

The Value and Purpose of a Teradata Data Lab

Enabling Agile Analytics to Uncover Possibilities

Business and IT Challenges

Success in today's global economy requires the agility to quickly test hypotheses and experiment with new concepts that drive innovation, uncover market opportunities and proactively react to competitive threats. Companies need the ability to extend their analytic practice with the proper infrastructures, tools and technology to enhance the agility of analyzing complex data. In addition, there is a need to be flexible for exploring new data sources from data lakes to experiment on emerging theories with 'production' data without long planning periods or always having to get IT to load the data. By considering a data lab, its value and purpose is to explore and examine new ideas, experiment, prototype new possibilities by combining new data with existing data to create experimental designs and ad-hoc queries without interrupting the production environment.

Data Lab Defined

Companies are collecting more data than ever before and many different data types are all proliferating throughout the enterprise, producing inconsistent analytic results, and driving up IT cost with inefficient processes and redundant systems.

To avoid these pitfalls, setting up a data lab has become a very popular and strategic option for organization to enable a self-service, collaborative environment for analytic development for the business community—to test and experiment with the new data types from data lakes, mainframe, external sources, excel spreadsheets or other types of data without impacting the production data platform. Teradata has introduced the data lab to do just that for many years and it is also known as a 'play-pen' to work with untested data or to submit queries for experimental designs. The data lab environment enables business analysts and data scientists to access data that previously was not easily

available to join with production data and enables businesses to explore and experiment with new ideas and data. Data Labs within Teradata Vantage™ makes it easy to identify new trends, develop new insight in your data or react to immediate business issues and opportunities.

Purpose of the Teradata Data Lab

A Teradata data lab enables self-service 'Agile' analytics by simplifying the provisioning and management of analytic workspace within the production data platform. By allocating that space in the data lab environment, it provides your users with easy access to critical production information without moving or replicating that data. In addition, it offers your entire business the flexibility to self-provision space, load other types of data into the data lab that they can experiment with to test theories and innovative business ideas without compromising data quality or performance of the production environment as shown in Figure 1. The result is a platform that allows your business to maximize hardware, software and human resources; streamline your processes; and deliver fast and accurate answers while controlling the costs and other issues that stem from data mart proliferation and redundant data.

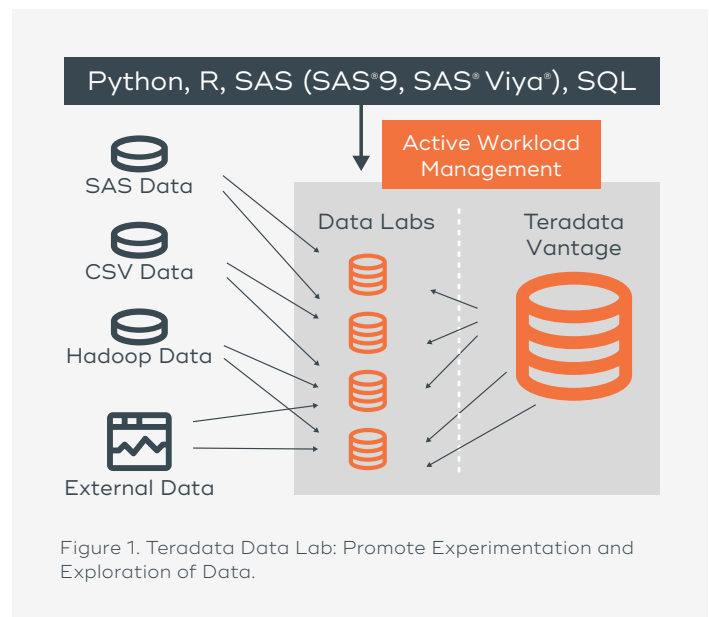


Figure 1. Teradata Data Lab: Promote Experimentation and Exploration of Data.

The data lab can be set up within Vantage. The data can be joined through views without data exports. One of the key concepts of the data lab is to 'self-load' new or experimental data quickly which can be used for rapid prototyping, experimentation and exploration analysis—'Agile Analytics'. Key benefits to the business include: easy to use for self-provisioning and management, extending analytics to many more users and minimize IT support after initial setup.

Value and Benefits of the Data Lab

As referenced in Figure 1, the data lab can be set up within Vantage and offers many benefits to both IT and business users.

IT Benefits

Teradata data lab protects and controls production data to ensure predictable workload performance and segregation of the jobs and maintains data quality within Vantage by reducing data redundancy. The benefits for IT are:

- Control the environment and workload management to ensure maximal production.
- Enhance governance by enforcing expiration dates, exception processes.
- Eliminate shadow IT and personal external data marts to help control costs.
- Optimize data integration by identifying and integrating only the data that provide high proven business value.
- Alleviate Database Administrators and IT from having to load experimental data and provision space on an ongoing basis.
- Reclaim storage space automatically at the expiration of the data lab.

Business Benefits

The data lab simplifies collaboration, self-service and data access by eliminating unnecessary data movement and replication. The benefits for the business users are:

- Enable self-service analytics and data management capabilities for exploration and experimentation.
- Quick time to value by accelerating and simplifying the process of loading and management of data for business users.
- Eliminate data replication by allowing users to load and join new data with production data.
- Access to new data sources through self-loading tools without waiting for a full integration project.
- Simplify collaboration among users to share their analytic data and results based on proper security authorization.
- Improve performance with in-database capabilities for faster results.

Whether you are an IT and business user, Teradata data lab provides the foundation for self-service agile analytics by providing an interface to automate much of the data provisioning and management of an analytic workspace. It offers the on-demand capacity you need for short-term projects such as ad-hoc analysis, data mining, proof of concept testing, and quality assurance testing.

About Teradata

Teradata transforms how businesses work and people live through the power of data. Teradata leverages all of the data, all of the time, so you can analyze anything, deploy anywhere, and deliver analytics that matter most to your business. And we do it on-premises, in the cloud, or anywhere in between. We call this pervasive data intelligence. It's the answer to the complexity, cost and inadequacy of today's approach to analytics. Get the answer at [Teradata.com](https://www.teradata.com)

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