US Army Corps of Engineers.

Achieving Information Democracy Throughout the Enterprise

The US Army Corps of Engineers started out in the 19th century as a government organization that built coastal fortifications, improved harbors, eliminated navigation hazards on key rivers, surveyed roads and canals, protected natural resources, constructed buildings and monuments, and explored and mapped much of the western frontier. Over the centuries, USACE has grown to become world's largest public engineering, design, and construction management agency, while also getting involved in research and development, military contingencies, humanitarian assistance, environmental protection, and water resource development. Even as the Army Corps' profile and projects have changed over the centuries, its vision has remained the same: to provide a superb engineering force of highly disciplined people working with partners to deliver innovative and sustainable solutions to the United States' engineering challenges. By strategically building an enterprise data warehouse (EDW) on Netezza's data warehouse appliance, USACE relies on Netezza as one of those partners that help it deliver innovative and sustainable solutions.

The Campaign for Enterprise-wide Analysis

Starting in the 1980s and continuing throughout the '90s, the Army Corps embarked on a campaign to modernize its key information systems and IT infrastructure. During this time, the Army Corps began treating data as a corporate resource and some systems were modernized to implement enterprise data standards. However, information exchange, data sharing, and decision support capabilities continued to suffer due to the relative immaturity of supporting industry tools and products. Information system owners continued procuring disparate business intelligence solutions resulting in reduced data quality and increased numbers of point-to-point information exchanges. Multiple versions of the truth and increased resources required to answer simple data calls meant that the Army Corps needed to take action. Realizing that the ability of the Corps to meet its congressionally mandated strategic objectives was being adversely affected by data quality issues, in 2006 the Corps began to explore enterprise-wide solutions that would dramatically increase data quality and trust in its data resource.

Organization Profile:

- US Army Corps of Engineers: world's largest public engineering, design, and construction management agency
- USACE Mission: provide vital public engineering services in peace and war to strengthen US security, energize the economy, and reduce risks from disasters
- USACE Vision: to be a great engineering force of highly disciplined people working with partners through disciplined thought and action to deliver innovative and sustainable solutions to US engineering

Business Challenges:

- Information exchange, data sharing, and decision support capabilities suffered from relative immaturity of supporting industry tools and products
- Disparate BI solutions resulted in reduced data quality, multiple versions of truth, and increased resources needed for simple data calls

Application:

- Global EDW for on-demand operational analysis

Solution Benefits:
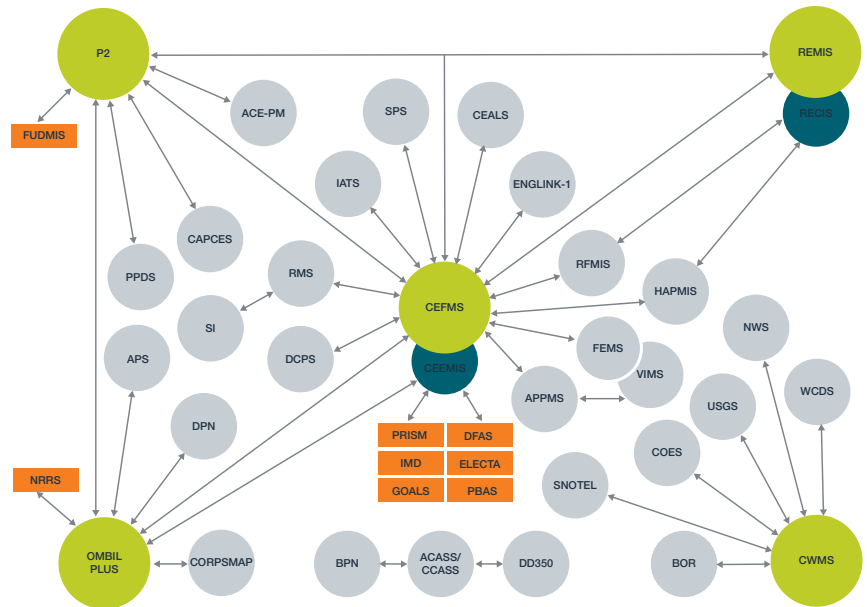
- Dramatically increased data quality and trust
- Real-time, operational analysis enabled from remote locations around the world on 5 years of transaction-level data
- Fast time to value: up & running in one day; full production within 6 months
- Elimination of disparate systems, resulting in billions of dollars of savings

EDW Criteria:
- Accuracy
- Enterprise scale & reach
- Strategic enablement

Here is a graphical representation of USACE's data sharing environment before building a centralized EDW:

A New View

It was abundantly clear that the Army Corps needed to develop a more organized system that would allow users around the world to store, access and analyze consistent and accurate data. The US Army Corps of Engineers came up with the following criteria for its new EDW:

- **Accuracy:** dedicated to the delivery of accurate information to provide advanced decision support

- **Enterprise scale & reach:** central repository for instant access to widely distributed information for analysis and review

- **Strategic enablement:** focus on analysis, planning, managing & forecasting as opposed to recording operations

Even though the US Army Corps has traditionally been an Oracle shop, the organization decided to build its EDW on Netezza due to the appliance's ability to get up and running very quickly with minimal support, and its promises to deliver extremely fast performance.

In comparing Netezza to USACE's in-house Oracle systems, the Army Corps' Chief Technology Officer David Rowson noted, "Netezza runs cooler and gives us fewer problems. We wanted performance and analytics, and that's what Netezza provided."

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Chief Technology Officer
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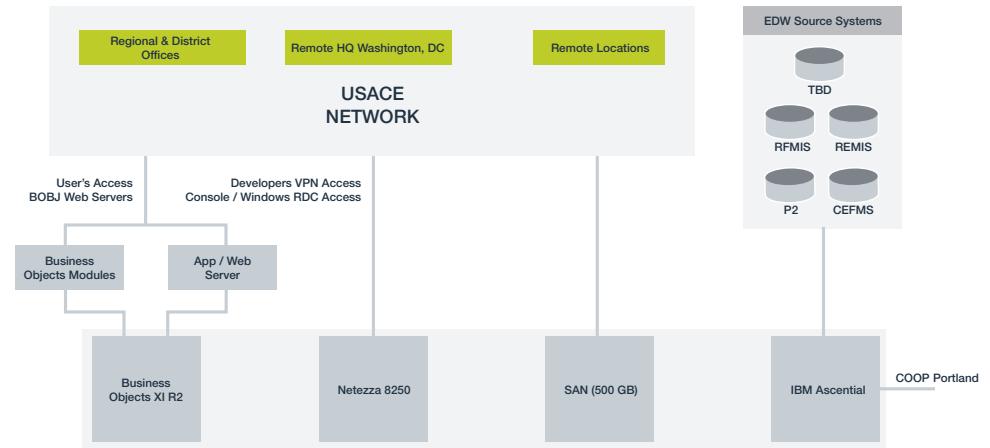
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Delivering on the Promise

True to its word, Netezza delivered an easy-to-deploy appliance solution that could quickly and simply provide users throughout the enterprise with accurate information, leaving them free to spend more time on analysis and less time gathering and reporting on data. Within six months, the Army Corps had a production-ready EDW built on Netezza, using the tools and processes already deployed, and capturing more than five years of transaction-level data from all of its operational data stores.

As Rowson, stated, "The Netezza system has worked flawlessly. It's virtually plug 'n' play. We literally had it up and running in half of one day."

Here's a present-day view of the Army Corps' data warehouse environment:

The Benefits

At a high level, USACE now has the ability to analyze trends instead of just looking at the data. This is allowing the organization to transform into a learning organization, adopting knowledge management at the enterprise level. With its central EDW, the Army Corps has a single source for coded and ad hoc analytical reporting, and users can perform in-depth analyses more readily and with more up-to-date information than was possible in the prior environment. Rowson added, "It's lightning fast. We really like it."

Netezza is helping USACE achieve its goal of "information democracy," meaning the EDW facilitates the sharing of information throughout the organization from a single source of truth. This is critical to success, as the Army Corps has a variety of users from remote locations including Iraq and Afghanistan hitting the Netezza system. "By leveraging a single EDW instead of relying on multiple disparate systems to access information, Army Corps' organizations are saving millions and billions of dollars," said Rowson. Ⓝ

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About Netezza
Netezza (NYSE: NZ) is the global leader in data warehouse and analytic appliances that dramatically simplify high-performance analytics across an extended enterprise. Netezza's technology enables organizations to process enormous amounts of captured data at exceptional speed, providing a significant competitive and operational advantage in today's data-intensive industries including digital media, energy, financial services, government, health and life sciences, retail and telecommunications. Netezza is headquartered in Marlborough, Massachusetts and has offices in North America, Europe and the Asia Pacific region.
For more information about Netezza, please visit www.netezza.com.

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