



## IDC ExpertROI® SPOTLIGHT

# Major U.S. Department Store Retailer Leverages Oracle Engineered Systems for Greater Business Agility

Sponsored by: Oracle Corporation

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May 2015

## Overview

Recognizing the limitations imposed by its increasingly complex IT environment, a large U.S. department store retailer took action to reduce this complexity and is now reaping the benefits. The retailer embarked on a major IT consolidation and simplification program five years ago that has enabled it to respond faster to a rapidly changing marketplace and better position its IT operations as a business enabler in a highly competitive industry.

A key component of the retailer's simplification initiative was consolidating database operations on Oracle Exadata and Oracle SuperCluster database machines. According to the retailer, it has substantially reduced its capital and operating costs with these Oracle engineered systems while making its IT staff much more efficient. Further, by consolidating on engineered systems optimized for Oracle databases, its IT staff must manage fewer platforms and environments and negotiate and monitor fewer contracts.

These Oracle engineered systems have also provided the retailer with greater IT agility because its IT infrastructure has become a single pool of resources that it can allocate to application development teams immediately rather than forcing them to wait weeks or even months to spin up a new environment. This greatly reduces the time to market for new applications and services, and has increased the retailer's agility in responding to changing business conditions.

In addition to consolidating databases on these Oracle engineered systems, the retailer deployed the Oracle E-Business Suite (Oracle EBS) of enterprise applications to replace a mix of disparate legacy systems on SuperCluster, which has helped it simplify its business operations. As a result of improved performance from the Oracle engineered systems and efficiencies from Oracle EBS, the retailers' employees have become more productive, and it has

### Business Value Highlights

**Organization:** Major retailer

**Location:** United States

**Challenge:** Simplify its IT environment by replacing multiple merchandising systems and consolidating database operations

#### Solution:

- Two Oracle Exadata database machines
- Two Oracle SuperCluster Systems
- Oracle E-Business Suite

#### Three-Year Cumulative Benefits:

- \$27.66 million in business benefits
- ROI of 437%
- Payback in 6.5 months

#### Additional Benefits:

- Avoided \$250 million for additional warehouse resources
- 67% savings in datacenter-related OPEX spending
- \$1.8 million per year in datacenter CAPEX savings

been able to better serve its customers without incurring significant additional costs in areas such as data warehousing resources.

To quantify the benefits of deploying Oracle engineered systems and Oracle EBS, IDC conducted interviews with IT managers at the retailer and asked a series of questions about operations and performance metrics. Based on these interviews, IDC projects that the retailer will achieve total business benefits of \$27.7 million over three years, which will result in a three-year ROI of 437% and a payback period of 6.5 months.

## Implementation

The retailer's deployments of these Oracle engineered systems and Oracle EBS were part of a major investment it has made to gain a business edge in the highly competitive retail market. Its motivation for deploying Oracle Exadata database machines and Oracle SuperCluster engineered systems was to accommodate rapid growth in storage and its application suite, and to consolidate and streamline database operations for improved performance, easier scalability, and lower operating costs.

The Oracle Exadata architecture features scale-out database and intelligent storage servers interconnected by a high-speed InfiniBand internal fabric. The retailer has deployed two quarter-rack Oracle Exadata database machines. Installation of these Oracle Exadata systems took only four days and required less than eight hours of the retailer's IT staff time.

The retailer has also bolstered its IT infrastructure with the deployment of two Oracle SuperCluster systems. Oracle SuperCluster integrates Exadata Storage Servers with SPARC compute servers interconnected across a high speed Infini Band network fabric. The SuperClusters are used to deploy the Oracle E-Business Suite application.

In addition, the retailer replaced a mix of enterprise applications on disparate legacy systems with Oracle E-Business Suite. The retailer considered its software investment to be part of its effort to ensure maximum business agility on its more powerful Oracle engineered systems.

## Benefits

Acquisitions over the years had left the retailer with the challenge of dealing with a variety of legacy merchandising systems, which left it with a complex IT environment that eroded its agility. "When we bought the other retailers we maintained their independent brand names and systems," the retailer's IT manager said. "We ended up with over 500 applications to support." The retailer has found that deploying Oracle EBS on Oracle engineered systems has helped it rationalize and consolidate the applications associated with these inherited merchandising systems both organizationally and within its IT operations. "In the past we also had pockets of IT but we have been able to consolidate them as well with our Oracle solutions," the IT manager said.

The retailer can better scale its infrastructure to meet business needs with Oracle engineered systems in place. The IT manager explained: "Before, I had limited ability to provide new storage so I would haggle and negotiate with our app team when they told me how much new storage they needed. Now I

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The simplified and powerful IT infrastructure running Oracle EBS has also helped the retailer turn its stores into mini-warehouses, giving customers greater flexibility with online orders and expediting delivery while deferring the need to build additional fulfillment warehouses. The IT manager explained how Oracle EBS on Oracle engineered systems has helped: "Previously all orders were fulfilled from our three warehouses. Now a customer can buy online and pick up the order in a store or have it shipped from the nearest store instead of a distant warehouse. It has served us well and increased customer satisfaction because they receive their orders faster. Also, we can ship from a store where the product is not selling well so we don't have to mark down inventory in those locations."

The retailer has also benefited from the improved performance the Oracle engineered systems provide compared with its legacy environment. According to the IT manager, complaints from employees about performance-related issues are down and applications are faster. The IT manager said that "we have very happy customers", and attributed increased employee productivity to more consistent and improved system and application performance with the Oracle engineered systems.

Beyond increased agility and improved performance, the retailer's investment in Oracle engineered systems and Oracle EBS was also leveraged to simplify and consolidate its IT infrastructure to streamline its datacenter-related capital and operating expenses. According to the IT manager: "We have a deep commitment to technology and our IT budget has gone up over the past five years because of investments and improvements we've made, However, if we hadn't simplified our IT infrastructure we would have spent 20% more to support the same capability."

The IT manager said that the retailer has achieved 4 to 10 times consolidation with its two Exadata machines in terms of servers supporting its database operations. This has allowed the company to reduce substantially the number of servers needed to support these database operations. Consolidating its datacenter footprint has also enabled the retailer to avoid hiring IT staff resources. The IT manager noted significant time savings in terms of building up new servers the company would otherwise require to support its database operations.

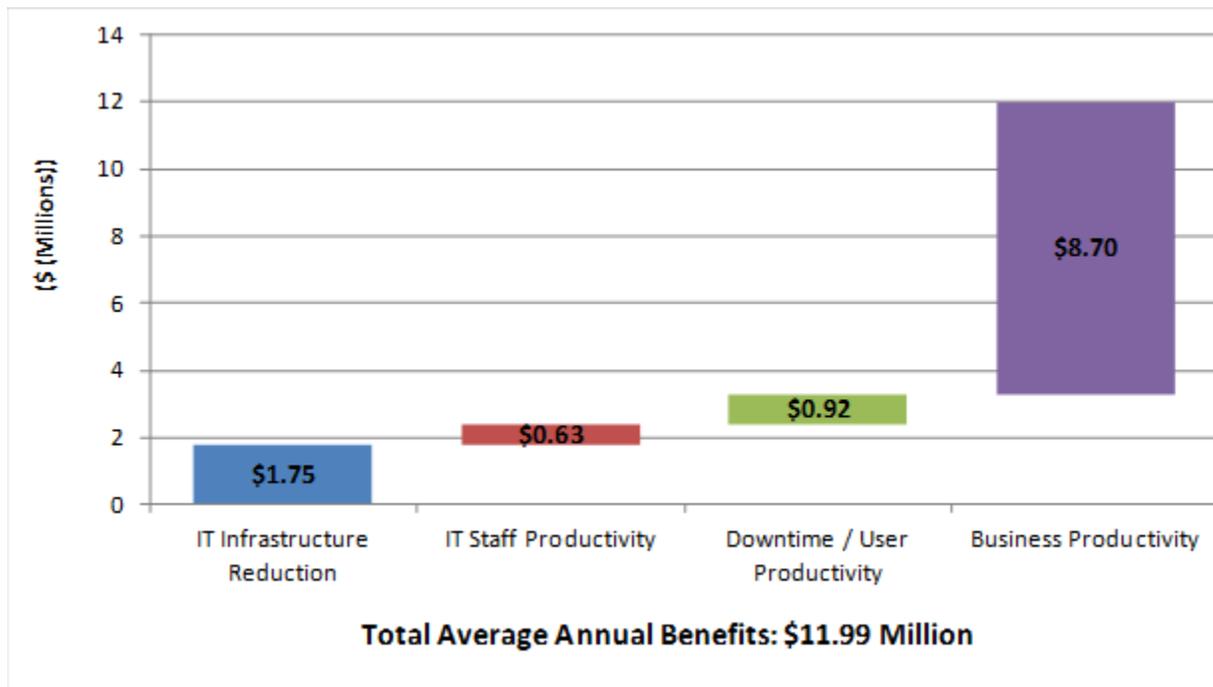
## Quantifying the Benefits

By interviewing the IT managers and asking questions about the retailer's operations before and after deploying Oracle Exadata database machines, Oracle SuperCluster integrated systems, and Oracle E-Business Suite, IDC was able to quantify the savings it is realizing from reduced infrastructure costs, increased IT staff productivity, reduced systems downtime, and business benefits such as higher employee productivity and cost savings from avoiding construction of new warehousing space. When projected over three years, the benefits will average close to \$12 million per year.

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FIGURE 1

Average Annual Benefits



Source: IDC, 2015

**IT Infrastructure Savings**

Consolidating database and business operations on Oracle Exadata database machines and Oracle SuperCluster engineered systems has enabled the retailer to save on server, storage, and network hardware. Consolidation has enabled the retailer to put multiple databases in a single machine, whereas it needed many more servers to host these databases in a more distributed environment. “We were able to retire a whole bunch of earlier generation servers,” the IT manager said. “We had a couple of hundred servers before and reduced the number to about 20, or a tenfold consolidation.”

Projected over three years the savings on server hardware and support and maintenance of retired hardware will average \$875,000 per year. In addition, the savings on power and data center space will add a further benefit of \$37,000 a year on average. Additionally, consolidation has helped the retailer reduce the number of software licenses it requires to support its datacenter operations by moving more workloads from a more distributed environment to these Oracle engineered systems, saving an average over three years of \$512,000 a year.

The retailer is also saving on storage costs thanks to the architecture of its Oracle engineered systems. “With the embedded storage of Oracle Exadata we don’t need any external storage,” the IT manager said. “If I had to buy external storage my costs would be much higher because I would need 100 ports and would have to invest in Fibre Channel.” On average the annual savings on storage and network hardware will amount to \$329,000 a year. In addition, the retailer attributed its deployment of these Oracle engineered systems with helping it convince users of the benefits of thin provisioning for storage after struggling to convince them of its efficiencies and utility.

## ***Business Productivity Benefits***

Because the retailer's consolidated IT environment with Oracle engineered systems performs better than its legacy environment, users are benefiting from improved and more consistent application performance. This translates through to increased employee productivity across substantial numbers of employees, helping the retailer operate more efficiently as its employees become more productive.

In addition, by being able to use their stores as mini warehouses thanks to the power and flexibility of its Oracle engineered systems environment running Oracle EBS, the retailer has been able to defer the huge expense of building additional fulfillment warehouses to support growth in customer orders. The retailer is also now able to better serve its customers by filling orders faster and more efficiently with stores serving as mini-warehouse, which improves customer satisfaction. Further, the retail is making its order fulfillment operations as cost effective as possible by having a variety of options for how to fulfil a customer's order.

Projected over three years, these business-related productivity improvements and cost savings will have an average value of \$8.7 million a year.

## ***Improved IT Staff Productivity***

Since the deployment of the Oracle engineered systems and Oracle EBS, the retailer's IT staff is spending 74% less time on server management and 47% less time on storage management. "We've avoided adding about eight people to our staff," the IT manager said. Projected over three years, the annual IT productivity savings for server and storage management will total an average of \$603,000.

## ***Higher User Productivity***

Because Oracle Engineered Systems are very reliable, the retailer has experienced no unplanned downtime since deployment, and calls to the help desk have dropped from as many as 15 per day to an average of less than one. With fewer outages and less time spent calling the help desk, users are more productive in their work. On average, these productivity savings for LOB users will amount to \$915,000 per year over three years.

## ***Return on Investment***

IDC projects that the retailer will earn total discounted benefits worth \$27.66 million over three years through its deployment of Oracle Exadata database machines, Oracle SuperCluster engineered systems, and Oracle E-Business Suite. It will achieve these financial benefits by reducing its datacenter capital and operating expenses, making its IT staff more efficient, reducing user productivity losses associated with downtime, increasing user productivity through improved systems and application performance, and avoiding costs associated with building out an additional fulfillment warehouse. These benefits compare with a discounted investment of \$5.15 million. As a result, IDC projects that the retailer will earn a three-year ROI of 437% on its investment in these Oracle solutions, and will break even on its investment in 6.5 months (see Table 1).

**TABLE 1**

**3-Year ROI analysis**

Benefit (discounted)	\$27.66 Million
Investment (discounted)	\$5.15 Million
Net Present Value (NPV)	\$22.50 Million
Return on Investment (ROI)	437%
Payback (months)	6.5
Discount Rate	12%

Source: IDC, 2015

IDC interviewed an IT manager at the retailer to quantify the benefits and investment associated with its use of the Oracle solutions discussed in this study and created an ROI analysis based on information taken from these interviews.

IDC calculates the ROI and payback period in a three-step process:

1. Measure the financial benefits directly resulting from the solutions, including decreased IT infrastructure costs, increased IT staff and user productivity, revenue enhancements, and operation cost reductions since deployment.
2. Ascertain the total investment.
3. Project the investment and benefit over three years and calculate the ROI and payback period. The ROI is the three-year net present value (NPV) divided by the investment. Payback period (expressed in months) is the time required to pay back the initial investment and establish a positive cash flow. To account for the time value of money, IDC bases the ROI and payback period calculations on a 12% discounted cash flow.

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