

# AARP transforms its business intelligence infrastructure

*Achieving a 347 percent ROI in three years from BI modernization effort*

---

## Overview

### The need

Transform a traditional BI infrastructure into a dynamic, blazing-fast environment that helps AARP staff better know its members, accurately match services and product offerings to member needs, and deliver value-added packages to targeted customer demographics.

### The solution

A purpose-built, high-performance data warehouse appliance that makes advanced analytics on very large data volumes simpler, faster and more accessible.

### The benefit

1,400 percent improvement in data loading time; 1,700 percent improvement in report response time; anticipated 347 percent ROI in three years; steady growth in member renewals, acquisitions and engagement.

---

Can having data at your fingertips get you a promotion? Maybe not entirely, but it certainly can help. Consider the case of one analyst at AARP—a nonprofit, nonpartisan organization that helps people age 50 and over improve the quality of their lives—after the organization’s traditional business intelligence (BI) infrastructure was transformed into a dynamic, blazing-fast environment. As in many companies, AARP’s BI environment is critical in helping staff better know its members and determine if its programs are on track.

“When we modernized our BI environment, our analysts could not believe how quickly results were provided—they were so shocked that their work could be accomplished in a matter of hours rather than weeks that, initially, they thought data was cached,” says Margherita Bruni, practice director, Business Intelligence, AARP. “One analyst, who is now a director, told us that he used the extra time for other projects, which ultimately helped him become more successful and receive a promotion.”

## A growing demand for business intelligence

In 2002, the organization first launched a BI initiative that would centralize information (AARP has offices in all 50 states as well as the District of Columbia) and empower its staff with current, relevant, accurate and flexible analytics to:

- Match services and product offerings to membership base and expectations.
- Improve member profitability, retention and acquisition.
- Protect AARP brand image by managing relationships with third-party service providers.

This insight helped fuel AARP’s success and, with this success, came larger data volumes and an increased demand for new analytics.



---

### Designed for Data

- Transformed a 36 terabyte data warehouse into a dynamic, agile business intelligence (BI) platform that delivers near real-time responses to questions concerning core accounts, membership, financial results, campaign performance and market segmentation.

### Tuned to the Task

- Consolidated analytics data and processing on the purpose-built IBM Netezza data warehouse appliance, realizing a 1,400 percent improvement in daily data loads and a 1,700 percent improvement in report response time.

### Managed for Rapid Service Delivery

- Improved service levels enabled a 1.5 headcount reduction in IT support staff, permitting one full-time database administrator (DBA) and half-time SAN network support to be redeployed to other areas of the organization.

### Driving Innovation

- AARP transformed a traditional BI environment into a dynamic, agile platform that has enabled steady growth in member renewals, acquisitions and engagement.
- 

By 2009, the BI team faced a new challenge. Its data warehouse—based on an SQL relational database from Oracle—could no longer keep up with the demand. The team experienced more than 30 systems failures that year. This was both unacceptable and costly.

System performance was a key concern as well. As the data volumes grew, daily loads into the warehouse couldn't be completed until 3:00 p.m.—which affected how long staff had to wait for reports. “Our analysts would run a report, then go for coffee or for lunch, and, maybe if they were lucky, by 5:00 p.m. they would get the response,” says Bruni. “It was unacceptable. The system was so busy writing the new daily data that it didn't give any importance to the read operations performed by users.”

Analysts also couldn't create ad-hoc queries without IT intervention. When IT received a request for a new type of report, the BI team would have to optimize the queries and send a report sample back to the requestors for review. The process, from start to finish, could take weeks to months.

Finally, with more than 36 terabytes of data in the data warehouse, staff found it impossible to back up the system each night. Backups were limited to a few critical tables, making it difficult for staff to create an effective disaster recovery plan.

According to Bruni, if left unsolved, these challenges could have affected AARP's work. “Analytics provide key metrics that are critical to evaluate how well our membership and social goals are being attained,” says Bruni. “It is essential to enabling continuous improvement and decision making to support member needs.”

---

Solution components:

- IBM DB2® for z/OS®
  - IBM® Netezza® 1000
  - IBM System z®
- 

---

*“Analytics provide key metrics critical to evaluate how well our membership and social goals are being attained. It is essential to enabling continuous improvement and decision making to support member needs.”*

— Margherita Bruni, Practice Director, Business Intelligence, AARP

---

## Creating an agile BI environment

As Bruni’s team looked to modernize the BI environment, they evaluated two options—upgrading the existing environment or moving to a single data warehouse appliance. “We found the cost of each option comparable, but only the appliance provided us a paradigm shift in terms of the performance we needed,” says Bruni. “Among the different partners we looked at, the IBM Netezza data warehouse appliance provided the safest bet because it didn’t require the data model fine tuning that other data warehouses do. We were also able to try the solution before we bought it to see whether it really could do everything we needed. Most vendors do not provide this type of ‘try-before-you-buy’ option.”

In building the new environment, the organization adopted a “Scrum” development model, usually used by software developers, to provide a framework that shortens development cycles and speeds time to market for BI requests.

“Using Scrum in data warehousing is kind of unheard of,” says Bruni. “But the basic premise it provides is an agile, iterative process that enables us to rapidly transform our users’ analytic needs into operating reports that show meaningful data.”

Within nine months from the acquisition of its new platform, the team had converted all the scripts and procedures from Oracle Database into the IBM® Netezza® data warehouse appliance. Core accounts and membership data (which resides on an IBM DB2® for z/OS® database running on an IBM System z® server), financial and human resource data from other smaller databases, and campaign analysis and segmentation data from third-party data sources are now loaded in the IBM Netezza data warehouse appliance nightly and accessible via the organization’s BI tools without interruption.

---

*“We have opened a whole new realm of possibilities to our internal customers, who are actually able to create reports on-the-fly and get the results back in a matter of seconds.”*

— Margherita Bruni

---

### Running complex queries at lightning speed

In terms of performance (which was the BI team’s most pressing concern), daily data loads are now completed before 8:00 a.m.—a 1,400 percent improvement—and reports that previously took minutes to run are completed in seconds—a 1,700 percent improvement. The solution also helped compress the data size from 36 terabytes to just 1.5 terabytes, enabling staff to easily backup the data warehouse in only 30 minutes.

Equally important, the nearly 220 membership, human resources, finance, marketing and campaign staff members that use the system can now conduct what Bruni refers to as “train-of-thought analysis”—creating ad hoc reports to test theories regarding membership needs. “The IBM Netezza data warehouse appliance is like driving a Ferrari,” says Bruni. “We have opened a whole new realm of possibilities to our internal customers, who are actually able to create reports on-the-fly and get the results back in a matter of seconds. In the first few months of operation, we saw a huge spike in the number of reports being created—nearly three times the number that we had previously supported. With the deep dive they can conduct now, we’ve seen a steady growth in member renewals, acquisitions and engagement.”

### Achieving rapid ROI

The new platform has also enabled the organization to redeploy IT support staff from the BI group to other areas. Previously, the team needed one full-time database administrator (DBA) along with part-time support from the organization’s storage area network (SAN) and mid-range service teams.

“It’s amazing,” says Bruni. “We no longer need IT support. The IBM Netezza data warehouse appliance is shipped already optimized. Give it power, give it network, and you’re done. It doesn’t need anything else.”

These improvements have enabled the organization to realize a nine percent return on investment in the first year, with an anticipated 274 percent ROI by the second year, and a 347 percent investment by the third year.

“Our initial analysis projected a positive ROI already in the first year—which is very unusual for infrastructure upgrades given all costs are incurrent in the first year,” says Bruni. “Our actual ROI post-implementation was even higher as we completed the swap three months ahead of schedule.”

---

*“After we moved to IBM Netezza, the word spread that we were doing things right and that leveraging us as an internal service was really smart.”*

— Margherita Bruni

---

### Expanding the influence of BI

By modernizing its infrastructure, Bruni’s team has elevated the value and perception of BI in the organization.

“After we moved to IBM Netezza, the word spread that we were doing things right and that leveraging us as an internal service was really smart,” says Bruni. “We’ve gained new mission-critical areas, such as the social-impact area which supports our Drive to End Hunger and Create the Good campaigns, based on the fact that we have such a robust infrastructure and that we changed our approach to business. We can develop in a more agile way from a development standpoint. From a program management standpoint, it shrinks our release cycles from months, which is typical with traditional data warehouse infrastructures, to just weeks.”

### For more information

To learn more about IBM Netezza data warehouse appliances, please contact your IBM sales representative or IBM Business Partner or visit: [ibm.com/software/data/netezza](http://ibm.com/software/data/netezza)

Visit [thinking.netezza.com](http://thinking.netezza.com) to see how our data warehouse appliance eliminates complexity at every step and allows you to drive true business value for your organization.

To increase the business value of Information Management software, participate in independently run Information Management User Groups around the world. Learn about opportunities near you at: [ibm.com/data/management/community.html](http://ibm.com/data/management/community.html). Join the IBM Netezza community at: [www.enzeecomunity.com](http://www.enzeecomunity.com).



---

© Copyright IBM Corporation 2011

IBM Corporation  
Software Group  
Route 100  
Somers, NY 10589  
U.S.A.

Produced in the United States of America  
September 2011  
All Rights Reserved

IBM, the IBM logo, [ibm.com](http://ibm.com), DB2, Netezza, System z and z/OS are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at: [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml).

Other product, company or service names may be trademarks or service marks of others. References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.



Please Recycle

---