Twelve Ways TIBCO Data Virtualization Turbocharges TIBCO Analytics

THE GROWING ANALYTICS DATA BOTTLENECK

In the best-selling book Competing on Analytics: The New Science of Winning, authors Thomas H. Davenport and Jeanne G. Harris ". . . found a striking relationship between the use of analytics and business performance. . . . High performers (those who outperformed their industry in terms of profit, shareholder return, and revenue growth) were 50 percent more likely to use analytics strategically . . . and five times as likely as low performers."

But analytics runs on data—and providing that data is a more difficult than ever. Do any of these sound familiar?

- Your company's demand for analytic data is exploding.
- Your analytic user types and capabilities are more diverse.
- Your analytic tools are more varied.
- Your data is more widely distributed across traditional, big data, Internet of Things, and cloud repositories.
- Your traditional data integration via warehousing and ETL is not keeping pace.
- As a result, your analytics data bottleneck keeps growing.

TIBCO® Data Virtualization software helps you turbocharge your use of TIBCO® Analytics applications so you can deliver more insights, drive better business outcomes, and outperform your competition, far faster than ever before.

This paper outlines analytic data requirements and describes how the TIBCO Data Virtualization platform successfully addresses these challenges for TIBCO Analytics customers. A customer use-case illustrates how one forward-thinking company is using this powerful combination to its advantage.

WHAT TIBCO ANALYTICS USERS WANT

TIBCO Analytics software enhances your competitive edge by enabling you to develop insights from any data anywhere, deliver them in real time, and automate actions to make better decisions and respond faster. TIBCO's market leading analytics solutions combine ease of use with analytic depth and governance to grow with you as your needs evolve.

However, if you ask your TIBCO Analytics users (data scientists, business analysts, BI application developers, and others) about their analytic data requirements, you may find them frustrated by all the time they spend chasing data, rather than analyzing it—which is after all why you hired them in the first place.

When asked to describe their data nirvana, their needs are clear. They include:

- *Any and All Data* – Any dataset I might need, from anywhere and everywhere.
- *Anytime Data* – Datasets should be up-to-the-minute and available whenever I need them.
- *Accurate Data* – Datasets should be trustworthy, with lineage back to their source.
- *Easy Data* – Datasets should be easy to find, understand, access, combine, and use.
- *Agile Data* – Whenever a new, unique dataset is required, help me quickly meet this need.

TIBCO DATA VIRTUALIZATION TO THE RESCUE

TIBCO Data Virtualization is purpose-built to help your data engineering teams meet your TIBCO Analytics data requirements. With TIBCO Data Virtualization, your data scientists, business analysts, BI developers, and other users, can take advantage of analytic datasets built, tested, secured, and governed by your data engineering teams. Delivered at a fraction of ETL time, cost, and rigidity, your data engineers can use TIBCO Data Virtualization to overcome the analytics data bottleneck that is constraining your TIBCO Analytics success.

Here are 12 ways that TIBCO's best-in-class data virtualization capabilities help you fulfill your TIBCO Analytics data requirements sooner.

1 *Business Directory Makes Data Easier to Find* – Your TIBCO Analytics users can easily search, categorize, and consume IT-curated datasets using TIBCO Data Virtualization Business Directory. By encouraging analytic dataset sharing and reuse, you can accelerate TIBCO Analytics projects and reduce data engineering workloads. Further, by adding <u>TIBCO Spotfire® Smart Data Catalog</u>, you can extend available datasets beyond those managed by TIBCO Data Virtualization.

2 *Data Abstraction Makes Data Easier to Understand* – The TIBCO Data Virtualization platform includes powerful data abstraction capabilities that simplify your complex data, transforming it from native structure and syntax into common business semantics that are easier for your TIBCO Analytics users to understand and analyze. Focused on business problem solving, your <u>TIBCO Spotfire</u> business analysts will particularly appreciate this business view of your data.

3 *Integrated Security Controls Data Access* – TIBCO Data Virtualization software provides myriad fine-grained security capabilities including authentication, authorization, encryption, and masking. You can also leverage your existing security investments (LDAP, Active Directory, and Kerberos); standards (SAM, NTLM, TLS, and WSS); and policies. Your TIBCO Analytics users access sanctioned data only, no more, no less.

4   *Adapters Broaden Data Access* – Over 100 TIBCO Data Virtualization adapters provide a wide range of data source connectivity for databases, files, big data, cloud sources, packaged applications, and more. Beyond schema-to-schema only connectivity, TIBCO Data Virtualization adapters work hand in hand with data source optimizers to ensure accurate queries and the highest possible performance. With more data than ever to work with, TIBCO Analytics users can readily uncover new insights.

5   *Quality Ensures Trusted Data* – TIBCO Data Virtualization software provides a range of profiling, standardization, conformance, enrichment, augmentation, and validation capabilities to give your TIBCO Analytics users data they can trust. And when master data is an important part of your analysis, you can use the TIBCO Data Virtualization system in concert with <u>TIBCO® MDM</u> to deliver an even higher level of quality to further improve that trust.

6   *Data Governance Maximizes Control* – TIBCO Data Virtualization lineage, where-used, logging, and more, provide complete visibility, traceability, and control over your analytic datasets. <u>TIBCO Jaspersoft®</u> embedded BI users working on mission-critical financial reporting, compliance, and other projects, will especially value this extra level of governance.

7   *Data Federation Provides the Complete Picture* – The TIBCO Data Virtualization federated query engine virtually integrates your analytic datasets. This provides TIBCO Analytics users with the complete picture without the time, cost, and rigidity of physical data consolidation. To provide richer analyses, your <u>TIBCO StreamBase®</u> streaming analytics users will appreciate the opportunity to combine real-time data streams with IT-curated datasets. Similarly, your <u>TIBCO Statistica™</u> and TIBCO Spotfire® Data Science users will value the opportunity to combine raw and IT-curated data.

8   *Query Optimization Ensures Timely Business Insight* – TIBCO Data Virtualization advanced query optimizers and algorithms, the fastest in the industry, provide up-to-the-minute datasets your TIBCO Analytics users require. With TIBCO Data Virtualization software, TIBCO Analytics users no longer need to wait for the nightly data warehouse refresh.

9   *Studio Accelerates New Dataset Development and Analytics Time-to-Solution* – Your data engineers use TIBCO Data Virtualization Studio to quickly model new datasets, build transformations, optimize queries, manage resources, and more. Easy to learn and use, The Studio graphical modeling environment, along with powerful code editors, speed new dataset development and thus your TIBCO Analytics time-to-solution. And if these datasets require further preparation, <u>TIBCO Spotfire Data Wrangling</u> or TIBCO Statistica Data Wrangling lets your TIBCO Analytics users quickly make these additional tweaks.

10 *Caching Supports Analytic Sandboxing* – When TIBCO Analytics users require specialized analytics sandboxes, TIBCO Data Virtualization caching can load needed datasets into over a dozen distinct analytic databases including Greenplum, HSQLDB, DB2, SQL Server, Netezza, Oracle, SAP HANA, Sybase, Teradata, Vertica, and more. This can be especially valuable for TIBCO Statistica and TIBCO Spotfire Data Science users who frequently leverage fit-for-purpose sandboxes.

11 *Standard Data Delivery Interfaces Support Heterogeneous Analytics Solutions* – TIBCO Data Virtualization supports all the most popular analytic data delivery interfaces including ADO.Net, Hadoop, JDBC, ODBC, REST, SOAP, and more. Sharing datasets across both your TIBCO Analytics solutions as well as your other non-TIBCO analytic tools, helps maximize your return on TIBCO Data Virtualization investments.

12 *Scalability Supports Multiple Lines of Business, Hundreds of Projects, and Thousands of Analytics Users* – The TIBCO Data Virtualization platform is enterprise-grade software proven at some of the world's most complex, high-volume data and analytics environments. As a result, TIBCO Data Virtualization can support your TIBCO Analytics data workloads at any scale, from project to enterprise.

BETTER TOGETHER IN THE ENERGY INDUSTRY

Data engineering teams at hundreds of companies use the TIBCO Data Virtualization platform to turbocharge their TIBCO Analytics systems. Here is an example from one of the world's 10 largest energy companies.

SITUATION AND REQUIREMENTS:

Energy companies run on data and analytics. In the upstream operations at this firm, thousands of sensors continuously capture pressures, vibrations, temperatures, and hundreds of other metrics from hundreds of offshore oil rigs throughout the Gulf of Mexico. Numerous additional systems such as SAP plant maintenance add to their data deluge.

Providing this critical data to production, safety, financial, and compliance analytics applications was a huge challenge made more complex by the need to support a diverse range of engineers, managers, data scientists, and business analysts, each requiring unique, and often ad hoc slices of the data.

TIBCO'S SOLUTION:

Using TIBCO Data Virtualization, the company built an enterprise-wide data virtualization environment with over 600 standard business canonicals. These easy to find and use datasets simplify complex data while also making this data available to a wide range of analytic tools including TIBCO Spotfire and others. And with one virtual place to go for data, analytics users stopped replicating data in costly uncontrolled, rogue data marts.

TIBCO Data Virtualization high-performance algorithms and optimizers enabled analysts to query large datasets with as many as two million rows in a single query. Prior to using the TIBCO Data Virtualization system, analysts were often forced to constrain their queries and thus make important decisions on subsets of the data. To further improve query performance, TIBCO Data Virtualization caching preloaded frequently used datasets into a Netezza analytic appliance.

With the TIBCO Data Virtualization system, the company was able to accelerate new analytics projects. Reusing existing datasets across analytics efforts saved significant development time. And whenever a brand new dataset was required, the TIBCO system improved the company's ability to quickly provide it.

RESULTS ACHIEVED:

With the TIBCO Data Virtualization and TIBCO Spotfire systems, the company was able to gain a number of benefits including:

- Reduced offshore downtime by 1%, yielding significant revenue increases.
- Accelerated development of new analytic applications and new types of analysis, improving decision effectiveness and reducing development costs.
- Enabled engineers, managers, data scientists, and business analysts to improve analytic development productivity.
- Reduced rogue data mart growth rates and costs.

GETTING STARTED

If you are a TIBCO Analytics customer challenged by a complex data and analytics landscape, the TIBCO Data Virtualization platform can help you turbocharge your efforts so you can deliver more insights, drive better business outcomes, and outperform your competition, far faster than ever before.

Learn more at https://www.tibco.com/products/tibco-data-virtualization.

TIBCO®

TIBCO fuels digital business by enabling better decisions and faster, smarter actions through the TIBCO Connected Intelligence Cloud. From APIs and systems to devices and people, we interconnect everything, capture data in real time wherever it is, and augment the intelligence of your business through analytical insights. Thousands of customers around the globe rely on us to build compelling experiences, energize operations, and propel innovation. Learn how TIBCO makes digital smarter at www.tibco.com.