

Teradata Advanced Business Analytics Services

A comprehensive suite of advanced analytical consultancy services from Teradata helps you to:

- > **Solve complex business problems and gain valuable new insights with the help of advanced analytics.**
- > **Increase ROI on your Teradata solution by incorporating advanced in-database analysis.**
- > **Review and improve your company's analytic environment and processes.**
- > **Benefit quickly from Teradata's technology and skills – without making major IT changes or investments.**

Advanced Business Analytics Services from Teradata Corporation help to answer the ever more complex business questions which are required to accurately drive strategy and execution. As an ongoing process, Advanced Analytics continually increase knowledge, based on the expanding historic information gathered in your data warehouse. This knowledge provides value to your business through a more effective execution of strategy and improved customer interaction.

Without advanced analytics, strategies may be misdirected, by being based on incomplete or inaccurate information: intuition is not enough to direct strategy. Leading organizations focus analytics on the areas that provide measurable results

and where competitive advantage can be obtained. Analytics is an iterative topic. With Teradata, your existing team can be trained and coached in advanced techniques, gaining benefit from day one.

Teradata provides key differentiators in its consultancy services for advanced business analytics. These differentiators will be important to those involved with creating or applying analytical results in your organization.

What is Advanced Business Analytics?

Advanced Business Analytics describes the process of answering intricate business questions via complex data analysis. These are business problems requiring



more than a straightforward factual answer or report – questions such as:

- > Which customers are most likely to purchase another product?
- > Which customers are most likely to defect to a competitor?
- > How much time do you have before each customer leaves?
- > How will price changes affect your product sales, and what is the optimal price?
- > What is the best channel to reach each of your customers?
- > What is the next best product or service to offer each customer?
- > What types of customers shop in each of your stores?
- > What kinds of shopping baskets do your customers purchase?

While a standard query or an On-Line Analytical Processing (OLAP) report might provide supporting information for such questions, these approaches are unlikely to provide the answer you need. Complex questions typically involve too many variables to be answered fully through traditional analysis. It's more likely that the answer will come from

Key Advantages for Analytics from Teradata

- > **Avoid data migration – create analytics in your data warehouse.**
- > **Boost your analytic sample sizes.**
- > **Increase analytical power using detailed data.**
- > **An action-orientated approach to analytics.**

Teradata Advanced Business Analytics Services

a more sophisticated approach that identifies and exploits a wide range of potential relationships between the attributes and variables in your data. This table (Figure 1) provides examples of analyses that can solve various frequently met business problems.

Advanced Analytics enable you to address complex business questions by discovering previously unrecognized, but highly useful, relationships in your data.

The Teradata Approach to Analytics

In our experience, many organizations over-emphasize the importance of software tools, such as data mining packages, and under-emphasize the business analysis process. In the cycle from business problem to result-driven action, analysis must be an embedded, efficient activity to provide timely and relevant results. The Teradata approach is consultative and highly business-focused to ensure that analytic outcomes align with business needs.

Maximum success results from a team approach, combining domain knowledge – such as your business managers and Teradata industry consultants – with technical capability – such as your data warehouse and IT professionals and Teradata’s database and analytics consultants. The outcome – applying suitable techniques to analyze appropriate data, leading to creation of business value from the results. And all this based on Teradata’s extensive business experience and best practice methodology, avoiding trial and error and inefficient implementation.

Analytic Application	Business Question	Business Value
Customer Segmentation	What market segments do my customers fall into, and what are their characteristics?	> Personalize customer relationships for higher customer satisfaction and retention.
Propensity to Buy	Which customers are most likely to respond to specific promotions?	> Increase campaign profitability by focusing on those who are most likely to buy. > Target customers based on their needs and preferences: increase their loyalty to your business.
Customer Profitability	What is each customer’s current and potential lifetime profitability?	> Make individual decisions based upon the profitability of each customer.
Fraud Detection	How can I identify fraudulent transactions?	> Quickly determine potential fraud. > Take immediate action to minimize cost.
Customer Attrition	Which customers are at risk of leaving?	> Prevent loss of high-value customers. > Establish alternative strategies for relationships with lower value customers.
Customer Acquisition	Which of my prospects are most interested in my product and are likely to generate the highest profit?	> Minimize cost and maximize profit in acquiring new customers.
Propensity to Default	Which delinquent customers are likely to default?	> Reduce risk, exposure, and collection cost. > Avoid offending high-value customers who present no credit risk.
Price Elasticity	How do I optimally price my products and services?	> Achieve revenue, profit, and growth goals.
Channel Optimization	What is the best channel to reach my customer in each segment?	> Interact with customers based on their individual preferences and your needs to manage costs.
Response Analysis	What is the expected response rate for a targeted campaign?	> Support planning and budgeting of marketing activities. > Evaluate the design of customer communications.

Figure 1

What Makes a Good Analysis?

The key to success is to be flexible and adaptive. Not all complex business questions require heavy duty statistical algorithms. Often, a good answer comes from piecing together basic data in a new way. Those initial answers will always

stimulate new questions leading to further analysis, and so on ... leading ultimately, to the more sophisticated approaches shown in Figure 1.

Experience and best practice awareness helps to match an approach with a specific

Teradata Advanced Business Analytics Services

scenario. Teradata consultancy can guide your organization through this path with training, support, and knowledge transfer, to equip your staff with the capabilities required for the analytics process.

Scale and Detail Combine to a Powerful Approach

A key differentiator of the Teradata approach lies in the underlying technology, through the ability to store and analyze huge volumes of data. While other analysts are forced to work with small samples of aggregated data, Teradata consultants can access full volumes of data going down to the finest level of granularity.

The Teradata approach offers many significant advantages:

Avoiding data migration – create analytics in your data warehouse

Your data may be examined, best sources selected, and analytic variables created – all entirely in the data warehouse, to make full use of your detailed and most predictive information.

Teradata® Profiler, our mining software for automatic data analysis, will typically be used to facilitate the initial exploration phase. The data creation process, which usually requires writing time-consuming SQL scripts, can be automated by using Teradata ADS generator, which is also part of Teradata Warehouse Miner software for in-database analysis.

Boosting your analytic sample sizes

It's generally believed that 'bigger is better' where sample sizes are concerned, and to a large degree, this is true. When building analytic models, increasing the

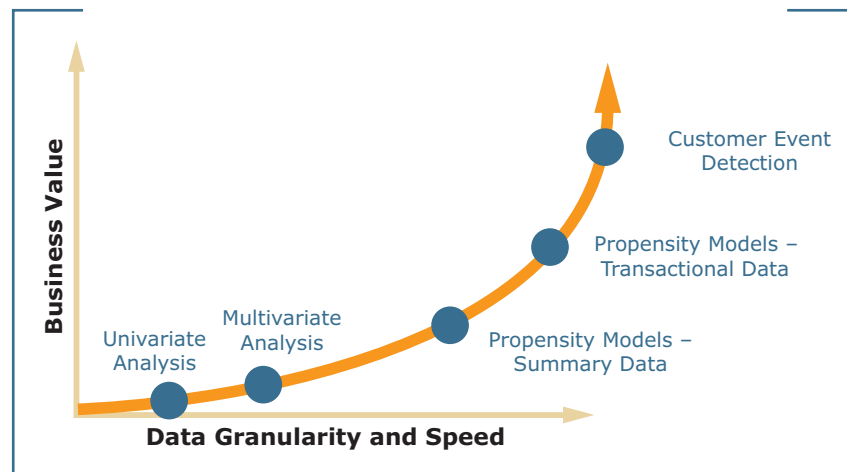


Figure 2. The Value of Analytics increases with data granularity and processing speed.

sample size helps to improve model accuracy, but with diminishing returns so there's generally very little to be gained in using the full population. At this level, other issues tend to creep in, such as the risk of "over fitting" the model.

Despite this, size has a great advantage when it comes to analyzing model performance and measuring KPIs for small subsets of your customer base. Customer segmentation modeling is a perfect example of this – by applying the segmentation to a substantial sample from your database, we can produce a far more detailed picture of the segments – for example, by channels, outlets, products, and usage – than would otherwise be possible. All this is easier with Teradata Database's power and in-database capabilities.

Increasing analytical power using detailed data

The power of analytic solutions typically increases exponentially with data granularity and responsiveness.

First, by using relevant detailed data, such as call detail records for a phone company, shopping basket items for a retailer, or transactions for a bank, we can monitor actual instances of customer behavior. Having examined the detailed interactions, we can build focused, specific measures that summarize the key behavioral aspects of most relevance to the business problem at hand.

Second, certain individual customer interactions may indicate special circumstances that should trigger immediate marketing actions. By detecting those events and acting quickly, response rates will increase by orders of magnitude.

An action-orientated approach to analytics

Teradata defines analytics in a broad sense – from simple statistics to complex data mining models – but is focused throughout on the actions that will be taken as a result. We frame each analytical project as a business improvement opportunity (BIO) which has four main

Teradata Advanced Business Analytics Services

Teradata.com

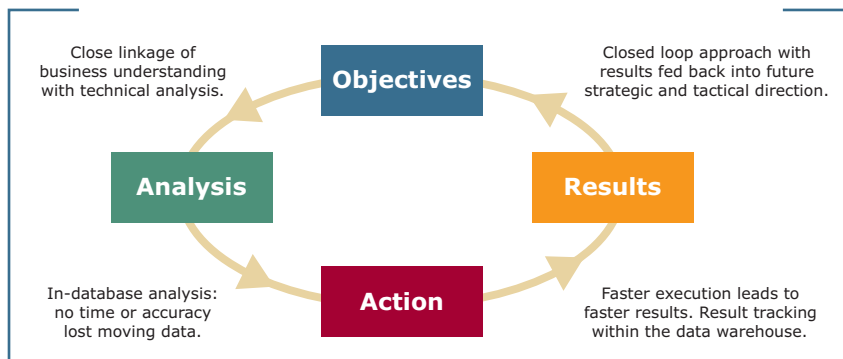


Figure 3

steps – business objectives, analysis, resulting actions, measure actions – and we internally document and maintain these BIODs from analytical engagements with clients around the globe.

This means that we can suggest and execute action-orientated analytics projects that will deliver measurable returns.

What Analytical Tools Does Teradata Use?

Each project uses a combination of statistical analysis, data visualization, and geographical mapping software as required, to generate the required results and apply them within your organization.

We may also leverage Teradata tools such as:

- > Teradata SQL – our database consultants can create virtually any analysis in SQL, enabling analytics to benefit from the massive processing power of Teradata Database.

- > Teradata Warehouse Miner – our data mining solution for in-database analysis including:
 - Teradata Profiler for data exploration, statistical analysis, and data quality assessment
 - Teradata ADS generator for building and refreshing analytic data sets
 - Teradata Warehouse Miner Analytics for building and deploying analytic models

We can work either onsite at your offices, for example by connecting direct to your Teradata solution, or remotely by processing an agreed set of data supplied for the project. You don't have to be using Teradata technology to use our services.

Teradata Consulting Services for Advanced Business Analytics

- > Workshops and advice on how to implement best practices in the analytical area of your business

- > Thought leadership on new techniques and approaches, leading to proof of concept projects
- > Professional services to execute analytical projects
- > Training courses on topics such as customer analysis and its business applications; followed by analyst mentoring
- > Consultancy support throughout all phases of your analytical projects – from defining business objectives to measuring and evaluating actions taken
- > Roll-out strategies and user training
- > Expert support to evaluate and overlay external data sources, such as market research, geodemographics and population census, onto your customer base, and build customized information products
- > Teradata Warehouse Miner training, evaluation, and implementation support

Next Steps

The Teradata approach helps get you started with Advanced Business Analytics quickly and efficiently. We work with your analysts to train and guide them, bringing existing industry best practices – helping to deliver rapid results and without slowing up their current work load.

For more information about how Advanced Business Analytics services from Teradata can help you make the most from your data, contact your Teradata representative or visit Teradata.com.

Teradata continually improves products as new technologies and components become available. Teradata, therefore, reserves the right to change specifications without prior notice. All features, functions, and operations described herein may not be marketed in all parts of the world. Consult your Teradata representative or Teradata.com for more information.

Copyright © 2005-2007 by Teradata Corporation All Rights Reserved. Produced in U.S.A.