



6 Things to Consider for Your Cloud Data Warehouse Journey

Turn data challenges into opportunities
with a cloud data management solution



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Introduction

Cloud Data Warehouse Insights Are Only as Good as the Data They're Built On



Cloud Data Warehouse Insights Are Only as Good as the Data They're Built On

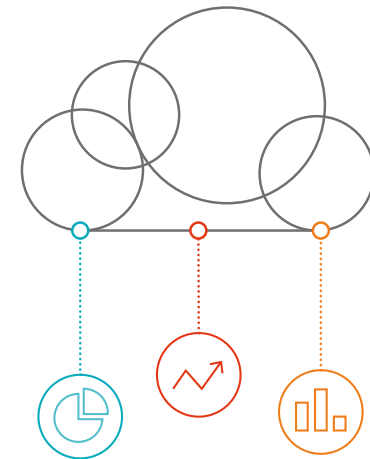
Data-driven digital transformation requires the ability to deliver trustworthy insights faster than your competition. Cloud data warehouses offer increased agility, but at the cost of increased data management complexity.

Your business requires relevant insights from across the organization—whether it's related to new products, fraud detection, optimal pricing, or maximizing customer loyalty. A cloud data warehouse delivers agility, standing up in minutes rather than quarters, and can be scaled up or down as required.

However, a cloud data warehouse requires timely and trusted data to deliver results that your management can depend upon for critical decisions and interactions. What is required is a cloud data management solution that can manage the challenges of data volume,

complexity, security, trust, and velocity so that you can enable your business analysts to focus less on data preparation and more on delivering breakthrough insights.

In the following pages, we will show some of the key challenges and opportunities for data management solutions to make this a reality.





Part One

The Role of Cloud Data Management for a Cloud Data Warehouse



The Role of Cloud Data Management for a Cloud Data Warehouse

A cloud data warehouse is a highly agile approach for new analytics initiatives. An EMA study found that 92% of organizations will be using cloud analytics as an integral part of their analytics strategy.¹ The data challenge for delivering business results quickly is to discover the relevant data from across your organization, migrate it to the new cloud data warehouse, and keep the cloud data warehouse updated with fresh and trustworthy data on a regular basis.

Industry analysts have found that over 50 percent of data in larger organizations is coming from sources outside of the company. This means that there is less control over data format, data quality and the level of business context that comes with that data.

Data management for today's data warehouses requires a solution that can manage:

- Any data type
- Any user
- Any data source: on-premises, multi-cloud, or hybrid
- Any data integration pattern
- The demands of data governance, regulatory compliance, and data privacy

With trusted data, your data warehouse solution can deliver analytics insights based on trusted data faster to support your organization's analytics needs.

In the next few pages, you'll see specific examples of the benefits a cloud data management solution should deliver and learn how it can help you deliver the most value from a new cloud data warehouse initiative.

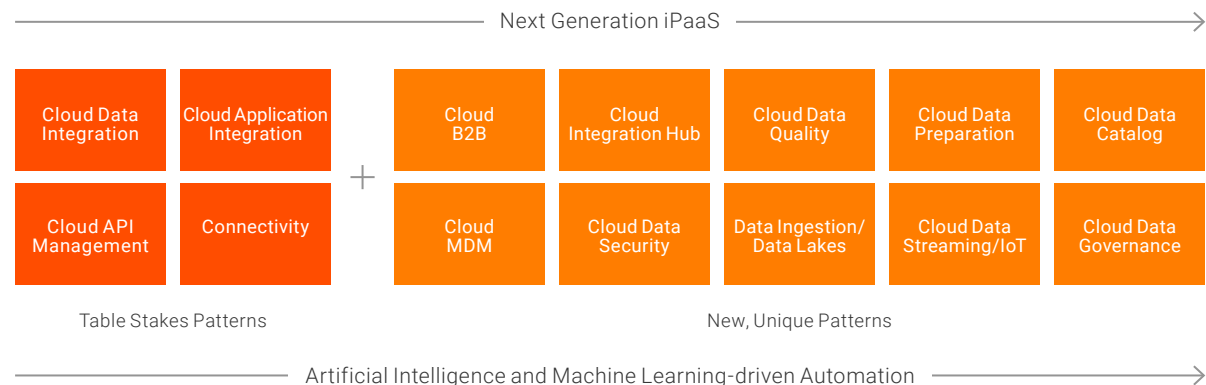
What Should a Comprehensive Cloud Management Solution Consist of?

This eBook describes a cloud data management solution for cloud data warehouses. By cloud data management, we mean more than just ETL that will address your current data integration. A true and useful data management solution supports multiple patterns of data integration such as ETL, API integration, B2B integration, streaming data, and a publish and subscribe data integration hub.

A truly useful solution should also include critical data management capabilities such as data quality, master data management, data governance and data privacy. It also must have the capability to integrate and manage data on-premises, in multiple clouds, hybrid, and big data anywhere.

In the cloud space, the term Integration Platform as a Service (iPaaS) has become a standardized concept for many years now.

But iPaaS has evolved beyond simple data integration, and now has expectations to deliver full data management capabilities as described above. Simply moving data without ensuring data quality, data governance and data privacy will not meet your business partners analytics requirements today. Analysts today spend far too much time defending their data because management does not trust it. A cloud data management solution that delivers trusted and timely data is required.



Turn Your Data Challenges into Opportunities

For many companies, a growing mountain of data is a challenge and an opportunity. More data offers the potential for more valuable insights, but only if you can quickly and easily extract those insights.

Fortunately, there's a straightforward way to reduce that data mountain and transform it into an easily managed molehill. Cloud data warehousing coupled with cloud data management enables companies to not merely overcome several common challenges, but turn them into valuable opportunities. In this section, you'll learn how you can turn these six challenges into opportunities.

1) Look for a Cloud Data Management Solution That Starts Small and Grows at Your Pace

Challenge: You need to stand up a new cloud data warehouse. The business demands it now. You probably have a data management architecture in mind, but do not have time to implement all of that in Phase I of this initiative.

Opportunity: You need a cloud data management solution that will enable you to start small, show results quickly and scale with your needs. Often the focus will be on data integration initially. The cloud data management solution you chose must enable you to add new data management capabilities at a later time—without disruption to your current environment. Plan to build incrementally towards your desired future state of cloud data management.

Challenges and Opportunities

2) Start with Data Discovery

Challenge: Your first step is to find and migrate all the relevant data to the new cloud data warehouse so that it can generate the reports and insights required. More than half the battle will be in simply discovering what data you have across the organization that might be relevant or useful. Is there data in another cloud application such as Salesforce that would be useful? Is there something that only exists on a spreadsheet on OneDrive that is relevant?

Opportunity: There is a new breed of enterprise data cataloging technology emerging that can make this part of the process far easier and less time-consuming. This technology enables both non-technical business users and IT professionals to work together to find data and establish a common understanding of its business context and meaning. Look for an enterprise data catalog that can enable discovery of any data anywhere in the organization, not just big data or cloud data.



Challenges and Opportunities

3) Have a Plan for Your Cloud Data Warehouse to Scale

Challenge: The amount of data most organizations manage is roughly doubling every two years. IDC projects that this volume of data will increase by a factor of 100 to 1.4 zettabytes by 2025.² New cloud data warehouse technologies make it economically feasible to build very large cloud data warehouses that can incorporate new, large data types.

The first challenge is to find a cloud data management solution that will enable you to ingest all of that data in the timeframes required. As the number of internal and external data sources grows, the complexity of managing the data will grow as well. You need the ability to add new data that the business requires to your cloud data warehouse. But you also have

to ensure that all of this data is trustworthy and that the data is updated in the timeframes that the business requires. That could be overnight or real-time, depending on the business needs of the cloud data warehouse.

Opportunity: Your cloud data warehouse can rapidly and easily scale up to greater data volumes as required. That is why so many organizations are moving to cloud data warehouses. Look for a cloud data management solution that can support your growing needs in terms of:

- Data volume
- Data complexity

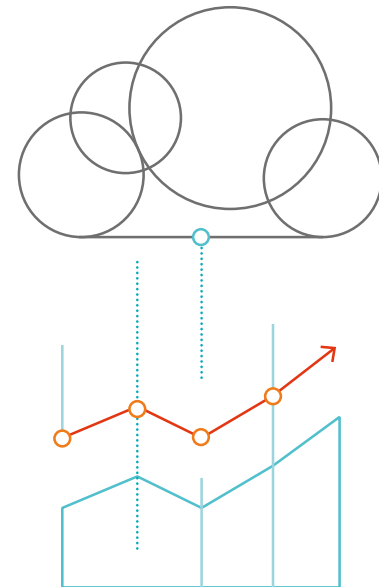
- Multiple data integration patterns: ETL, API, B2B, Data Hub
- Multiple data sources: internal and external
- Data update SLAs: periodic or real-time
- Ease of adding a new data source
- Ease of upgrading a data source from periodic batch to real-time updates

Challenges and Opportunities

4) Make Sure Your Cloud Data Warehouse Can Integrate with Any Data

Challenge: The data in your cloud data warehouse will come from a rapidly-expanding array of sources, each of which has its own data models and format. Internally the potential data sources include applications hosted on public clouds like Software as a Service (SaaS) apps, private and hybrid cloud, on-premises servers, local files, Internet of Things and machine data. Externally, data may also be coming from sources such as partner systems or services or B2B interactions. Extracting meaningful insights from the varied and fragmented sources comprehensive connectivity capabilities. Connecting and integrating data across different sources is critical to an efficient analytics project.

Opportunity: Your cloud data management solution should be able to connect with any data source—on-premises, multi-cloud, hybrid, and big data or streaming data. It must be simple and non-disruptive to add a new data source even if it requires an entirely new data integration pattern.



Challenges and Opportunities

5) Empower Stakeholders

Maximize developer productivity:

Challenge: Developers are constantly asked to “do more with less” and solve data challenges faster. But defaulting to hand-coded “point-to-point” solutions or traditional data integration strategies used for on-premises relational databases won’t work for cloud, if you plan on gathering, storing, syncing, and integrating different data types from varying sources.

Opportunity: Look for a cloud data management solution designed with developer productivity in mind. It should have a consistent user interface for every function: data integration, data quality, data governance, master data management, and data privacy. To shorten the learning curve, it should have an intuitive, graphical, zero-code development environment with reusable data management logic and assets.

To accelerate developer productivity even more, consider a modular platform powered by artificial intelligence/machine learning that can:

- Recommend relevant data sets based on the current activities of users
- Recommend and implement data prep steps intelligently
- Automatically tag data based on previous user behavior
- Onboard unstructured data while automatically discovering the data structure
- Intelligently identify sensitive and personally identifying data
- Automatically identify and recommend how to integrate new data types

Challenges and Opportunities

5) Empower Stakeholders (continued)

Empower Citizen Integrators:

Challenge: Traditionally, IT specialists have been the gatekeepers for delivering and integrating data. But, in this hypercompetitive market climate, waiting days, weeks, or months to get data and deliver integration projects is no longer feasible for fast-moving enterprises. Companies adopting cloud services constantly struggle to keep up with the ever-increasing number of integration projects, especially with tight budgets and limited resources.

Opportunity: This is the age of data democratization and self-service tools. Look for a cloud data management solution that enables non-technical people, such as business analysts, to do their own data integration, without relying on IT. This reduces the load on IT, while empowering line of business users, who understand the data context, to do ad hoc integrations themselves.

Look for a cloud data management solution that has:

- Role-appropriate user interfaces
- A graphical, zero-code environment
- Preconfigured integration templates, mappings, visual designers, wizards, and guided tools to make it easier for business users or citizen integrators to create data integrations themselves
- A complete toolbox of data management features and integration capabilities for both business and IT users
- A modular platform powered by artificial intelligence/machine learning to boost the productivity of all users

Challenges and Opportunities

6) Enable Innovation While Supporting Data Trust, Quality, and Governance

Challenge: Organizations need to implement data governance standards, facilitate change programs, monitor compliance while delivering trusted, relevant data so all projects and initiatives meet your business objectives. Finding and fixing quality issues in your data can mean the difference between business initiative success and failure.

Opportunity: Enterprise data is a strategic asset that organizations can leverage to innovate. The data that organizations derive actionable insights from needs to meet stringent quality requirements. And, with the myriad of regulatory requirements, legal requirements, and business best practices, organizations need robust tools and processes that govern the data that gets stored and analyzed.

Look for a cloud data management solution that provides automated capabilities to identify and prioritize quality issues. Organizations need to simplify data trust and quality by providing a single point solution that provides self-service capabilities across departments and applications. Furthermore, your cloud data management solution needs to support regulatory compliance and assist your data stewards throughout their governance journey.

Challenges and Opportunities

Requirements for a flexible cloud data management solution

When you're ready to start your data warehouse, look for a cloud data management solution to fuel it. Below are some important attributes to ensure that you can deliver the trusted and timely data the business requires to deliver rapid insights. Your cloud data management solution should be able to support:

Growth. Start small and grow the capabilities—as well as data volumes and sources—at your pace and with no disruption.

Agility. Accommodate data sources from existing on-premises systems, multiple clouds, big data, streaming data and partners.

Flexibility. Support multiple integration patterns in order to integrate many different data types with different SLA (service level agreement) requirements.

Productivity. Enable both technical and business users to be productive with a zero-coding environment that features AI/ML-powered intelligence to boost productivity.

Connectivity. Manage any data, support any integration pattern and enable you to meet the requirements of your business counterparts.

Trust. Ensure all data is of high quality, has been mastered to ensure a trusted, authoritative view, and is properly governed and protected.



Part Two

Case Studies



Increased customer satisfaction with a future-proof data management framework



PostNL Leverages the Power of Data to Deliver New Services

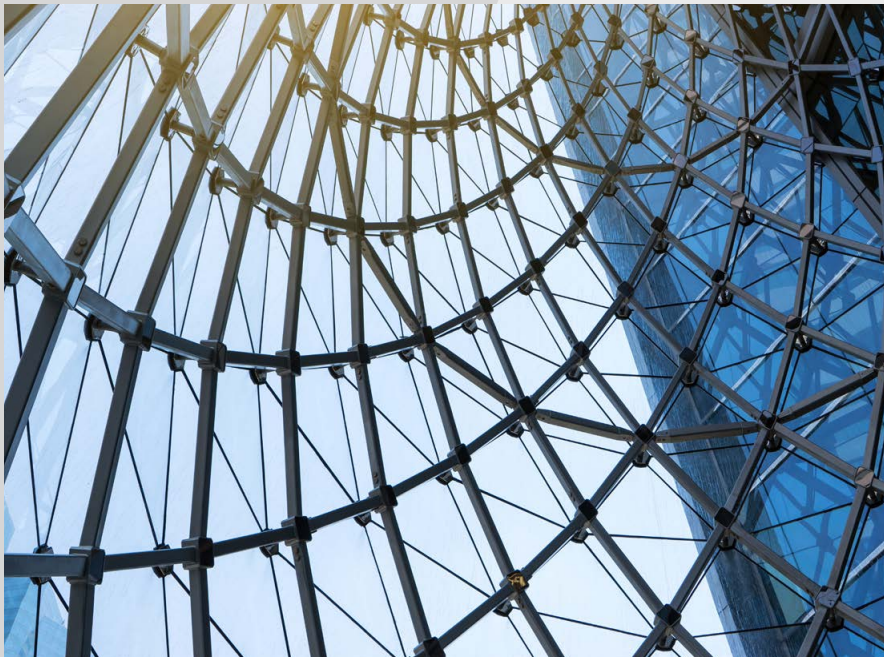
PostNL—the postal service in the Netherlands—wanted to provide new value to their customers by leveraging their data to drive analytics for smarter business decisions. They also wanted to provide real-time data services for their customers.

At the same time, they wanted to migrate their systems to the cloud, including Microsoft Azure, Amazon Web Services, and private cloud. This meant that they had to deliver improved services while managing complex migrations and a hybrid systems environment.

PostNL used a cloud data management platform to integrate their systems as they evolved and moved to the cloud. As a result, PostNL transformed from a traditional Netherlands postal delivery service to a significant distributor of packages worldwide, monetizing the value of their data, shortening the supply chain, and improving customer experience with personalized and flexible purchasing options and locations.



Leveraging data to create new services for customers



JLL Repositions Itself as a Strategic Partner

A world leader in the commercial real estate business, JLL (formerly Jones Lang LaSalle) wanted to become a strategic partner to their customers. To accomplish that, they leveraged data from many internal and external sources to deliver many new services to customers such as site selection, power and HVAC management, security management, conference room design, and management of a portfolio of properties.

By leveraging this data to offer valuable services to its customers, JLL is now perceived as a trusted strategic partner to its customers. With the new analytics foundation, JLL is differentiating itself in the competitive commercial real-estate market.



By better understanding individual members, they deliver better service

Life Time Fitness Creates a Personalized Experience

Life Time Fitness set out to use data to better understand customers, their goals and to help them to better achieve their fitness and health goals. This also had the effect of building customer intimacy and reducing churn.

The challenge was with the distributed nature of their data—the data is scattered across on-premises equipment at individual locations, at headquarters in Minneapolis, and in a Microsoft Azure SQL Data Warehouse. For example, Life Time's marketing and sales analysts need unfettered access to reliable, always-on, contextualized, and cross-referenced data from all relevant sources (including Microsoft Azure, Workday, and point-of-sale systems).

Life Time sought out a cloud data management solution that could integrate business and customer data from a variety of cloud and on-premises applications, data warehouses, and data marts for faster reporting. It was essential for them to implement a data management

architecture that provided scalability to address operational demands and flexibility to meet evolving business requirements.

Life Time has been able to recommend and deliver fitness programs and services to members to help them to achieve their personal goals. It also had the effect of building customer intimacy and has reduced customer churn.



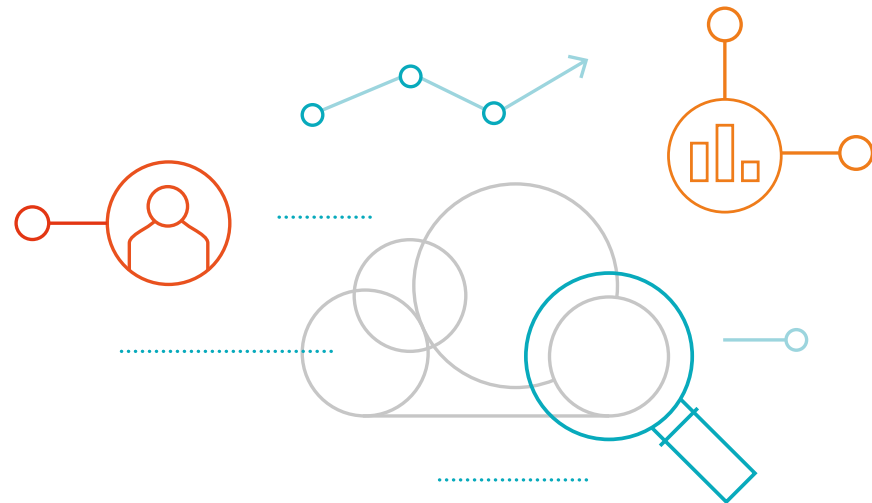
Conclusion



Delivering Value with a Cloud Data Warehouse

Cloud data warehouses offer the potential for faster insight delivery based on their agility and flexibility. It is essential to have a plan for data management that includes the cloud data warehouse, all its data sources, and its projected growth.

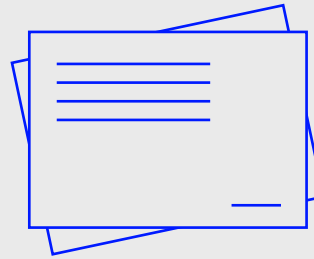
The key to unleashing the power of data and ensuring the cloud data warehouse delivers business value quickly is to select the right cloud data management solution. This solution must handle any data, any integration pattern, offer comprehensive data management capabilities and enable you to start small and scale with the needs of your business.



Further Reading

Discover how you can leverage iPaaS to power your cloud data warehouse projects to achieve successful business outcomes.

For more details about how Informatica helps deliver faster, better, secure data for all cloud data integration use cases, check out the Cloud Data Integration data sheet.



[DOWNLOAD DATA SHEET](#)

About Informatica

Digital transformation changes expectations: better service, faster delivery, with less cost. Businesses must transform to stay relevant and data holds the answers.

As the world's leader in Enterprise Cloud Data Management, we're prepared to help you intelligently lead—in any sector, category or niche. Informatica provides you with the foresight to become more agile, realize new growth opportunities or create new inventions. With 100% focus on everything data, we offer the versatility needed to succeed.

We invite you to explore all that Informatica has to offer—and unleash the power of data to drive your next intelligent disruption.

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IN19-0319-3460

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Sources

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2. **IDC White Paper**. Data Age 2025: The Evolution of Data to Life-Critical. March 2017