WHITE PAPER

Data Warehousing Accelerated

Modernizing Your Legacy Infrastructure

INTRODUCTION

Data warehousing projects can deliver tremendous business value, so why so often do they fall short of expectations? You know the challenges: Taking too long to deliver, costing too much to build and maintain, unable to keep pace with changing business requirements. All these reasons frustrate your business teams and fuel the perception that IT can't deliver. Their work-around is to pursue self-service, business intelligence (BI) options or build their own. But both choices – self-service and building what often turns out to be disconnected data hubs – end up contributing to bigger maintenance issues, inconsistent data across hubs, and a lack of governance. How can your enterprise overcome these data warehousing issues?

For years, IT teams like yours – with data architects, DBAs, data warehouse admins, and integration developers – have chosen a traditional approach to designing, building, and operating data warehouses. They've employed a variety of database, modeling, integration and extract transform load (ETL) tools to collect, prepare, and distribute information to business analysts. There's a better way now. And it uses Qlik Compose™ for Data Warehouses.

A data warehouse automation solution for designing, building, deploying, and operating agile data warehouses, data marts and data hubs. Our Qlik Compose solution, formerly Attunity Compose, brings automation to data warehouse processes and replaces manually-coded, time-consuming, and error-prone tasks. It reduces the time and the resources required to manage the data warehouse lifecycle while accelerating business time-to-value for your data warehouse project. Accelerating data delivery with an architecture that spans both on-premises and cloud environments.

What You Have Now:
Traditional Data Warehouse Tools & Process Steps

Both tools and processes can fall short when it comes to meeting your project requirements. Consider what's needed – time, cost, and resources – to design, build, and maintain the traditional data warehouse in each project phase:

Requirements Gathering

Can be done on paper, in PowerPoint, or via a sample report, but requires a manual method to transform it into an artifact suitable for use in the data warehouse design phase.

Data Warehouse Design

Typically accomplished in a logical or physical modeling tool (such as ERWin) and based on what was the then-current understanding of business requirements. Decisions about data models and methods – whether to employ a Kimball, Inmon, or Data Vault approach – must be made at the start.

Data Warehouse Build

Requires SQL programming to build the physical warehouse schema in the database from the logical design. All primary, foreign, and surrogate key management and relationships between business entities and attributes must be specified and validated.

Data Integration

Investment includes significant manual SQL and/or ETL tool coding to access source data, transform it to a common format, and load source data into the data warehouse. There's manual development needed, too, for all business rule definition, metadata management, error handling, suspense processing, project documentation, logging, and audit trail activities. This is the most complicated and time-consuming step in the process. Companies report spending more than 50% of the total data warehouse design and build time creating and validating data integration and ETL.

Testing

Because there are so many ETL and SQL programs written, a team needs to validate and test all processing jobs and calculations that take place during design and data integration steps.

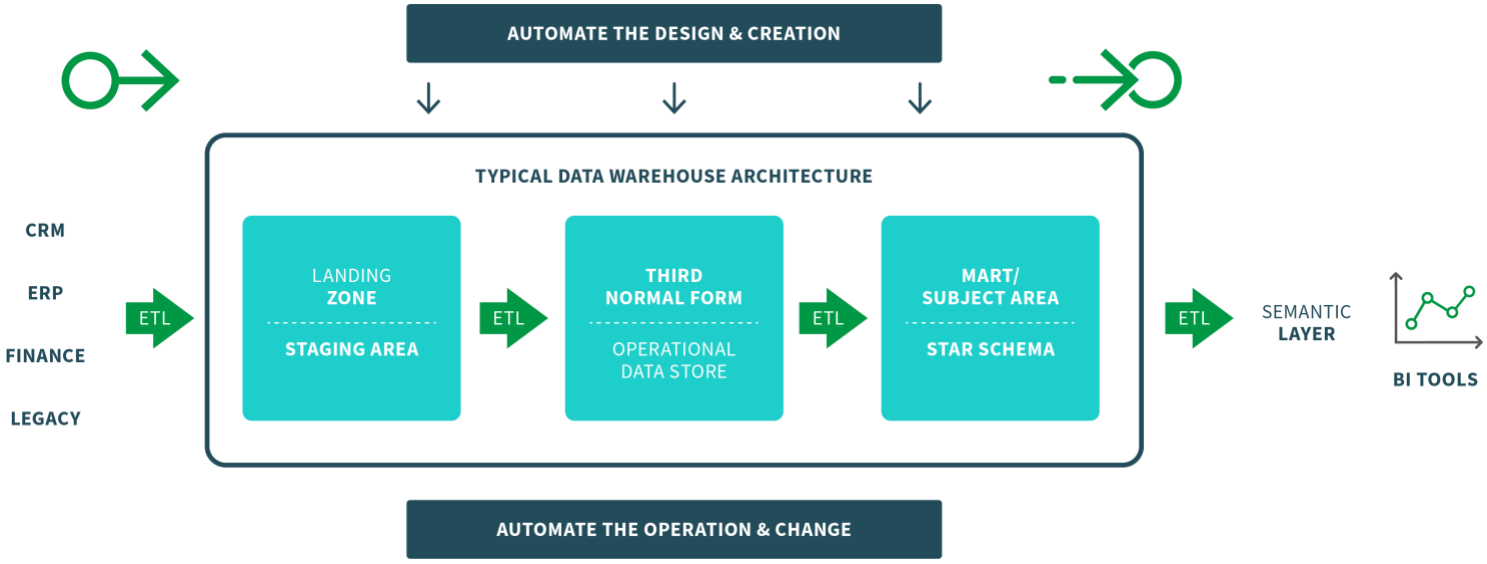
Release to Production

Moving from sandbox, to development, to user acceptance, and to production often requires many migration steps across multiple environments, along with necessary testing to ensure nothing is broken.

Change management

Once in production, the data warehouse team must constantly adjust and enhance the entire data warehouse environment for new business requirements and data source systems. Plus, they must check that software tools used in the process stay compatible to ensure a controlled, working system. Because the relationships among data entities and the physical tables in the data warehouse are typically hard-coded in traditional ETL-based systems, it's difficult to identify what needs to be changed and to implement those changes in many places when a new data source or new entity is required.

Depending on project scope, this outlined process can take more than a year and cost millions of dollars to complete.



In a traditional data warehouse architecture, a significant amount of hand-coded and hard-coded programs make for a brittle infra- structure that's expensive to build and operate, challenging the accommodation of changing requirements in a timely manner

What You Want: Agile Data Warehouse Automation

Fortunately, there are significantly simpler steps and tools available to complete the full process. Your IT team can design, build, deploy, and operate a data warehouse faster, more efficiently, and at lower cost using agile data warehouse (DW) automation.

Agile Data Warehouse Automation is a Win for Customers

Activity	Traditional	DW Automation	DWA Advantage
Build a data mart	10-14 days	1 day	10-14x faster
Time spent ETL coding	45 days	2 days	95% less time
Ability to make changes	2x per year	12x per year	6x more frequent
Time from design to production	12 months	3 months	75% faster
Skilled resources used			40% fewer
Cost to build, deploy, manage			80% savings
Time to make business decisions			10x faster

Qlik Compose Capabilities Across the Data Warehouse Lifecycle

Requirements gathering, warehouse design, and creation

Architects use our Qlik Compose solution to visually create the relationships between business objects and edit them in a simple graphical interface. Our solution also can interpret existing logical data models from ERWin and other tools, then automatically generate the physical schema in the relational database, saving time and effort. Teams have freedom to adopt any or all the different data warehouse styles, including Inmon, Kimball, and Data Vault.

Data integration and testing

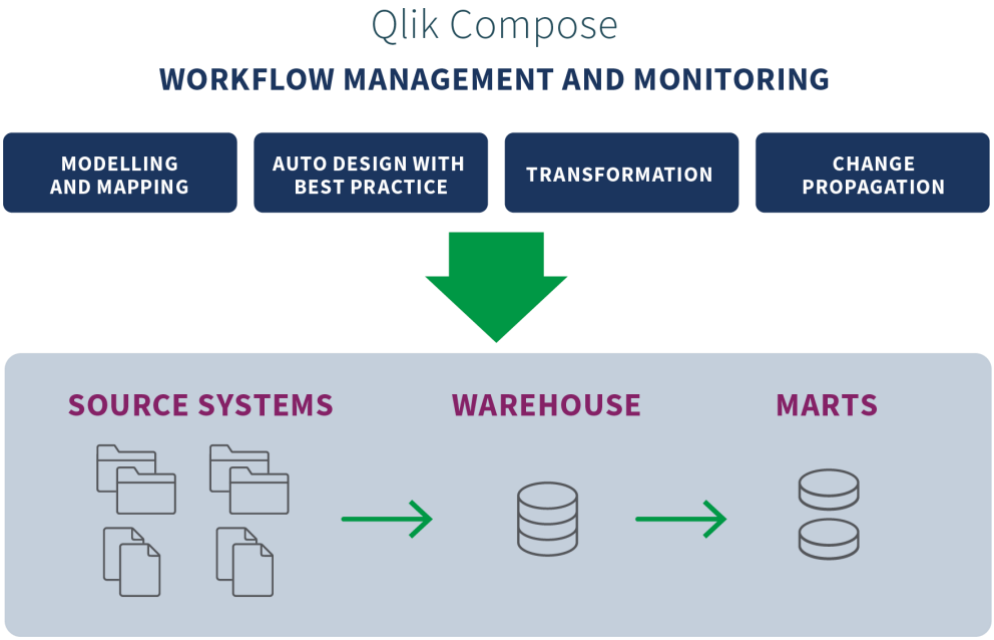
Qlik Compose automates the repetitive, manual tasks of creating, maintaining, testing, and debugging data warehouse environments. Our solution automates key management, handling slowly changing dimensions, star schema generation, business and technical metadata management, and many other tasks usually handled programmatically in ETL tools. Our customers report less time spent manually writing SQL and ETL programs – by as much as 95% in some cases. And because our Qlik Compose solution generates this code, incidences of typos and programming errors are dramatically lower, making testing and debugging simpler and faster.

Release to production

With Qlik Compose, it's easy to migrate from development, test, and user acceptance environments to production environments. Our solution supports managing global variables for each environment, integrates with version control systems, and offers both graphical and command-line interfaces to facilitate moving between environments.

Change Management

Teams can adjust data relationships and transformations much more rapidly with our Qlik Compose automation. Customers report they can better handle new business requirements. One organization says it can make changes six times more frequently using Qlik Compose.



Qlik Compose is a workflow-driven environment that automates all phases of design, build, and operations so data warehouses, marts, and data hubs are delivered on time and on budget, ensuring organizations keep pace with rapidly changing business requirements.

Why Change Your Management Approach Now?

For organizations with investments in traditional data warehouse, data mart, or data hub design and build tools, there's often a reluctance to adopt new techniques. Teams have been trained; warehouses built – the pieces are all in place. Yet, many data warehouse teams will admit to not being as responsive as business analysts require. They agree that their data warehouse infrastructure can't always keep up with rapidly changing demands for data due to many moving parts.

5 Reasons Your BI and IT Teams Should Consider Changing Their Approach

A key technology is end of life

When underlying technologies become obsolete, it's the perfect time to look at a fresh solution. End of life availability or support is a perfect time to consider a more modern and affordable alternative solution to develop your accelerated data delivery architecture.

Keeping your data warehouse current is becoming a business issue

When BI teams and business analysts don't get what they need in a timely manner, they seek other solutions. And their choices can lead to more data silos and arguments about correct numbers – the very scenario your data warehouse is designed to avoid. Modernizing how you manage change in your data warehouse is another good reason to consider a new approach.

Staff or budget constraints

Data warehouses built with traditional methods and tools are often resource intensive. When other, higher-priority projects come up, team members go work on them and that strains your staffing requirements. Also, data warehouse budgets have flattened which just compounds the issue. For constrained data warehouse teams, automation helps relieve resource pressures.

Cloud adoption

Enterprises are quickly moving data to the cloud to better manage resources and costs. Since a traditional data warehouse isn't designed for the cloud, it will need to be redesigned and rebuilt. This is a good opportunity for your teams to review technologies and choose a more modern, responsive approach.

New projects to meet new business requirements

Rather than using the same approach and experiencing the same problems with traditional data warehousing, companies with new or time-sensitive business requirements have an opportunity to find a better solution. One that delivers more automation. Our Qlik Compose solution addresses the following use cases:

- Replacing a brittle legacy data warehouse/mart system
- Migrating and re-platforming
- Augmenting an existing solution
- Consolidating data for analytics
- Prototyping an analytics environment

Ready to Modernize Your Data Warehouse Infrastructure?

Make sure your enterprise can still rely on data-driven insights from your BI programs, fueled by your data warehouse. Rethink your strategy if your BI and data warehouse project is running on an obsolete technology backbone, costing your organization too much, requiring too many resources, or not delivering the business value you expect, and consider a proven data warehouse automation solution from Qlik®.

Learn more at www.qlik.com/us/products/data-integration-platform

Qlik LEAD WITH DATA™

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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