

# Data Integration Platform

Qlik's Vision and Strategy

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## SUMMARY

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- This statement of direction provides an overview of Qlik's strategy and direction for our newly created Data Integration Platform direction for our Data Integration Platform which helps organizations move, transform, prepare and catalog data assets for all kinds of uses across an enterprise, accelerating data availability for cloud and analytics.
- It sets out our vision for the Qlik (formally Attunity) Replicate®, Qlik (formally Attunity) Compose and Qlik Data Catalyst™ products that combine to form this data platform.
- It addresses our go-to-market direction and the customer use cases we are focusing on.
- Describes our product roadmap for the Data Integration Platform and our future investments over the near and long term.

## INTRODUCTION

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After completing the acquisition of Attunity, Qlik has integrated our teams and built a product strategy that sets Qlik apart in the data and analytics market. Consistent with our vision for the 3rd generation of business intelligence and analytics, we believe a modern data integration strategy creates the foundation for an enterprise analytics strategy that drives insights, improves decision-making and transforms organizations.

## Strategic Direction

Qlik is uniquely able to deliver end-to-end, real-time data integration and analytics solutions that help organizations access and transform all their data into value.

In a competitive environment where trusted, real time enterprise data is crucial to success, organizations are looking for a more holistic and agile approach to data integration and analytics. Qlik is now able to provide customers with a complete enterprise data integration platform to transform their raw data into a governed, analytics-aware information resource. This platform enables the movement of data in real-time across multiple cloud environments and data lakes along with a secure, enterprise-scale catalog of all the data your organization has available for analytics to provide a comprehensive data integration platform that can enable modern data architectures and deliver on the promise of DataOps for Analytics; directly supporting the markets shift to cloud and real-time analytics.

### DataOps and Analytics Strategy

“Attunity’s agile and real-time data integration capabilities give Qlik a unique platform that perfectly aligns with an enterprise’s DataOps and analytics strategy. The ability to help customers better automate and manage the delivery of trusted data for insights will help them lead with data to solve their most challenging problems.”

Mike Capone, CEO, Qlik

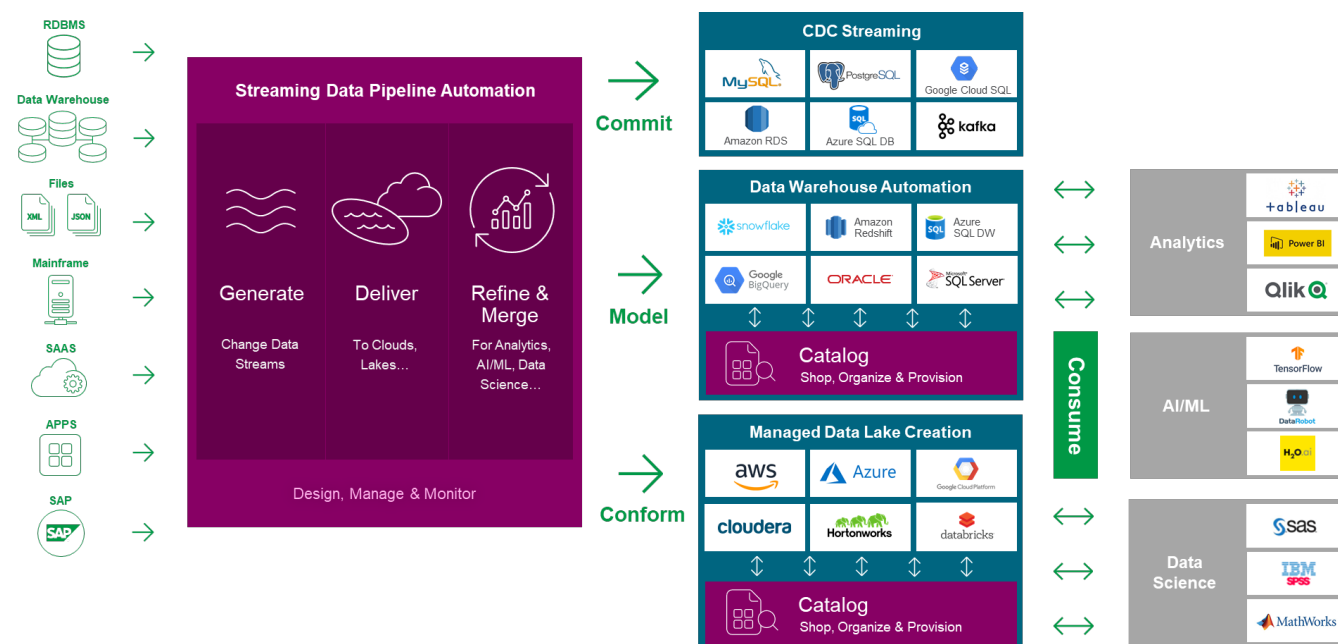
As a result, our ability to support a complete, self-service and agile end-to-end data and analytics supply chain provides further evidence of our commitment to helping customers transform their businesses and lead with data. While optimizing this experience for customers using our analytics solutions, we are committed to ensuring that our data integration platform continue to support and integrate with any and all of the market’s leading cloud, data, analytics and BI environments. We will continue to ensure product alignment with Attunity’s strategic technology partnerships such as Microsoft, AWS, Google, Cloudera, and Snowflake and deliver optimized integration and joint value proposition to our mutual customers.

## Emergence of DataOps for Analytics

As organizations look to modernize their analytics environments to enable digital transformation, they are embracing a DataOps approach, which requires IT and business alignment along with a modern data strategy and architecture. Qlik's Data Integration Platform accelerates the discovery and availability of analytics-ready data by automating real-time data streaming, refinement, cataloging and publishing. It enables DataOps and drives agility in the analytics process through automated data pipelines that stream from transactional systems, warehouses, or data lakes to create actionable data on-demand. Together, the products will enable transformative capabilities including:

- **Real-Time Data for Faster, Better Insights** - Using Change Data Capture technology, Qlik's Data Integration Platform can intelligently deliver data from a wide range of systems to ensure users are always analyzing the latest information.
- **Agile Data Delivery** - To fulfill ever-changing business needs and meet the demand for increasingly diverse data sets, Qlik's Data Integration Platform automates the creation of analytics-ready data pipelines to empower users to operate at the speed of business across multi-cloud and hybrid deployment options.
- **Trusted, Enterprise-Ready Data** - Business users need to quickly find and be confident that the data they analyze is accurate, safe and verifiable. Qlik's Data Integration Platform includes a robust set of enterprise-scale quality, governance and collaboration capabilities to streamline DataOps processes, making sure that all data is completely validated, protected and secured from data ingest through delivery.

# Our Solutions Today



Qlik's Data Integration Platform supports the following offerings and underlying products:

## Offerings

### Change Data Capture (CDC) Streaming

Qlik Data Integration (QDI) for CDC Streaming provides a simple, real-time and universal solution for converting production databases to live data streams to support modern analytics and microservices. We enable architects and DBAs to automatically produce real-time transaction streams into Kafka, Confluent, Amazon Kinesis and Azure Event Hub. You can flexibly support one-to-many publication, automated data type mapping and comprehensive metadata integration, all with no hand coding. This enables streaming analytics, streaming ingestion to data lakes and other Big Data end platforms, and integration of legacy systems with microservices environments.

## **Data Warehouse Automation**

The most significant inefficiency of traditional data warehousing is the requirement to design EDW models that match future queries before a warehouse is created. This is especially painful in today's world of real-time decision making and rapidly changing business requirements. As a result, EDW teams just can't keep up. Qlik Data Integration (QDI) solutions for Data Warehouse Automation allows them to quickly design, build, deploy, manage and catalog purpose-built Data Warehouses (especially cloud based) faster than traditional solutions. Consequently, data engineers can meet or exceed the demands for analytics-ready data marts at the speed of change and help the business capitalize on data-driven decisions.

## **Data Lake Creation**

Qlik Data Integration (QDI) for Data Lake Creation helps enterprises deliver a return on their data lake investment by continuously providing accurate, timely and trusted transactional data sets for business analytics. Unlike other solutions, QDI for Data Lakes provides a multi-zone architecture with full historical and operational data store, supports virtually all industry standard data sources and targets, automates data flow from initial ingest to final consumption, profiles & catalogs the content of the data lake, and requires no hand coding or Hadoop scripting expertise. Data engineers can now meet growing demands for analytics-ready data sets in real time because QDI for Data Lake Creation makes transactional data available at the speed of change

## **Products**

### **Qlik Replicate**

Qlik Replicate is our data replication product that moves data at high speed from data sources to targets. Featuring our unique Change Data Capture (CDC) technology, it keeps data up to date across locations in near real-time, delivering high performance at scale without taxing source systems. Qlik Replicate is managed through a simple user interface that completely automates end-to-end data replication. With streamlined and agentless configuration, administrators and data architects can easily set up, control, and monitor bulk loads and real-time updates. Using Qlik Replicate, organizations can ensure updated data, whether data lakes or cloud-native data warehouses, with visibility and centralized control of replication across distributed, hybrid environments. Qlik Replicate is offered on a subscription basis.

## **Qlik Compose**

Qlik Compose automates the design, implementation and updates of data lakes, data warehouses and data marts. It minimizes manual, error-prone data warehouse design processes by automating data modeling, ETL generation, and workflow. Using Qlik Compose, data architects and project managers can speed analytics projects, optimize process and reduce risk. There are two variations of the product. Qlik Compose for Data Warehouses simplifies the ETL process by automating the manual and repetitive aspects of data warehouse design, development, data loading, deployment, and updates. Qlik Compose for Data Lakes automates data pipeline creation and is your fastest route to “analytics-ready” data. Qlik Compose is offered on a subscription basis.

## **Qlik Enterprise Manager™**

Qlik Enterprise Manager (formerly Attunity Enterprise Manager) serves as a command center to configure, execute and monitor replication across the enterprise. Organizations can design, execute, monitor and analyze Qlik Replicate tasks across large and growing environments. Customers can efficiently manage high-scale data lake consolidation across dozens of Qlik Replicate servers and hundreds of end points, to meet and exceed business SLAs. Qlik Enterprise Manager helps simplify enterprise-wide management tasks by integrating with larger IT systems, to improve security and compliance.

## **Qlik Gold Client™**

Qlik Gold Client (formerly Attunity Gold Client) allows SAP users to replicate and move select data from and between SAP applications and data warehouses, by creating and updating non-production systems. It provides the most practical and flexible approach to selecting and replicating data based on any criteria and controlling the amount of data being copied – from individual transactions to larger volumes.

## **Qlik Data Catalyst**

Qlik Data Catalyst offers a secure, enterprise-scale repository and catalog of all the data assets your business has available for analytics. This gives data consumers a single, go-to destination to find, understand, and gain insights from all enterprise data sources. It includes data preparation and



metadata tools that streamline the transformation of raw data into analytics-ready assets, and a Smart Data Catalog that helps people easily discover and choose whatever data they need. Built on a platform with hardened data security and governance, Qlik Data Catalyst can be easily integrated with other data management tools for enterprise-grade scalability, reliability, and performance. Qlik Data Catalyst can be deployed on premises or in the cloud, and includes publishing directly to Qlik Sense and other analytics products. It is offered on a subscription basis.

## Offerings vs. Products

	Qlik Replicate	Qlik Compose for Data Warehouse	Qlik Compose for Data Lakes	Qlik Data Catalyst
<i>Change Data Capture (CDC) Streaming</i>	X			
<i>Data Warehouse Automation</i>	X	X		X
<i>Data Lake Creation</i>	X		X	X

## Customer Use Cases

Our data integration platform helps customers move, transform, prepare and catalog data assets for a broad range of uses across an enterprise, many of which will be BI and analytics use cases. As we look to define our short- and long-term product strategy and roadmap, and ensure we identify the right areas that will drive the most value for our customers we have identified a series of customer-centric use cases that will guide our investments. We segment these use cases in two categories: those which our data integration platform can support as a standalone platform irrespective of the BI and analytics solution being used, and those which provide additional value across our data and analytics supply chain with additional integration with Qlik's own analytics solutions.

## Data Integration Platform Use Cases

The following represent a sample of the use cases that are possible by using Qlik's data integration products either "out-of-the-box" or through implementation and configuration. In line with our strategy and commitment to an open data integration platform, these use cases are primarily agnostic of the BI and analytics solutions our customers are using.

- 1. Analytics-Ready Data Lake:** Building cloud/hybrid data lakes in support of an analytics strategy. Driving more efficiency and automation in this process enabling the streaming of a data pipeline at scale, in real-time and in an agile fashion, delivering analytic-ready and derivative data sets that can be accessed through a business-oriented data catalog.
- 2. Cloud Data Warehousing:** Support modernization initiatives to move to the cloud in order to gain agility and cost-efficiencies, reducing on premise data center/hardware costs while optimizing data access. Includes building new data warehouses and marts at either an enterprise or line of business level, leveraging modern technology at scale, in an efficient (automated) and agile way. These data warehouses provide the real-time data foundation in support of an analytics strategy.
- 3. Generating Data Streams for Micro-Services and Analytics:** Enabling architectures for the development of cloud-based microservices and streaming analytics in platforms such as Kafka<sup>®</sup> that require real-time streaming data feeds from legacy applications, with minimal to no impact and overhead on these applications.
- 4. SAP<sup>®</sup> Analytics and Data Management:** Unlock the value and liberate SAP data in support of Data Lake and Data Warehousing use cases. In addition, streamline test data management by moving SAP data from one SAP system to another.
- 5. Mainframe Analytics and Data Offload:** Unlock and liberate mainframe data in support of modernization, analytics and micro-services initiatives. Further, enable the provision of mainframe data in support of passing data to a streaming platform.
- 6. Support Line of Business Analysts:** Supporting business analysts in analyzing data to make rapid and informed business decisions, increasing the ease at which they can find and trust data through the cataloging and profiling of enterprise data assets. Further support them in understanding the data and building derivative data models to provision to a downstream analytics tool.

## Qlik Centric Data & Analytics Use Cases

These represent three example use cases that will add additional value to our customers as we deliver additional integration between our Data Integration Platform and Qlik's analytics solutions.

- 1. Real-Time Analytics with Qlik Sense®:** Support the creation of near real-time dashboards and analytics in Qlik Sense. Create the ability to explore data as events occur but without having queries impact the underlying source data.
- 2. Qlik Sense Enterprise in the Cloud:** Provide the mechanism so that on-premise data can be analyzed using Qlik Sense Enterprise in the cloud whether that be Qlik's software as a service offering (Qlik Sense Business), or in the customers own Qlik Sense environment on a cloud platform, for example AWS®, Azure®, or Google Cloud® Platform.
- 3. Big Data Analytics:** Create scalable data pipelines that feed big data platforms and refresh the Qlik Big Data Index™. Perform interactive analytics at scale with the most current data.

## Product Roadmap

Based on these use cases and our strategic vision to Lead with Data we have outlined the following planned priorities for our near- and longer-term roadmap. It is important to note that Qlik's Data Integration Platform products offer capabilities that are complimentary and can be used together today to solve a broader scope of data integration initiatives. Each product in the portfolio will continue forward with their independent roadmaps, however these roadmaps will now contain new components to better support the Data Integration Platform use cases listed above.

### Near-Term Roadmaps

Planned innovations include:

#### Qlik Replicate:

- Continue to release new versions in agile method to expand market leadership and accommodate enterprise customer needs.
- Add an IBM VSAM agentless source end point that will support CDC for CICS and batch environments

- Continue focus on supporting a wide variety of cloud-based data and analytic services across multi-cloud environments including Snowflake for Google, Databricks for AWS, Google PubSUB and Kafka Cloud platforms.
- Expanded support for more source and target endpoints including SAP Hana applications, IBM Integrated Analytics System, Cloudera 7.0 and Oracle & SQL 2019 , SaaS applications such as ServiceNow, Success and WorkDay , and NoSQL databases .
- Support for source partitioned operations within Oracle Enterprise deployments and error recoverability for CDC batched optimized apply.
- Continue to deliver enhancements for high throughput, low impact and low latency.

#### **Qlik Compose for Data Warehouse:**

- Expanded support for data warehouse targets including Google® BigQuery™ , Oracle 19c, SQL Server 2019, Windows 2019, and incremental data marts
- The capability to back-date historical data, work with external models & mappings and provide physical model management.
- Continue to optimize end-to-end performance for cloud data warehouses development and continuous refresh including parallel cloud loading and unloading.
- Improved control and flexibility of pipeline stages and warehouse tables.

#### **Qlik Compose for Data Lakes:**

- Continue to expand support across a wide variety of cloud-based data and analytic services including Azure Synapse, Cloudera 6.3, HDInsight 4.0, Windows 2019 and CDP.

#### **Qlik Enterprise Manager:**

- Extend capabilities to include management of Qlik Compose for Data Warehouse including the UIs and APIs
- Provide SAML authentication for UI & end points and extend the current APIs to cover complete operation and control via programable user interfaces (REST, .NET and Python).
- Integrate Qlik Enterprise Manager with Qlik Data Catalyst.

**Qlik Gold Client:**

- Continue to support new versions of ABAP-based SAP components including ECC, HR, CRM, SCM, SRM, GTS, EWM, TM, BW and Business Suite on HANA.

**Qlik Data Catalyst:**

- Enhance cataloging and management of Qlik QVD files.
- Support end-to-end data lineage tracking from data sources through Qlik Sense applications
- Support end-to-end data lineage tracking from Qlik Replicate related data sources through Qlik Enterprise Manager
- An improved framework for supporting multiple processing and storage platforms
- More publishing options to other platforms
- SaaS based Cloud Data Catalog that operates in the QCS environment
- Catalog integration with Qlik Cognitive Engine
- Automated discovery with Replicate and Compose managed objects
- Continued enhancements to search and collaboration capabilities, richer information and personalization of views in the Catalog.
- Usability, workflow and management improvements
- Simplified installation and improved functional parity between the single node and multi-node deployment options.

## Longer-Term Roadmap

The longer-term roadmap for our Data Integration Platform focuses on delivering the market leading capability to automate the data and analytics supply chain enabling organizations to realize their DataOps and analytics strategy. This is planned to include:

- Tightly integrate formally Attunity products with Qlik Data Catalyst as well as continuing to integrate both products with the rest of the Qlik portfolio.
- Extend the current APIs to cover complete operation and control delivered via programable user interfaces (REST, .NET and Python)
- Introduction of integrated infrastructure, functionality and a world-class user experience across products that focuses on ease of use, productivity and intuitive workflows.
- Continue to improve flexibility, scalability and performance to ensure the platform is designed for large scale digital transformation.
- Continued optimization of data source and target support through our close technical and commercial relationships with cloud, data warehouse and data management partners.
- Reduced total cost of ownership while maintaining market leading deployment and consumption options.
- Introduction of a SaaS (iPaaS) based offering for data integration.
- Embedding shopping for data experience in Qlik Cloud Services and other Qlik BI offerings.
- Leveraging rich catalog metadata to power Qlik Cognitive Engine

## Legal Disclaimer

Qlik roadmaps provide a general overview of our anticipated product direction as of the date hereof. Qlik undertakes no intention or obligation to update or revise any forward-looking statements contained herein, whether as a result of new information, future events or otherwise.

The information contained in Qlik roadmaps is the proprietary information of Qlik and is not to be used for any reason other than to provide our customers, prospective customers, partners and strategic partners with a general overview of our anticipated future offerings. Our roadmaps are not a commitment, promise or other obligation on the part of Qlik to deliver any particular code or functionality. Furthermore, Qlik makes no commitment that any future functionality may be made available as part of maintenance and support.

Roadmap information should not be relied on in making a purchasing decision, as the development, release, and timing of any features or functionality described for Qlik's products remains at our sole discretion.



### About Qlik

Qlik's vision is a data-literate world, one where everyone can use data to improve decision-making and solve their most challenging problems. Only Qlik offers end-to-end, real-time data integration and analytics solutions that help organizations access and transform all their data into value. Qlik helps companies lead with data to see more deeply into customer behavior, reinvent business processes, discover new revenue streams, and balance risk and reward. Qlik does business in more than 100 countries and serves over 50,000 customers around the world.

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