A Business User's Guide to the Data Warehouse Cloud

Empowering Business Professionals with Insight-Driven Decisions

EMA™

IT AND DATA MANAGEMENT

RESEARCH | INDUSTRY ANALYSIS | CONSULTING

A Business User's Guide to the Data Warehouse Cloud
Empowering Business Professionals with Insight-Driven Decisions

Table of Contents

EMA™

IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING

EXECUTIVE SUMMARY

Digital transformation and the cloud have accelerated the maturity of the cloud data warehouse market. In May 2019, SAP released SAP Data Warehouse Cloud, a cloud data warehouse platform combined with built-in business logic and a full set of capabilities to collect, analyze, share, and act on insight. EMA believes that the concept of a business-focused, unified data platform signals the move of the market away from cloud data warehousing to the data warehouse cloud. This market shift puts data and insight into the hands of business professionals without assistance from IT organizations, makes IT organizations more efficient, and accelerates time to value.

This white paper is designed to help executives and business professionals understand what to look for and expect in this intersection of cloud and data warehousing. It also provides initial guidance on how SAP Data Warehouse Cloud aligns with market and customer expectations.

THE EMERGENCE AND EVOLUTION OF CLOUD DATA WAREHOUSING

Digital transformation changes the requirements for organizations pursuing insight-driven strategies. Mobile applications, the Internet of Things, and digital customer interaction are producing new types of data at a faster pace. Audience engagement and personalization push the need for data and analytics to real time. The speed of innovation puts the rate of change into overdrive. As a result, the days of the rigid, monolithic data warehouse are gone.

A critical area of modernization is the move to the cloud. In the most recent EMA big data research, 87.4% of respondents indicated that they were adopting cloud implementation strategies. Early cloud entrants brought data warehousing to the cloud and gained market share quickly, with basic cloud functionality. The convenience of the cloud drove market adoption, but the early platforms lacked performance and functionality for the emerging data landscape.

In a second technology wave, new entrants introduced cloud data warehousing with a focus on making adoption simpler for business users. Cloud data warehouse innovations included features like automated indexing, the creation of structure-on-read, and platforms built specifically for the cloud. Second-wave technology adoption continued to accelerate, especially for use cases defined by the business and provisioned by IT.

As the market matures, the newest offerings are providing complete, integrated business solutions with built-in business logic, a full set of analytics tools, multiuse flexibility, higher performance, model agnosticism, enhanced management automation, and advanced hybrid cloud interoperability. With a massive influx of business professionals wanting access to analytics in the cloud, innovators are moving on from data warehousing in the cloud and cloud data warehousing to a new model: the data warehouse cloud, fully integrated with all the capabilities necessary to support a variety of business use cases.

WHAT BUSINESS PROFESSIONALS WANT

SaaS, mobile, and the cloud created new expectations for business professionals who are used to applications that are intuitive, boost productivity, and respond quickly. To meet these emerging expectations, insight-driven organizations need a data warehouse that provisions quickly, immediately produces value, scales up and down automatically, supports varying use cases, connects easily to new systems, and interoperates with a broad spectrum of business applications. Business users expect to be able to ask any question, get answers without delay, and share the insight easily.

There are also some basic expectations driven by ten years of cloud maturity and adoption. At a rudimentary level, forward-thinking organizations expect the following from data warehouse cloud providers…

IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING

Value Creation

Ultimately, when business professionals sign on to a data warehouse, they expect to discover insight and create value quickly. They expect a rapid return on their investment. Since most organizations measure value creation in terms of time, money, resources, and speed of innovation, any new insight must be easily transferrable to decision-makers and business sponsors.

Context and relevance are the keys to accelerating business value. Business users are looking for data and insight that are specifically relevant to their focus area. Data out of context does not help them make better decisions, and they do not have time to forage through irrelevant data. If users do not see value quickly, they are likely to search for another CDW or DWC option.

Simplicity

Mobile and internet usage have created a culture of simplicity. To meet business expectations, the data warehouse cloud must be easy to use from the point of customer arrival to the end of the usage lifecycle. This includes registration, payment, user interface, data loading, data preparation, analysis, and data sharing. The credit card payment analogy works to define the kind of simplicity required—everything should be as simple as an online payment.

Simplicity is most frequently measured by intuition and the number of clicks required. All business user interfaces should be simple to navigate and intuitive to use. Data warehouse cloud providers must reduce options and streamline clickstreams to capture and retain customers. Since the effort to move to a new provider is minimal, failure to meet simplicity expectations will result in early customer attrition.

Productivity

A primary reason for moving to a data warehouse cloud is to increase productivity. The expectation is that global access and simplicity will make technical and business users more productive. Productivity gains can be expected with high-performance platforms. The productivity equation is simple—when data is loaded quickly, immediately available for analysis, and answers come back without delay, productivity increases. A second productivity contributor is built-in business logic. When the data warehouse cloud includes semantics, data mapping, reports, dashboards, and KPIs, users can potentially gain insight on day one and improve the value of insight quickly as they explore results.

Performance

The emergence of digital everything drives the redefinition of data warehouse cloud performance. Performance was traditionally measured by a set of queries run on a static set of data, with some consideration of load times. Modern use cases have altered the definition of performance for business users. High-performance, in-memory platforms remove barriers and allow users to freely ask questions driven by the business. From a technical perspective, high-performance platforms are not constrained by modern use cases like complex queries, concurrent queries, or large datasets.

Elasticity

Elasticity is the ability to scale up and down, quickly and simply, based on the needs of the business. In the early days of cloud data warehousing, elasticity was focused almost entirely on data volumes. The modern data warehouse cloud must be elastic for shifts in many different dimensions, including data volumes, number of users, new datasets, and query volume and complexity. Without multidimensional elasticity, customers growing their data warehouse cloud presence will begin to search for new offerings.

Security

Cloud security concerns were replaced by cloud security that often surpasses on-premises security for many organizations. Based on consumer demands and regulatory compliance, cloud data warehouses have been required to meet stringent privacy and security standards since their inception. Since the data warehouse cloud provides unified access to raw data, business intelligence, and analytics, there is an opportunity to raise standards for high-need markets like healthcare and financial services.

IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING

Cost

In cloud data warehousing, cost was defined by containment. Cost in the cloud must be tied to real usage with accurate forecasting. Organizations moving to the cloud expect pricing commensurate with usage at least down the hour. The move to the data warehouse cloud shifts the cost paradigm to value-based pricing. Customers that are used to paying for compute and storage resources will need to think more about value creation based on additional tooling in the unified platform and business logic built into the platform. Data warehouse cloud costs must have affordable entry points and should demonstrate the combined value of the offering.

A CLOUD DESIGNED FOR BUSINESS USER INSIGHT

The previous generations of cloud data warehouses were built for data management. The data warehouse cloud is built to help business professionals make better decisions in a single, unified platform. The move from a single-purpose cloud offering to a multiuse cloud offering changes the discussion from features and functions to value creation. The shift from a technology focus to a business focus marks a maturity in the data warehouse cloud market that will surpass value created by similar on-premises deployments in the last decade.

The Acceleration of Business Value Creation

Value creation is a base-level requirement for cloud data warehousing. In the move to the data warehouse cloud, there must be an acceleration of business value creation. In fact, the maturing of the market is evident as vendors begin to build DWCs that have a full set of business logic built into the solution from day one.

Acceleration requires the removal of activities that typically consume time and resources in the value creation process. For example, deep integration with business applications makes it easier to load data into the data warehouse and it makes insight more accessible to the business application once the data has been analyzed. Additionally, since most business users do not have expertise to prepare data or build dashboards, adding prebuilt dashboards eliminates time from the lengthy exchange that normally takes place between the business and IT.

The Advantage of Complete Tooling

Early and second-wave entrants into cloud data warehousing provided complete analytics and data management toolsets via partnerships and online marketplaces. While this approach provided all the functionality necessary to process and analyze data, it was cumbersome. It required additional steps to be taken by the business user, and in many cases, it required skillsets not common among the business. It pushed the responsibility back to IT teams.

The hallmark of the data warehouse cloud is a full set of capabilities for data management and analytics. In the DWC, partner offerings can be used, but most of the necessary functionality is already built into a single offering, usable by tech-savvy business professionals. Users can load, blend, cleanse, and prepare data for any kind of analytics they want to perform. Business intelligence capabilities include reporting, dashboards, advanced analytics, and machine learning. The speed at which business users can discover insight and make decisions accelerates in the data warehouse cloud.

The Agility to Change Direction Quickly

The traditional data warehouse and the cloud data warehouse were both built as technical solutions to address the need to understand a historical perspective in order to predict what might happen in the future. This required processing of the data for quality and consistency, along with structuring the data for analysis across many different dimensions.

IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING

The data warehouse cloud is a business solution built to help business specialists analyze data based on their understanding of a very specific business domain like sales, marketing, logistics, manufacturing, or human resources. The data warehouse cloud provides a domain-specific layer with business terminology to abstract away the complexity of the underlying data. Along with business area specificity, new entrants are already adding industry-specific business logic, as well.

The separation of business logic and data in the data warehouse cloud enables business users to make changes quickly as markets and business ecosystems evolve. Users are able to ask new questions, add new data, and discover new insights without having to reengineer the data themselves, and without intervention from IT.

The Ability to Connect Insight to Action

Much of the cloud data warehousing market flourished in terms of data connection and analysis, but struggled to operationalize decisions. Insight without action is meaningless. The data warehouse cloud provides all the necessary insight discovery capabilities and, in addition, caters to the data appetites of APIs, applications, and devices.

These new avenues of action represent ways in which data investments can be transformed into valuable decisions. In the era of digital everything, the ability to turn insight into action and to respond in near-real time create a strong competitive advantage. The data warehouse cloud must be built with modern digital use cases in mind.

SAP DATA WAREHOUSE CLOUD

In May 2019, SAP released SAP Data Warehouse Cloud, a cloud data warehouse platform combined with built-in business logic and a full set of capabilities to collect, analyze, share, and act on insight. In a review of the SAP offering, EMA recognizes that SAP Data Warehouse Cloud meets or exceeds all the requirements for a data warehouse cloud.

A Data Warehouse for Business Users

SAP Data Warehouse Cloud starts with the user in mind. SAP begins with their understanding of different user personas based on gradient levels of technical expertise and different business focus areas. One unified set of data, along with predefined views and insights, can easily be provisioned specifically for marketing, sales, finance, or human resources users. Within a provisioned environment, additional workspace can be provisioned based on use cases for planning, predicting, partnering, or storytelling. The complexity of underlying data is abstracted so users can interact with data and insights without help from IT.

In order to achieve a significant depth of business focus, SAP infused their offering with built-in business logic to accelerate time to value. Business logic includes domain and industry-specific reports, dashboards, KPIs, and analytic models. Business insight is immediately available. For unique perspectives, users can blend in their own data and simply build their own views, alerts, or dashboards.

Connecting Insight to Action

SAP Data Warehouse Cloud also includes an API framework that allows for the consumption of valuable insight by SAP cloud and on-premises applications, along with third-party applications. With more than 170 advanced connectors in the SAP Cloud Elements API Integration Platform, customers can map insight to modern digital use cases, like real-time customer interaction or logistics recommendation engines. The combination of a rich API environment and pre-integration with the SAP Analytics Cloud gives customers what they need to connect insight to action.

IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING

A Complete Set of Analytic Capabilities

To simplify the consumption of data and use of insight, SAP Data Warehouse Cloud is fully integrated with SAP Analytics Cloud. The combination of data warehousing and analytics provides customers with a unified data platform and speeds time to value with four powerful capabilities:

1. Business performance – Tracking business performance is a primary use case for data warehousing. SAP provides a KPI builder with predefined KPIs for specific business areas and industries.

2. Business intelligence and analytics – Data warehouse users also need to understand what happened, what is happening, why it is happening, and what is going to happen in the future. SAP provides full business intelligence and analytics capabilities already preconfigured with business logic.

3. Analytic mart management – Many of the projects launched in the cloud are individual, departmental, or divisional. SAP provides tools to provision and manage marts that are designed for very targeted business needs.

4. Master data management – Having a consistent definition and regular usage of data that deals with customers and products can positively affect the accuracy of insight produced in the data warehouse. SAP built both product and customer data governance into the platform.

Exceeding Expectations for the Cloud

To meet and exceed customer cloud expectations, SAP combines SAP HANA with their newly-developed container technology, called Spaces. SAP Spaces separates data spaces from the spaces that represent the business in common terms. The separation of spaces makes it easy to replicate workspaces for similar users, or to provision new workspaces for different business requirements. SAP Space technology also makes it simple to optimize the use of spaces; enforce governance via security, auditing, and compliance; and easily connect to third-party tools, platforms, and applications. SAP meets all of the following requirements for their DWC.

Simplicity
SAP Data Warehouse Cloud exceeds all requirements for cloud simplicity with several layers of business representation built into the platform. By offering access to data extractors, data blending, and business intelligence within a unified platform, users do not have to struggle with integration of third-party tools.

Elasticity
SAP Data Warehouse Cloud is built to scale up quickly and without limits, and to scale down when needed to avoid unnecessary cost. Because SAP separates the data from the business logic, it is simple and cost-effective to scale on many different dimensions including more data, more queries, more complex queries, concurrent users, or more users.

Performance
SAP Data Warehouse Cloud is built on SAP HANA, an in-memory database known for performance. Users can expect the multidimensional performance necessary for everything from individual to enterprise use of data and analytics in the cloud. This includes performance for single queries, complex queries, and concurrent users. With hyper-scaler capabilities built into the SAP platform, performance should scale for growing analytics programs.

Security
SAP Data Warehouse Cloud comes with the security expected from a company with years of experience with highly sensitive data. SAP's security protocols include secure connectivity and role-based security for simplified management. The platform also provides data masking, anonymization, and encryption for data both at rest and in motion. Users can expect true, cloud-class security.

IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING

Cost

While pricing has not been published, the SAP pricing strategy is to be aggressively competitive with simplified packaging that is clear and predicable. As a unified platform, SAP Data Warehouse Cloud should exceed the cost for value expected from cloud data platforms.

EMA PERSPECTIVES

The arrival of the data warehouse cloud puts the legacy cloud data warehousing market on notice. Data warehousing is here to stay, but IT-focused cloud data warehousing vendors will be forced to provide more business-focused capabilities. EMA expects this trend toward business value creation to continue aggressively over the next five years.

EMA recommends that organizations with existing cloud data warehouse subscriptions consider a move toward the data warehouse cloud. EMA also highly recommends that SAP customers who have invested in other cloud data warehouse solutions look closely at the potential value they would receive from a business-focused, unified data platform with SAP. For new projects and new customers looking for a cloud data warehouse or cloud analytic mart solution, SAP Data Warehouse Cloud should be in the top three of any consideration list.

ABOUT SAP

SAP is the market leader in enterprise application software, helping companies of all sizes and in all industries run at their best: 77% of the world's transaction revenue touches an SAP system. Our machine learning, Internet of Things (IoT), and advanced analytics technologies help turn customers' businesses into intelligent enterprises. Our end-to-end suite of applications and services enables our customers to operate profitably, adapt continuously, and make a difference. With a global network of customers, partners, employees, and thought leaders, SAP helps the world run better and improves people's lives.

IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING

IT AND DATA MANAGEMENT
RESEARCH | INDUSTRY ANALYSIS | CONSULTING