



Data Dominance for the DoD  
Analytics for Data-Driven Decision Making



If your organization is like most, you're facing a constant obstacle: managing data from numerous disparate sources, including multiple legacy transactional environments, monolithic Enterprise Resource Planning (ERP) systems, as well as new and emerging technologies such as Hadoop and Cloud.

The Department of Defense (DoD) is continually challenged trying to analyze data housed in disparate stovepipes; however, managing and sharing huge volumes of collected data is essential to your mission's success. Having multiple independent systems has led to excessive expenditures and problems:



- Lack of clean, standardized, authoritative detailed data in a central repository from which properly cleared personnel can access to efficiently perform their roles
- Duplicative data, as data marts fail at scaling to the level necessary to support the organization
- Duplicate licenses of the same software
- Duplicate hardware platforms, associated maintenance, and data center expenses
- Duplicate personnel that waste time on basic low-level maintenance processes, rather than higher value-added activities such as enterprise level queries, predictive analysis, and forecasting
- Latency issues, as information is propagated across a vast array of data marts
- Inability to evolve and rapidly adapt as new technologies emerge

off premise, on our platform or yours, or in the Cloud. Simply put, Teradata integrates Analytics, Big-Data, Cloud, Hadoop, Integrated Data Warehousing, "Internet of Things", legacy systems, and virtualization into a performant, scalable, interoperable enterprise-class solution.

For decades, private sector organizations have relied on Teradata to integrate and analyze data, then put that information into the hands of those who make critical day-to-day decisions. But the true value of data analytics comes from capturing and integrating information from sources across the organization to create an integrated, enterprise-wide view of your entire organization—one that gives every user a single, consistent view of current and historic facts.

Accessible throughout the organization, this capability is a powerful, secure decision support solution that lets you quickly analyze huge quantities of data to support tactical and strategic decision making. Enterprise analytics has become the key to consolidating operational data and turning it into shared knowledge.

## The Teradata Advantage

Teradata is the global leader in enterprise data analytics, delivering expertise and best-in-class technology to the world's most successful organizations. For more than 35 years, Teradata has helped its customers make better, faster, and more confident decisions by providing the analytical solutions needed to turn data into knowledge.

We have a proven track record of helping organizations—industries as diverse as retail; manufacturing; transportation logistics and distribution; financial services; telecommunications; travel; healthcare; insurance; and government—build better solutions to solve their unique problems.

Companies like Apple, eBay, FedEx, Ford, Netflix and Wal-Mart rely on Teradata to link disparate information systems and stove-piped environments into actionable information. Like most organizations, they already had huge repositories of data. But they also recognized the

**Fact: Second only to personnel, data is your most valued asset.**

This situation leaves most DoD communities "stuck on the beach" with a limited ability to run simple reports and some adhoc reporting, as depicted in Figure 1. Capabilities such as dashboards, advanced forecasting, predictive modeling and optimization are typically beyond the scope of most DoD organizations.

Teradata provides end-to-end solutions and services in data warehousing and big data analytics that enable your organization to become data-driven. Our solutions are designed to address these challenges on premise,

value that integrated data can bring across an enterprise—actionable data that can be used to support critical decision making and strategy planning.

## Teradata in Action

Current Teradata DoD projects include:

- Air Force Materiel Command—GCSS-AF Data Services
- Naval Air Systems Command—DECKPLATE
- USTRANSCOM—Integrated Data Environment/Global Transportation Network Convergence (IGC)
- Defense Commissary Agency
- Defense Health Agency
- Department of Defense—Cyber Network Defense

Here are some examples of how DoD agencies are already taking advantage of Teradata decision support capabilities:

### Air Force Logistics

Using an EDW built and maintained by Teradata, the U.S. Air Force Materiel Command provides logistics decision makers with centralized, consolidated access to aircraft maintenance and supply data. With ongoing hostilities in the Middle East, operational users worldwide have increasingly logged onto the system for near real-time updates about status, readiness, and mission capability of their weapon systems (see Figure 2). For example, GCSS-AF Data Services reports support planning and operations staff at USAFE, PACAF, and CENTCOM. USAFE and CENTAF use Teradata analytics to query data to brief commanders and senior staff several times daily. Other GCSS-AF Data Services uses include:

Where is your organization on this chart?

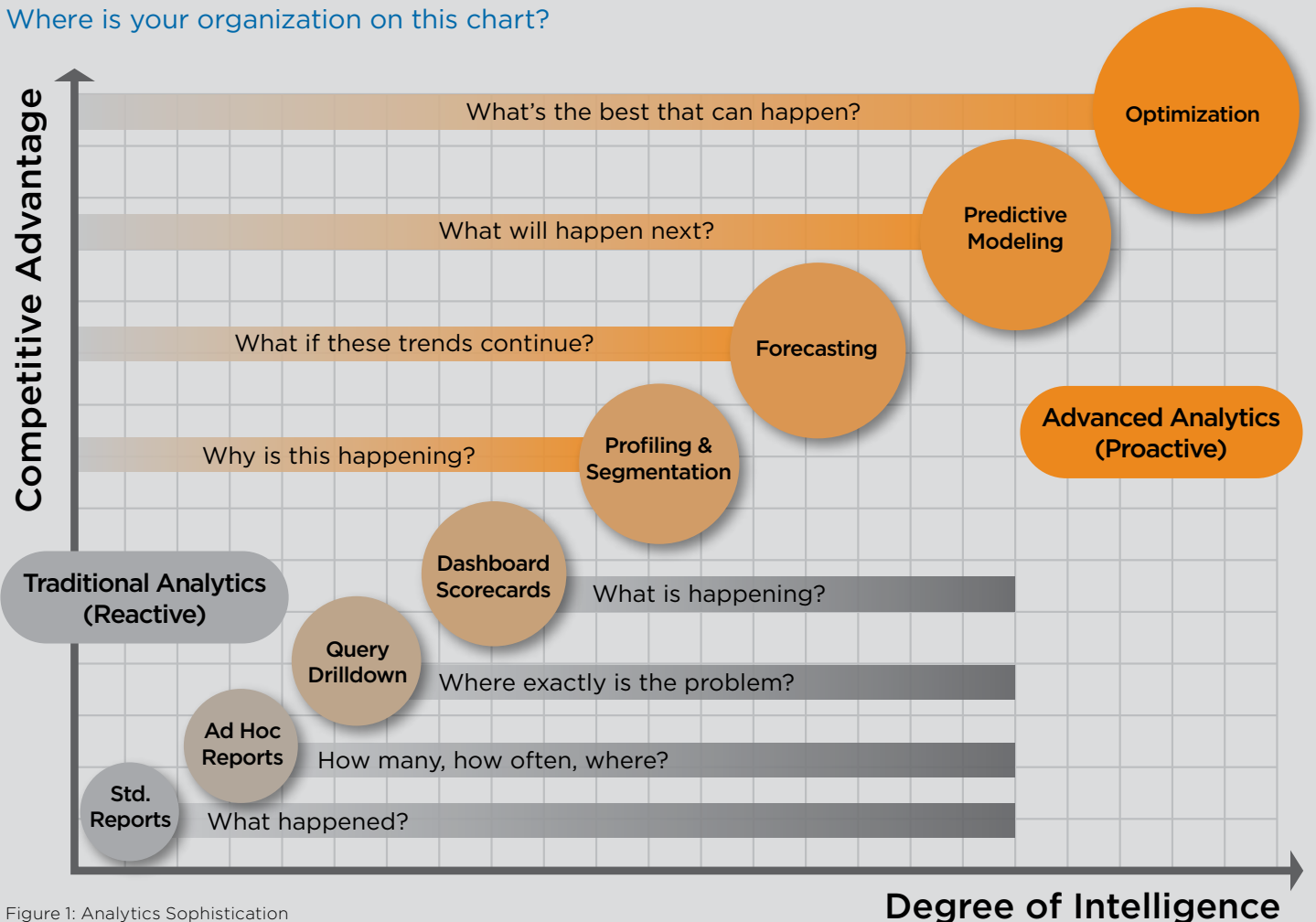


Figure 1: Analytics Sophistication



- Extensive analysis by personnel at AMC (Scott AFB) and various Air Logistics Centers track support for deployed aircraft. This includes readiness, maintenance activity, and supply chain requirements to backfill parts used.
- Vehicle Management application tracks 78,000 ground vehicles, and provides financial analysis to optimize assets. This single application saved the Air Force over \$309M in its first three years of operation.

### Naval Air Systems Command

The Naval Air Systems Command (NAVAIR) delivered a Next Generation aviation maintenance solution with Teradata that provides logistics decision support to its aviation fleet worldwide. Known as DECKPLATE, the system is the authoritative source of information for Navy and Marine Corps aviation logisticians, providing 25+ years of web-enabled access with near real-time detailed data about more than 4,100 Marine Corps and Navy aircraft, wherever they are deployed. Prior to DECKPLATE, the Navy had to rely on data that was 6 to 8 weeks old as opposed to near real-time information.

Continuously updated with over 40 billion incoming records monthly, DECKPLATE supports over 6,000 users and generates over 70,000 reports and ad-hoc queries, making an immeasurable impact on safety, parts management, mission readiness, and cost efficiencies for the fleet.

### Example of a USAF GCSS Data Services Dashboard



Figure 2

### Agency Analytic Solutions

Teradata can bring analytic solutions to your organization as well, specifically in areas such as:

- Cloud analytics integration
- Conditioned-based maintenance
- Cyber defense
- Facilities management
- Finance/performance management
- Hadoop integration
- Logistics & combat support personnel management
- Program management
- Telecomm expense management

### A Fully Unified Analytics Solution

Teradata solutions are based on the Teradata Unified Data Architecture (UDA), as depicted in Figure 3. The UDA is a suite of services, platforms, applications, and tools that, together, unleash the true potential of data. By applying the right technology to the right analytical opportunities, Defense customers can do more because they know more.

Teradata's Unified Data Architecture includes these main capabilities:

- **Integrated data warehouse:** Teradata Active Enterprise Data Warehouse; an ANSI standard SQL RDBMS that combines data from multiple sources—such as ERP and legacy transactional systems—into a single, scalable enterprise class warehouse. This provides one authoritative data source of cross-functional information capable of answering questions never before considered.
- **Integrated discovery platform:** Teradata Aster Discovery Platform brings the world of advanced analytics to the business user with more than 150 SQL-based pre-packaged analytics functions. Functions include path, text, graph, machine learning, and other various algorithms. Users may also create their own customer analytics. Capable of supporting the iterative nature of discovery processes, this platform offers a business-friendly SQL interface that can be used with information in databases, as well as multi-structured data stored in Apache Hadoop, eliminating the requirement for specialized programming to unlock big data insights through iterative exploration.

- **Data Platform:** The Teradata Portfolio for Hadoop is a flexible suite of hardware, software, and services for organizations to integrate enterprise Hadoop into a Teradata environment and across a broader enterprise architecture. Teradata has deep engineering partnerships with Hortonworks, Cloudera, and MapR, offering customers the ability to choose which Hadoop distribution best meets their needs, while ensuring enterprise integration capabilities and the advantage of world-class Teradata service and support.
- **Services:** With over three decades of successful implementations, Teradata has incorporated its best practices into a patented, formal methodology. This proven approach relies on integrated processes, customized tools, and quantifiable metrics to demonstrate quality and value during each phase of the solution life cycle. Every implementation is unique. We define the strategy, design the database, deploy

“The Naval Air Systems Command has an entire team of highly trained data analysts who use real-time data (Teradata) to make crucial strategic decisions for the Navy.”

- Adam Wiederman, Research Analyst, The Motley Fool

the right analytical applications, and facilitate user training as part of a customized, end-to-end process. Projects are planned and executed in a way that maximizes financial return by accelerating appropriate development cycles to decrease time to production.

Teradata provides seamless data movement throughout the UDA and transparent access for users and administrators. Just as tables can be joined within a database,

### Unified Data Architecture

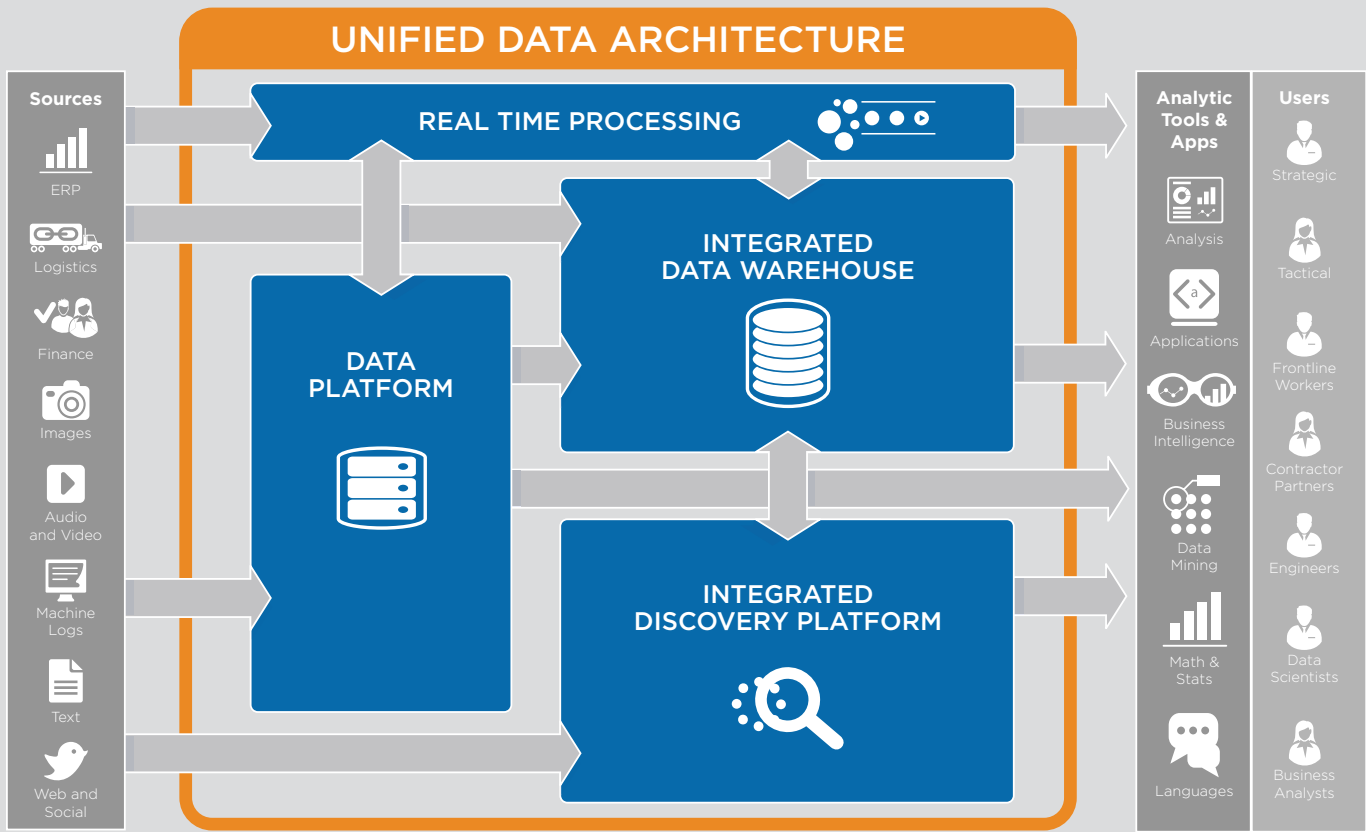


Figure 3

Teradata allows data to be joined across platforms both within and outside of the UDA. Additionally, our Viewpoint management system delivers anytime, anywhere access to all your systems from one common management console.

## Teradata Cloud Supports All Three Key Environments

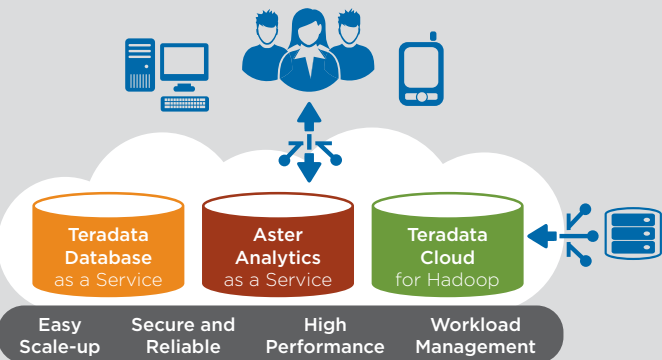


Figure 4

## Teradata Cloud Offerings

Tapping into Teradata has never been easier. Choose our purpose-built managed environment or deploy on Amazon Web Services. Both offer superior solutions for data warehousing and advanced analytics.

Teradata Cloud provides best-in-class data warehousing, analytics, and Hadoop capabilities on a subscription basis. It is a managed, secure, scalable solution that meets the demands of your business via quality service from expert professionals. This means you can focus on deriving business value rather than managing infrastructure—while enjoying flexible pricing options that fit within your budget.

Teradata recognizes that cloud-based analytic services are available from multiple vendors. However, what is often overlooked is the deep insight and market knowledge required to create a robust, well-integrated solution. What is true in life is also true in analytics: there is no substitute for 35 years of industry leadership. Here are some key attributes:

- Teradata's Cloud solution is a highly integrated, hosted, and managed service that bundles hardware, software, security, and customer service into one complete packaged solution.
- Teradata Cloud is priced as a subscription model, allowing your organization to swap traditional capital costs for monthly operational expenses. You can focus on delivering business value and insight from data, rather than incurring the costs and risks that come from hosting the environment in-house.
- Teradata Cloud gives you the flexibility to grow at your convenience, providing assurance that your business can increase without restraint. Plus, if you choose, you can have Teradata Production and Advisory Services (such as "DBA as a Service") for easy access to expert Teradata analytical and cloud resources.
- Teradata Cloud pricing is all-inclusive, and does not have any hidden costs like most other cloud solutions. There are never any extra fees, or charges for queries, users, data storage, or data transfer.

## Teradata by the Numbers

Over 35 years of innovation and leadership:

- 2,600+ customers in 77 countries
- 10,000+ employees in 40 countries
- More than 130 technology partners
- \$2.5B in revenue in 2015

We are defined by who we work with, which includes:\*

- 18 of the top 20 global commercial and savings banks
- 19 of the top 20 telecommunications companies
- All of the top six U.S. airlines
- 11 of the top 20 healthcare companies
- 15 of the top 20 global retailers
- 14 of the top 20 travel/transportation companies
- 13 of the top 20 manufacturing companies

\* Based on Fortune Global Rankings released Q3 2014.



## Industry Analyst Reviews

- **Gartner:** *“Teradata has continued to evolve its offerings to meet the demands of the changing market, with the Teradata Cloud, Teradata on AWS, and Aster Analytics on Hadoop, which is Aster Analytics running natively in Hadoop. This new approach offers more flexibility to clients and creates the opportunity to adopt Teradata products separately. This is important as organizations look for best fit engineering approaches”.* — Gartner, Inc. 2016 Magic Quadrant for Data Warehouse and Data Management Solutions for Analytics issued February 25, 2016.
- **Forester:** *“Overall, Teradata remains a powerful EDW solution, especially for large, on-premises data warehouses where scalability, security, availability and integration are critical. Teradata continues to deliver high-end, scalable EDW solutions to support any DW requirement, now including expansion to the cloud.”* — The Forrester Wave: Enterprise Data Warehouse, The 10 Providers That Matter Most And How They Stack Up, Noel Yuhanna, December 7, 2015

## Learn More

For more information about Teradata and how our decision support solutions can strengthen your organization’s effectiveness, contact your Teradata representative or visit [Teradata.com/government](http://Teradata.com/government).

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