

Teradata Data Lab for Life Sciences R&D

Develop Collaborative Analytics that Drive Ideas and Insight

Life Sciences companies everywhere today need the agility to quickly test theories and new ideas to drive innovation, exploit market opportunities, and react to competitive pressures. They need the ability to extend their analytic practice so they can get the right analytics to the right people at the right time. That means adding vital flexibility for exploring new, unrefined data and experimenting on emerging theories without long planning periods.

But all too often, business analysts don't have access to their own data warehouse because of the governance and safeguards built into the data warehousing process. Those obstacles make it virtually impossi-

ble for them to work with untested data or submit queries that may impact other data warehouse users. As a result, data marts proliferate throughout R&D, producing inconsistent analytic results and driving up IT costs with inefficient processes and redundant systems.

What's needed is a solution that enables Life Sciences R&D to explore and examine new ideas and data, a solution that delivers immediate access to data and that makes it easy to identify new drugs and insight or to react to immediate R&D and post-marketing issues. A Life Sciences R&D data lab from Teradata delivers that solution.



Agile Analytics Drives Performance

A Life Sciences R&D data lab from Teradata is built on the Teradata Data Lab which enables agile analytics by simplifying the provisioning and management of analytic workspace within the production data warehouse. By allocating that space, it provides your lab users easy access to critical production information without moving or replicating data. And it provides your entire business with flexibility to self-provision space and experiment with new data and theories without compromising data quality or performance of the production data warehouse.

The result is an environment that allows R&D to maximize hardware, software, and human resources; streamline your processes; and deliver fast and accurate answers while controlling the cost and other issues stemming from data mart proliferation.

Built-in Business and IT Benefits

An agile analytics data warehouse with an integrated data lab provides both your IT technicians and R&D analysts an array of advantages.

An R&D Success Story

A leading pharmaceutical company recently accelerated its outcome data insights using a Life Sciences R&D data lab from Teradata. The company's goal was to consolidate its outcomes analytic data into a single data warehouse and to create temporary sandboxes to develop high-speed solutions or uncover answers to critical questions, e.g. Adverse Events.

The Life Sciences R&D data lab allowed analysts to experiment with new data, deal with requests, and test queries before integrating into the production data warehouse where it can be accessed by everyone.

Among the highlights:

- > Processing performance increased from 20x to 450x.
- > An internal resource with no previous Teradata experience was able to load data and run SAS® against Teradata® Database with little training.
- > No compression, no indexes (aside from Primary Index) assigned, no query tuning were utilized.
- > Teradata Database provided the capacity to collect stats on columns within tablets; the system now utilizes these stats to tune performance.
- > Performance gains allowed the company to cut the time needed to answer business questions from 3 - 4 days to just hours (and provided the capacity to answer more questions).

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For your organization's IT operations, it safeguards and controls R&D data to ensure predictable workload performance and maintain data quality within the data warehouse. It also provides IT with an interface to easily establish guidelines and rules for the work by controlling size, expiration dates, and user access.

The Life Sciences R&D data lab from Teradata implements these guidelines by allowing scientists/analysts to manage the individual work areas.

For R&D users, it provides an interface that allows them to easily provision space within their production data warehouse for exploration and experimentation. This interface allows them to manage their allocated area so they can load and analyze data using their favorite tools, such as Tableau and TIBCO® Spotfire®, or share their analysis, with others using applications such as SAS® and R. The Life Sciences R&D data lab simplifies collaboration, self service, and data access without unnecessary data movement and replication.

Among the specific benefits the solution delivers are:

For scientists and analysts:

- > Rapid exploration and development environment with self-service analytics, provisioning, and management.
- > Quick time to value by accelerating the process for business users. Users can load and join new data with production data, eliminating data movement.

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	Automatic	Lab owner	Lab group owner
Increase lab size:	<input type="text"/> MB	10 MB	> 10 MB
Extend lab:	<input type="text"/>	<input type="text"/>	All
Add lab:	<input type="text"/> MB	<input type="text"/> MB	All

	Automatic	Lab owner	Lab group owner
Remove user:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Add owner:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Remove owner:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Add user:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Delete lab:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Decrease lab size:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Drop table:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Figure 1.

- > Access to new data without waiting for full data warehouse integration projects.
- > Simplified collaboration so data lab users can easily invite others to share analytic data and results.

For IT:

- > Added control of the environment with data hierarchy and workload management to ensure production users are not impacted by the exploratory nature of analytic development.
- > Stronger governance by enforcing expiration dates to data labs, preventing unintentional growth of data labs.
- > Improved cost control by eliminating shadow IT and personal external data marts.
- > Optimized data integration by identifying and integrating only the data that provide proven business value.

Why Teradata?

Teradata Corporation is the world's leading analytic data solutions company focused on integrated data warehousing, big data analytics, and business applications. Teradata's innovative products and services empower organizations to integrate, analyze, and profit from data for competitive advantage.

For More Information

To find out how a Life Sciences R&D Data Lab from Teradata can provide agility to explore new data and test theories so you can improve your decision-making capabilities and grow a stronger, more productive business, contact your local Teradata representative or visit Teradata.com.