

5 Ways Data Integration Can Leverage the Full Potential of Your Data

See real-life use cases that are relevant to your day-to-day work.



Data integration seems like a straightforward topic: It's simply the process of combining data from multiple sources. In reality, data integration can be incredibly complex.

Technology vendors offer a variety of data integration tools with a range of capabilities that support constantly evolving use cases. The tools give you options to support your needs and environment, such as:

- On-premises, cloud-based, and hybrid data integration tools
- Single-purpose tools and multi-function data integration platforms
- Proprietary and open-source data integration tools

Choosing the best tools for your business requires you to have a future-proof data integration strategy. You also need a line of sight into current and upcoming use cases involving integrating data.

Each company will have different and potentially unique needs, depending on its industry, products, workflows, and other factors. Likewise, data engineers may have different data integration needs than data analysts or other data users. The use cases featured here can benefit your entire data team.

5 Data Integration Use Cases at a Glance

1. **Migrate data to the cloud.** Moving data to cloud-based repositories to support modernization efforts.
2. **Practice master data management.** Connecting and syncing records in all systems.
3. **Enable business-to-business data sharing.** Sharing data with suppliers and partners.
4. **Enable and visualize analytics.** Analyzing data and visualizing results to quickly identify trends.
5. **Provide a 360-degree customer view.** Capturing the customer journey to nurture relationships.

5 Data Integration Use Cases for Innovative Businesses

Here are five of the most common data integration use cases that can be implemented across a wide range of industries:

1. Migrate data to the cloud

Organizations are creating data repositories for analysis, yet capturing and storing data is not enough. To make data actionable for reports, analytics, or applications, you must cleanse it, get it in the proper format for analytics, and bring it together in one place, such as a cloud data platform.

These efforts require data integration—ingesting data from various sources, such as applications and systems, then transforming and harmonizing it for use. The data must be readily available to users, analysts, apps, and systems such as an analytical database, data warehouse, and business intelligence (BI) tools.

Many organizations have a data warehouse that's used for BI and analytics. Because a data warehouse stores data in a structured state, data may need to be modified so it's in the same format as other data. For example, some applications store phone numbers with parentheses, such as (123) 456-7890, while others use hyphens, as in 123-456-7890. Before data is stored in the data warehouse, those phone numbers must have the same format. To achieve this, organizations typically use data integration software known as extract, transform, and load, or ETL.

Companies have been using ETL for integration for decades, making it one of the most familiar types of data integration software. You can use ETL or another data integration method to facilitate the seamless data migration from on-premises environments to cloud repositories.

Data integration can bring together data from all relevant sources to the cloud, where it's available for users, analysts, and data-intensive applications. Modern data integration tools help ensure data migrations to the cloud are successful by ensuring the integrity, security, and availability of the data. As more organizations move to and modernize in the cloud, integrating data into cloud-based platforms, data warehouses, and other repositories is increasingly important.

2. Practice master data management

Many enterprises have several independent systems storing the same data—which increases costs and consumes more resources than having a single integrated data source. It often ends up creating data silos, too.

Sometimes multiple records occur as a result of mergers and acquisitions. For example, if two sporting goods retailers merge, they will probably have many suppliers, partners, and customers in common. The information from each of these entities will be stored in each retailer's respective database. However, the way the data is stored could be different, creating duplicate records for the same companies and customers.

Other times, duplicate data is the result of siloed systems. For example, the finance software might be different than the receiving department software. While both systems store similar data related to the supply chain, the two databases may be very different. If the receiving department updates the address for a particular vendor but the finance department doesn't, the company will have two different addresses for the same vendor.

While large enterprises often reduce their number of databases and applications through consolidation, they can still end up with multiple data repositories. To keep all databases up to date, you need the ability to sync records in various independent systems to achieve one master record across disparate systems.

This usually requires a data integration tool with data governance and master data management (MDM) capabilities. The tool might be a standalone MDM product or a complete data integration platform that consolidates data from all of your sources and systems into a single source of master data.

The integration process can also include transformation capabilities to remove duplicates, standardize formats, and copy data from one system to another. MDM tools also help ensure data quality and accuracy across your systems, apps, and business processes. You end up with a unified and consistent view of your data.

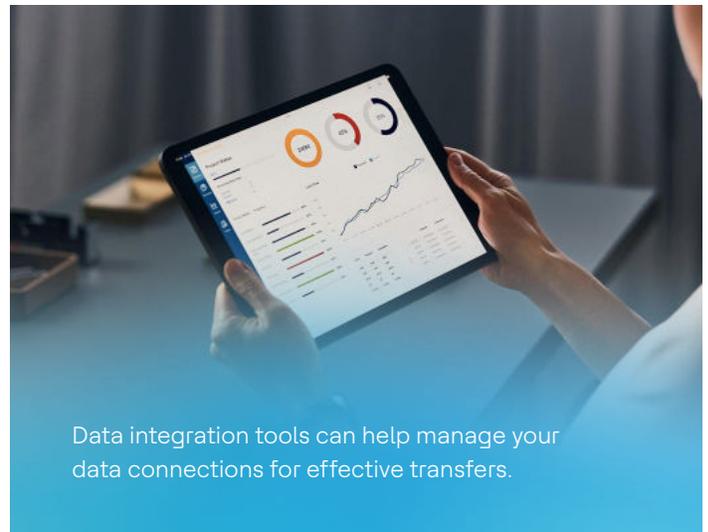
3. Enable business-to-business (B2B) data sharing

For as long as companies have been using computers, they've needed to send and receive data from suppliers and business partners. For example, a manufacturer might need to transfer shipping lists, invoice information, or general product data to vendors throughout the supply chain.

Data integration tools can help manage your data connections for effective transfers. The tools solve the interoperability issues between disparate systems and applications used by different organizations to enable fast and secure data transfers.

This is especially important, for example, for supply chain operations. Organizations at every step of the supply chain, including suppliers, logistics, and manufacturing, need the ability to seamlessly share data. Data integration is essential in making supply chains more efficient, mitigating risk, providing visibility and traceability at all points along the supply chain, and informing decision-making.

Data integration helps with B2B information sharing in other industries, too. For example, healthcare organizations can share electronic health records to give providers a complete patient view, and financial firms can share data with partners to assess credit risk or conduct digital ledger transfers.



Data integration tools can help manage your data connections for effective transfers.

4. Enable and visualize analytics

Innovative organizations are focused on making data more accessible to all users to foster a data-driven culture. One benefit of easily accessible data is that it can be of greater use for analytics across the business.

For example, customers now interact with brands both online and offline. This challenges marketers to map the buyer journey based on all touchpoints and then design personalized campaigns based on buyer persona, buying preference, online behavior, and other factors. With data analytics and visual dashboards, you can better quantify sales and marketing efforts, whether you're counting advertising impressions and clicks, tracking how long customers spend on various portions of your website, or selling products and services online.

Many organizations use data to create dashboards to visualize trends, allow users to drill down into the data for deeper analysis, and quickly understand complex information. One example is marketing teams using a dashboard to see how a campaign is progressing or to track leads by analyzing factors such as:

- Bounce rates
- Open rates
- Conversion metrics
- Lead quality
- Key performance indicators (KPIs)

You can create dashboards using a data integration platform or a BI or data visualization tool. You can also build custom dashboards that pull data from internal and external sources. The dashboards perform analytics in addition to creating visualizations and updating them regularly.

This data integration use case is more complex than ETL or syncing records and requires powerful software. The key advantage is that it makes data analytics easy to consume for all stakeholders across all areas of the organization.

5. Provide a 360-degree customer view

For many enterprises, the "holy grail" of data integration is creating a true 360-degree view of individual customers. The idea is that whenever salespeople or other employees interact with a customer, they have a single pane of glass that summarizes all the customer's interactions with the company.

Marketing departments want to create a 360-degree view of each customer to better understand their behavior and maximize customer lifetime value, which can also lead to increased cross-sell and upsell opportunities. Gaining this view requires pulling and integrating customer data from multiple systems—customer relationship management (CRM) software, enterprise resource planning (ERP) applications, technical support's ticket tracking system, marketing software, e-commerce systems, and other sources and apps.

The view ultimately allows users to drill down into each customer's history, seeing exactly what they've purchased along with details of any calls, emails, or chat sessions with customer support. Many 360-degree customer dashboards also benefit from data enrichment. The dashboards bring in external data not included in the company's databases. For example, enriching data may include pulling information from the customer's public social media accounts or incorporating information that's available from data brokers.

Modern dashboards typically leverage predictive analytics to visualize what is likely to happen next. This can help identify customer behaviors and predict potential future purchases, which allows you to personalize the customer journey. In some cases, you may be able to use sentiment analysis to gauge the customer's emotional state or sentiment toward your products or services, which can then guide a staff member's actions on a customer call.

This type of data integration use case is the most complicated of all. It requires very advanced data integration and analytics software. Many companies are making the necessary investments to build complete customer views to drive dramatic improvements in sales and customer service.

Reliable Data Integration is Essential for Your Business

In addition to the use cases featured here, data integration enables a wide range of ways to make better use of data—with new use cases constantly emerging. Modern organizations require data integration to perform the type of use cases that deliver new and sustainable value.

In our current landscape, where businesses and departments demand an increasing volume of data, you must solve data integration challenges to bring together all relevant data and make it accessible to everyone who needs it. Actian can help you achieve these goals.

We unify data from diverse sources to give you a comprehensive and accurate understanding of your data, allowing for better decision-making, analysis, and reporting. The Actian Data Platform offers flexible and reliable data integration solutions that allow you to unify, transform, and orchestrate data pipelines. With Actian, you can easily connect to any data source and ensure accurate, timely, high-quality data.

Actian integration capabilities are tailored to your needs—both simple and complex data integration scenarios. We offer no-code, low-code, and pro-code data integration and transformation options to enable more employees to easily connect systems and solve complex data integration challenges to better optimize all of your data and to drive new use cases.

Spend Less Time Integrating Data

You can unlock the value of your data for innovation and high-value projects while significantly reducing the time it takes for integration. Actian provides trusted data integration capabilities to connect and unify your data, applications, and systems faster and easier than ever before.



Case Study: Optimizing Data Integrations

Academy Bank needed a way to create, maintain, and leverage data integrations in a hybrid cloud environment. The Actian Data Platform enabled the bank to securely expose previously developed integrations to cloud-based applications and third-party vendors, eliminating the need to rewrite the integrations.

With Actian, Academy Bank is now delivering automated, real-time updates to its core banking system, saving more than four hours per day on manual data entry. The bank also gained the ability to develop and migrate integrations to support cloud and hybrid cloud infrastructure.

About Actian

Actian makes data easy. We deliver cloud, hybrid cloud, and on-premises data solutions that simplify how people connect, manage, and analyze data. We transform business by enabling customers to make confident, data-driven decisions that accelerate their organization's growth. Our data platform integrates seamlessly, performs reliably, and delivers at industry-leading speeds. Learn more about Actian, a division of HCLSoftware: www.actian.com.

