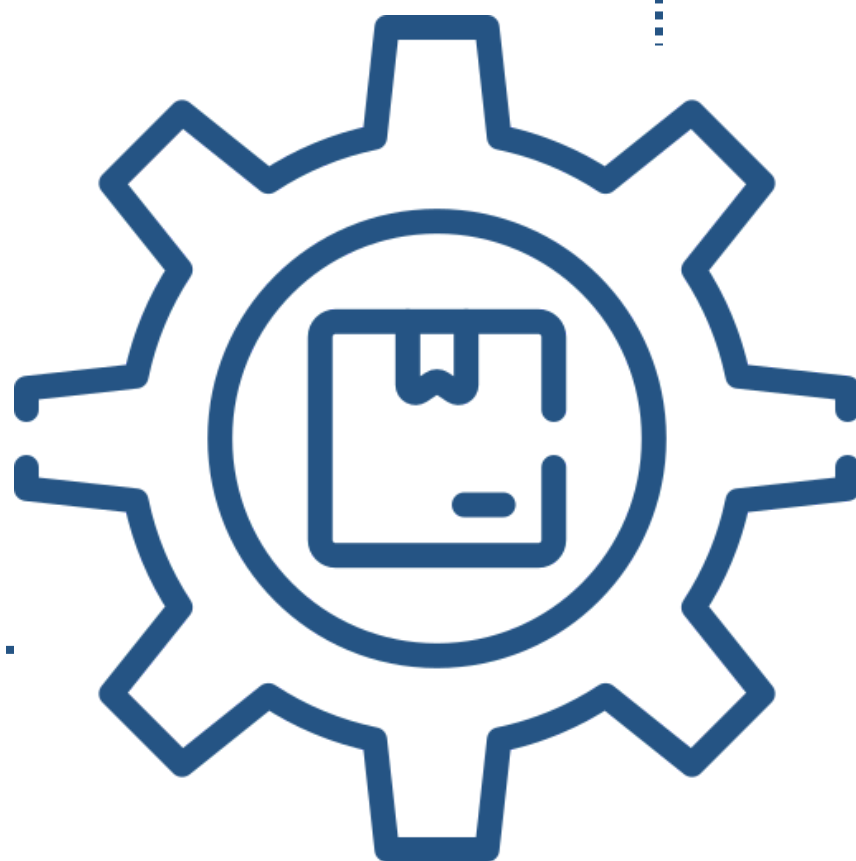
What is data management?

Data management is the practice of collecting, organizing, protecting, and storing an organization's data so it can be analyzed for business decisions. As organizations create and consume data at unprecedented rates, data management solutions become essential for making sense of the vast quantities of data. Today's leading data management software ensures that reliable, up-to-date data is always used to drive decisions. The software helps with everything from data preparation to cataloging, search, and governance, allowing people to quickly find the information they need for analysis.



Types of Data Management

Data management plays several roles in an organization's data environment, making essential functions easier and less time-intensive. These data management techniques include the following:



- Data preparation is used to clean and transform raw data into the right shape and format for analysis, including making corrections and combining data sets.
- Data pipelines enable the automated transfer of data from one system to another.
- ETLs (Extract, Transform, Load) are built to take the data from one system, transform it, and load it into the organization's data warehouse.
- Data catalogs help manage metadata to create a complete picture of the data, providing a summary of its changes, locations, and quality while also making the data easy to find.
- Data warehouses are places to consolidate various data sources, contend with the many data types businesses store, and provide a clear route for data analysis.
- Data governance defines standards, processes, and policies to maintain data security and integrity.
- Data architecture provides a formal approach for creating and managing data flow.
- Data security protects data from unauthorized access and corruption.
- Data modeling documents the flow of data through an application or organization.

Why data management is important

Data management is a crucial first step to employing effective data analysis at scale, which leads to important insights that add value to your customers and improve your bottom line. With effective data management, people across an organization can find and access trusted data for their queries. Some benefits of an effective data management solution include:

Visibility

Data management can increase the visibility of your organization's data assets, making it easier for people to quickly and confidently find the right data for their analysis. Data visibility allows your company to be more organized and productive, allowing employees to find the data they need to better do their jobs.



Reliability

Data management helps minimize potential errors by establishing processes and policies for usage and building trust in the data being used to make decisions across your organization. With reliable, up-to-date data, companies can respond more efficiently to market changes and customer needs.



Security

Data management protects your organization and its employees from data losses, thefts, and breaches with authentication and encryption tools. Strong data security ensures that vital company information is backed up and retrievable should the primary source become unavailable. Additionally, security becomes more and more important if your data contains any personally identifiable information that needs to be carefully managed to comply with consumer protection laws.



Scalability

Data management allows organizations to effectively scale data and usage occasions with repeatable processes to keep data and metadata up to date. When processes are easy to repeat, your organization can avoid the unnecessary costs of duplication, such as employees conducting the same research over and over again or re-running costly queries unnecessarily.



Data management continues to evolve to address challenges

Because data management plays a crucial role in today's digital economy, it's important that systems continue to evolve to meet your organization's data needs. Traditional data management processes make it difficult to scale capabilities without compromising governance or security. Modern data management software must address several challenges to ensure trusted data can be found.

Challenge 1: Increased data volumes

Every department within your organization has access to diverse types of data and specific needs to maximize its value. Traditional models require IT to prepare the data for each use case and then maintain the databases or files. As more data accumulates, it's easy for an organization to become unaware of what data it has, where the data is, and how to use it.

Challenge 2: New roles for analytics

As your organization increasingly relies on data-driven decision-making, more of your people are asked to access and analyze data. When analytics falls outside a person's skill set, understanding naming conventions, complex data structures, and databases can be a challenge. If it takes too much time or effort to convert the data, analysis won't happen and the potential value of that data is diminished or lost.

Challenge 3: Compliance requirements

Constantly changing compliance requirements make it a challenge to ensure people are using the right data. An organization needs its people to quickly understand what data they should or should not be using—including how and what personally identifiable information (PII) is ingested, tracked, and monitored for compliance and privacy regulations.

Establish data management best practices

Implementing best practices can help your organization address some data management challenges and reap the benefits. Get the most out of your data with an effective data management strategy.

Clearly identify your business goals

Just like in every business practice, the first step is identifying your organization's goals. Setting goals will help determine the process for collecting, storing, managing, cleaning, and analyzing data. Clearly defined business objectives ensure you're only keeping and organizing data relevant for decision-making and prevent your data management software from becoming overcrowded and unmanageable.

1

Focus on the quality of data

You set up a data management system to provide your organization with reliable data, so put the processes in place to improve the quality of that data. First create goals to streamline your data collection and storage, but make sure to complete regular checks for accuracy so data does not become outdated or stale in any way that can negatively impact analytics. These processes should also identify incorrect or inconsistent formatting, spelling errors, and other errors that will impact results. Training team members on the proper process for inputting data and setting up data prep automation is another way to ensure data is correct from the beginning.

2

Allow the right people to access the data

Having quality data is half the battle. You also need to make sure the right people can access that data when and where they need it. Instead of issuing blanket rules for everyone in the company, it is often smart to set up different levels of permissions so each person can access the relevant data to do their jobs. It can be difficult to find the right balance between convenience and security, but if your team cannot access the data they need efficiently, it can lead to a loss of time and money.

3

Prioritize data security

Data should be appropriately accessible inside your organization, but you must put protections in place to keep your data secure from outsiders. Train your team members on how to handle data properly, and ensure your processes meet compliance requirements. Be prepared for the worst-case scenario and have a strategy in place for handling a potential breach. Finding the right data management software can help keep your data secure and safe.

4

Find effective data management platform

An effective data management solution can help you achieve each of these best practices. Tableau's approach to data management is unique from traditional solutions in that it surfaces metadata and integrates management processes into the Tableau analytics platform where people are already spending their time in analysis. With the Tableau Data Management Add-on, you get a solution that's designed with multiple people in mind. It also remains heavily focused on analytics so people get the information they need when and where they need it—directly in the flow of their analysis. Plus, the visual interface provides a better way to interact with your data, making the process faster and easier. Learn more about Tableau's approach to data management and how you can increase visibility, reliability, security, and scalability in your data management processes.

Taken from: <https://www.tableau.com/learn/articles/what-is-data-management>

True/False activity.

Para consolidar las respuestas ingrese al cuestionario online.

