Oracle Exalogic Elastic Cloud: The Logical Choice for Running Business Applications

This paper examines the business impact of implementing Oracle Exalogic Elastic Cloud, a platform for business applications that is pre-engineered and tuned for ultra-fast performance. It focuses on real-life deployments of this Oracle Engineered System across multiple industries, and how it enabled companies to dramatically improve the buying experience for customers, fuel better, quicker decision-making and put an end to infrastructure sprawl and runaway IT costs.

INTRODUCING THE OPTIMAL PLATFORM FOR BUSINESS APPLICATIONS

Businesses are going through a major transition in how they run IT. Tired of funding data centers that keep growing in size and complexity, they want to see better value from IT. Critical customer-facing applications need to be extremely fast, all the time. Instead of taking weeks to deploy new applications, businesses need them up and running in a day. Downtime needs to be a thing of the past. Moreover, IT infrastructures need to pivot in an instant to support new business initiatives without spending more on hardware, software and services.

Oracle Exalogic Elastic Cloud meets these priorities head on. It is a datacenter building block designed to allow enterprises to rapidly deploy and provision mission-critical, high-performance applications in a conventional or cloud model. It is an Oracle-engineered system, integrating compute, networking and storage hardware with virtualization, operating system and management software. For this paper, we talked to several leading enterprises—in the U.S., Europe, and South America—to discover why they made the switch to Oracle Exalogic and what types of benefits they’re seeing. We’ll start with a valuable of Exalogic benefit: the ability to quickly seize market opportunities.

SEIZING MARKET OPPORTUNITIES

Businesses across industries say that Exalogic delivers extremely fast application performance, helping them leverage speed and throughput to gain a strategic advantage in the market. One of the secrets to Exalogic’s high performance is a unique high-speed I/O technology—which Oracle calls Exabus—that connects applications, storage, and networks through an extremely low-latency InfiniBand backplane specifically tuned, optimized and certified for the Exalogic platform.

For the companies we studied, this translated into extremely fast applications and business processes that run as much as 10-times faster. For example, the engineering and testing company UL (formerly Underwriters Laboratory) migrated to Exalogic and immediately saw a 5- to 10-fold jump in speed.
Driving a Better Buying Experience

The ability to run applications orders of magnitude faster can empower businesses in significant ways. For many companies, the extra speed enhances their customers’ buying experience and drives sales growth. Banca Transilvania, for example, was worried that its sluggish commodity server-based infrastructure—the basis of its market-leading credit card business in Romania—might lead to service bottlenecks and turn away customers.

Moving to an Exalogic-based platform solved that issue. “We saw very low latency and high throughput for our key applications,” the bank’s IT director says. Downtime was cut to nearly zero, giving customers uninterrupted access to ATMs, online banking, and other services. Maintaining a fast and satisfying customer experience helps Banca Transilvania attract new business in its target market of consumers and small-to-medium sized businesses. “We’re now a true 24-by-7 business,” the IT director says. “We’ve had very good feedback from customers.”

At Sascar, a transportation-tracking company in Brazil, customers need to access a huge quantity of real-time information to help recover vehicles or loads when goods are lost in traffic accidents or theft. Executives at Sascar say that Oracle Exalogic accelerates application response time and gives their customers instant access to vehicle data they need to make critical, time-sensitive decisions.

A leading measurement-equipment maker, switched to Oracle Exalogic to maximize uptime at its revenue-generating genomics website. The company says the Exalogic platform consistently runs 2 to 8 times faster than its legacy Microsoft .NET platform, with web pages served in 0.15 seconds or less. Uptime jumped from 90% to 99.9%. They eagerly now show off the site to customers and have seen a 4% increase in net new customers. Sales are trending upward, with requests for quotes (RFQs) up 50% over last year. In summary, Exalogic is giving companies the reliability, flexibility, and scalability they need to grow revenue and protect profitability.

Pivoting Faster

Aside from the performance edge, organizations are deploying and provisioning applications faster on the engineered systems platform—a capability that enhancing their market agility. Driving this is Exalogic’s built-in tools to help IT managers quickly configure and provision complex enterprise applications in virtual environments with minimal manual work.

Banca Transilvania, for example, has reduced the time needed to set up CRM applications from more than a week to a couple days. “With Exalogic, there’s no need to retest different configurations and combinations of machines,” the bank’s IT director says. “Standardized configurations and best practices are built in.” Ultimately Exalogic’s speed and flexibility will allow the bank to introduce new products and services ahead of the competition.

“We tried all kinds of different hardware combinations and, in the end, performance drove our Exalogic decision.”

Marius Ursuti, Director of IT, Banca Transilvania
In fact, it was the first bank in its European market to offer Western Union transactions through its ATMs, and is working on rolling out new mobile and big data capabilities. Exalogic’s robust application-deployment platform will underpin these latest initiatives.

Engineering and testing leader UL says it can mobilize its global project teams faster on the Exalogic platform because key business and technical applications can be deployed without delay. This allows the company to “pivot operations” and respond rapidly to market shifts. Similarly, internal business users at the leading measurement-equipment maker say they can access the company’s Exalogic-based genomics website information more easily, driving more informed business decisions.

As the technology landscape evolves with new devices and social media, Oracle Exalogic (and the applications running on it) will help companies keep pace. Companies told us that Oracle Exalogic will enable them to add new e-commerce tenants to the infrastructure as needed and speed rollout of new online stores. UL says that Exalogic is supporting its green business initiatives by enabling it to phase out large N Class servers in favor of just a few Exalogic racks, significantly reducing energy consumption.

**REDUCING RISK**

Organizations face an array of IT-related business risks—from cyber-security threats to system outages—that can hurt revenue flows, brand reputation, and more. The companies we studied were keenly aware of these risks and many placed risk mitigation above revenue enhancement and cost savings on their list of business priorities. For these companies, Oracle Exalogic offered significant value as a platform with built-in protections for sensitive data using “application isolation” techniques that eliminate concerns about running multiple applications on the same system. These protections include InfiniBand partitioning at the hardware level and Oracle Virtual Machine (VM) virtualization at the software level.

Companies implementing Exalogic say that consolidating on a single engineered systems platform makes it easier to ensure compliance with industry regulations and control business risk. Through Exalogic, administrators at the leading measurement-equipment maker now leverage a single tool for managing user identities and system access across the company. “We have just one system of record and no longer worry about doing security checks across multiple layers,” the company’s CIO says. They also use Oracle Traffic Director to manage access to sensitive data in the web tier. By automating application deployment processes, Exalogic brings more reliability and predictability to data center operations. Oracle tools are helping drive efficiency gains for them, and the 30-person development team now implements applications six-times faster.” The ease of implementing the solution was a major decision factor for us—even more important than cost savings,” a company executive says.
“We plan to put everything we do on single frame—the Exalogic platform. Our Oracle technology infrastructure and applications allow us to do more with less.”

Christian Anschuetz, Chief Information Officer, UL

REDUCING COST AND COMPLEXITY

Data centers represent a financial burden for businesses, so it’s not surprising to see them looking for ways to simplify and consolidate these operations. Exalogic reverses the trend toward expanding data center complexity with an engineered systems platform that is easy to manage with a lean staff, allows for hardware and application consolidation, and provides a cost-effective foundation to support business growth. Companies say that with Exalogic they can deploy highly complex applications with what amounts to a “click of a button.”

IT managers at UL, for example, say they can “do things with a single click” that used to require multiple steps and switching between several tools. Efficiencies like these have allowed the global engineering and testing company to handle day-to-day administration of its Oracle platform with a lean staff. “Our new Oracle Exalogic platform grows with UL and scales to handle our most ambitious projects, all with a minimum of staff intervention,” he says.

At Sascar, Oracle engineered systems have helped the fast-growing company establish a unified system with nearly 100% uptime, while reducing its IT staff by a factor of four. And by simplifying its IT infrastructure with Exalogic, the company could reduce training time and effort to an eighth of its former level.

Consolidate, Virtualize, and Save

One way to reduce complexity and cost is by consolidating workloads in virtualized environments. Businesses say that Exalogic’s ability to partition applications using the Oracle VM virtualization solution helps increase density and lower management costs. Banking innovator Banca Transilvania switched to Oracle Exalogic to consolidate applications and increase business efficiency. Now, computing capacity is no longer a concern with processors running at about 35% of capacity compared to 90% in the legacy environment.

UL consolidated its mix of applications on a single Exalogic platform, helping establish a companywide source of data. “We plan to put everything we do on single frame—the Exalogic platform,” a UL executive says. And as the leading measurement-equipment maker shifted from its legacy .NET platform to Oracle Exalogic, it consolidated nine back-end servers and created a 100% virtualized environment for its genomics unit’s online environment. Down the road, managers say the company could consolidate up to 50 systems across the company on the Exalogic platform, saving about $50,000 in server costs. Even more savings will come from lower software license costs as the company takes advantage of sub-capacity “virtual partition licenses.” Similarly transportation-tracking company Sascar replaced 70 servers with an Oracle Exalogic and Oracle Exadata-based platform, eliminating the need for 10–12 servers annually and cutting costs in half.
Built-in Load Balancing

Companies adopting Oracle Exalogic point to the platform’s built-in load-balancing capabilities as one of the keys to positive ROI. The driver here is Oracle Traffic Director (OTD), which manages the flow of data coming into the network’s application and web servers, allowing companies to handle large volumes of application traffic with low latency while requiring no additional hardware or software to run. UL’s CIO says the load balancing feature removes bottlenecks and boosts system speed. “That means UL customers can get information faster and easier,” he says.

The leading measurement-equipment maker relies on OTD—which is optimized for Exalogic—to help run both its web and application environments. For its applications tier, OTD balances complex traffic patterns coming from systems like SharePoint and Oracle Commerce and manages server communications between key business systems. This ensures higher availability of critical applications and adds scalability to support business growth.

Align with Business Priorities

Companies want an IT infrastructure that supports the business—not the other way around. Exalogic is the logical choice because it allows them to prioritize computing resources and IT work according to business goals. Driving this are the platform’s native system-management tools based on Oracle Enterprise Manager, which automate tasks like application deployment and load balancing. The fast-growing Banca Transilvania, for example, has leveraged Exalogic to keep the size of its IT team constant despite a steep rise in transaction volumes, helping push down its total IT ownership costs by 30%.

Brazil’s Sascar, which runs both Exalogic and Exadata, has seen its data center costs decline by 50% despite dealing with data growth of 6 GB per day.

Exalogic maximizes productivity by enabling IT managers to troubleshoot issues faster. Using Exalogic’s built-in Oracle Enterprise Manager, IT teams see a complete view of the software and hardware stack and can pinpoint issues and get users back to work sooner. At the leading measurement-equipment maker, IT managers say that when issues arise, they can troubleshoot two times faster. As a result, they now expects to spend less on support. They publish web content eight times faster with Exalogic and related Oracle solutions. Site updates that used to take a week now take a day. Most importantly, the business-friendly platform allows it to shift web development work from IT to the marketing team, freeing up technical resources to focus on much more strategic technology projects. And after regularly being hit by hardware failures, UL migrated to Exalogic and almost completely eliminated downtime and resulting business bottlenecks. Tightening IT’s alignment with business using Exalogic is paying off for these companies.

“The ease of implementing the solution was a major decision factor for us—even more important than cost savings. Exalogic is a solid solution.”

Director, E-Commerce, Leading Measurement-Equipment Maker
CONCLUSION

In an economy that increasingly runs in real time, companies and organizations need to run applications with practically no latency—and no delays. Oracle Exalogic Elastic Cloud was designed with this in mind, providing a platform for business applications that is pre-engineered and tuned for ultra-fast performance. We are seeing businesses take advantage of this performance edge by deploying applications that help them dramatically improve the buying experience for customers, and deliver data and applications to business users faster, fueling better, quicker decision-making. These same businesses are leveraging Exalogic’s speed and management ease to pivot rapidly and capture emerging opportunities. On top of this, businesses are garnering significant savings with Exalogic, using the platform to drive application consolidation and virtualization, and putting an end to infrastructure sprawl and runaway IT costs. This is why Oracle Exalogic is quickly becoming the logical choice for business applications.

CASE STUDY 1
Banca Transilvania Gains Competitive Edge with Consolidated Exalogic and Exadata Platform to Support Oracle Business Critical Applications

Organization

Founded in 1994 as a commercial bank, Banca Transilvania is a leader in the financial industry in Romania and the country’s first bank to be listed on the Bucharest Stock Exchange. With more than 1.7 million customers, 500 branches, 6,000 employees and $1.7B in annual gross revenues, Banca Transilvania ranks among the top five recognized brands in the Romanian banking and insurance sectors and offers retail and business banking services.

Challenges

Banca Transilvania has been growing at a rapid pace—more than 30% annually for the last five years. To keep up this pace while staying profitable, the bank modernized its core banking applications several years ago, adopting Oracle FLEXCUBE in 2008. More recently executives took another look at Banca Transilvania’s technology infrastructure with an eye to consolidating applications and building a more efficient foundation to drive further growth and profitability.

While Banca Transilvania had existing hardware investments—including a number of commodity servers—the infrastructure’s performance, reliability and costs were less than optimal. The bank was becoming increasingly concerned that strategically important operations, such as its market-leading credit card business, could experience service bottlenecks that might turn off customers and curb revenue growth. New regulations also placed tighter reporting requirements on the bank, further straining IT systems.
“Linking Exalogic and Exadata was perfect. We saw low latency and high throughput. In fact, the combined platform showed four-times better performance than a comparably sized platform.”

Marius Ursuti, Director of IT, Banca Transilvania

Solution

Banca Transilvania set out to design a new business infrastructure that emphasized consolidation, simplification, and flexibility. The platform would provide access to a shared pool of computing resources for its core banking (Oracle FLEXCUBE) and CRM (Siebel) applications, and expand the company’s business intelligence and reporting capabilities. Executives quickly identified Oracle engineered systems as one of the most promising options. Banca Transilvania had previously implemented Oracle Exadata to help run its data warehouse and was impressed with how efficiently the pre-integrated database platform delivered critical business analytics. Now it considered adding Oracle Exalogic to run its banking and credit card applications, as well as its Siebel CRM and Oracle E-Business Suite software, in a highly scalable private cloud environment.

A proof-of-concept demo sealed Banca Transilvania’s decision to go with Oracle Exalogic, proving to managers that a platform based on integrating Exadata and Exalogic would perform four-times faster than a comparably sized commodity-server-based platform and handle more than 90% of Banca Transilvania’s daily point-of-sales banking transactions in less than a second. “Linking Exalogic and Exadata to support Oracle applications was perfect,” said Marius Ursuti, Director of IT, Banca Transilvania. “We saw very low latency and high throughput for our key applications. We tried all kinds of different hardware combinations and, in the end, performance drove our Exalogic decision.”

Figure 1. Banca Transilvania’s Engineered Systems Architecture
Oracle Exalogic enables Banca Transilvania to run its banking and credit card applications, as well as its Siebel CRM and Oracle E-Business Suite software, in a highly scalable private cloud environment.

Today, Banca Transilvania uses Exalogic and Exadata to deploy a range of business-critical solutions, including its core banking application (Oracle FLEXCUBE), CRM system (Oracle Siebel), ERP system (Oracle E-Business Suite), and Oracle SOA-based e-banking application. By running Oracle hardware and Oracle software together, the bank is optimizing its IT infrastructure to deliver better business results. Oracle Exadata handles essential data processing and storage tasks while Oracle Exalogic serves as the platform for deploying and integrating business applications. Currently the platform facilitates 1.5 million banking transactions per day for more than 2 million banking customers. More than 3,000 employees across hundreds of branches work and collaborate on the Oracle platform.

Benefits

Running its Oracle applications on Oracle engineered systems has helped Banca Transilvania achieve its goal of consolidating applications and increasing business efficiency, which in turn is expected to enhance the bank’s underlying value and attract future investment. “We were already a fully satisfied Oracle Exadata user, and now with the addition of Exalogic, we’ve created a highly scalable, reliable, and high-performing environment to run our core Oracle business applications,” Ursuti said.

The performance boost will enable Banca Transilvania to avoid service slowdowns as it deals with a surging volume of banking card transactions. Downtime has been reduced to nearly zero, giving customers uninterrupted access to ATMs, online banking, and other services. Maintaining a fast and satisfying customer experience helps Banca Transilvania attract new business in its target market of consumers and small-to-medium sized businesses. “We’re now a true 24-by-7 business,” the IT director said. “We’ve had very good feedback from customers.” Banca Transilvania has found it can rapidly deploy new applications within Exalogic’s standardized, highly automated environment. For example, the bank has reduced the time needed to set up CRM applications from more than a week to a couple days. “There’s no need to retest different configurations and combinations of machines,” Ursuti said. “Standardized configurations and best practices are built in.”

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<td>Sales Force Productivity (Increased face time for relationship managers)</td>
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<td>Reduction in Number of IT Systems</td>
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Ultimately Exalogic’s speed and flexibility will allow Banca Transilvania to react to market shifts with the timely introduction of new products and services. In fact, Banca Transilvania recently became the first bank in its market to offer Western Union transactions through its ATMs.

**Figure 3. Exalogic and Exadata enable Banca Transilvania to accelerate transactions**

Banca Transilvania is now boosting IT staff productivity and controlling costs by leveraging Exalogic capabilities that automate system management tasks such as application deployment and load balancing. As a result, Banca Transilvania has kept the size of its IT team constant despite large increases in transaction volumes. Overall, the bank estimates that its total cost of ownership has dropped by 30% after consolidating on Oracle engineered systems. Moreover, computing capacity is no longer a concern: Exadata’s processors are running at about 35% of capacity compared to 90% in the legacy environment.

Going forward, Banca Transilvania will rely on engineered systems to support business-critical Oracle applications and new strategic business initiatives while controlling costs through standardization, consolidation, and flexibility. The company is expecting Exalogic will make for the smooth deployment of the latest version of Oracle E-Business Suite, coming soon. Other initiatives are likely to include the rollout of mobile and big data capabilities—all of which will require the robust database and application-deployment platform provided by Oracle engineered systems.
CASE STUDY 2
UL: Using Oracle Exalogic to Unite a Global Business

Organization

UL (formerly Underwriters Laboratories) is a safety consulting and certification company headquartered in Northbrook, Illinois, with offices in 46 countries. UL was established in 1894 and has participated in the safety analysis of many of the twentieth century’s new technologies, most notably the public adoption of electricity and the drafting of safety standards for electrical devices and components. UL provides safety-related certification, validation, testing, inspection, auditing, advising and training services to a wide range of clients, including manufacturers, retailers, policymakers, regulators, service companies, and consumers.

Challenges

Recent years have seen UL enter a new acquisition-driven growth phase. With over 18 acquisitions in a year-and-a-half period and more than 30 acquisitions in just under 3 years, the company is moving quickly into new lines of business and adding thousands of employees. The growth has added to UL’s bottom line, but it has also tested the company’s operational infrastructure. Getting all the business units to work in sync and present a common face to the customer has been a challenge.

A key task is maintaining management and customer visibility into ongoing business projects. However, meeting deadlines is tough due to the diversity of business applications and platforms and the size of the customer base, which includes 66,000 manufacturers worldwide. As it grew, UL found it harder to integrate an increasingly diverse collection of applications and nearly impossible to maintain a single source of data.

“It was time to change the very platform on which we operated,” says Christian Anschuetz, UL’s chief information officer. “We needed a unified IT and business foundation that could consolidate back office systems, scale easily to incorporate new organizations, and create an environment for running essential processes such as issuing quotes, booking orders, and creating invoices.” For UL to be relevant for the next century, the company needed an efficient, affordable way to deploy and maintain its most important business applications.

Solution

UL turned to its technology partner Oracle for a fresh perspective. UL had been running Release 11 of Oracle E-Business Suite on Sun Microsystems hardware to manage core business functions such as human resources, financials, and order management. And while the company wanted to stay with Oracle applications, it needed to start from scratch with a technology platform that supported and integrated a larger and more
diverse organization. “Starting with a clean slate gave us the opportunity to standardize processes and systems, bring all our acquired organizations into the fold, and build a unified collaborative interface with our customers,” Anschuetz says.

UL examined several top-tier vendors for server, storage, and networking architectures that could handle the company’s growth and serve more than 10,000 users. Oracle Exalogic Elastic Cloud, an engineered system for business applications, easily offered the best performance and manageability, with its fully integrated compute nodes, storage and networking, built-in load balancing, and automated application deployment processes. Exalogic’s InfiniBand switched fabric networking decisively outperformed competing systems.

“This was basically a rebirth of the company,” the CIO Anschuetz says, and it required a new vision of UL’s business infrastructure. The new companywide platform would be based on Release 12 of Oracle E-Business Suite and it would leverage Oracle Exalogic for solution development, testing, and production.

**Benefits**

Today UL is beginning to reap the benefits from its Oracle Exalogic initiative. “We’re unlocking the value of our investment by aligning UL’s new Exalogic platform with the company’s business transformation and speed-to-market initiatives,” Anschuetz says. To date, UL has focused on consolidating its business applications on the Oracle Exalogic and Oracle E-Business Suite products. “We plan to put everything we do on single frame—the Exalogic platform,” Anschuetz says. “Our Oracle technology infrastructure and applications allow us to do more with less.”

UL is driving significant operational efficiencies with Exalogic. The company has consolidated its business applications on a single physical platform, standardized on a few key technologies and implemented virtualization to boost operational flexibility and speed. Today, IT managers note they can “do things with a single click” that used to require numerous steps in multiple tools. Efficiencies like these have allowed UL to handle day-to-day administration of the Oracle platform with just a single FTE plus an additional FTE supporting backup tasks.

Another key result is faster provisioning and deployment of applications, which will allow UL to pivot operations to respond rapidly to market shifts. In the pre-Exalogic environment, UL was hit by hardware failures with some frequency, causing bottlenecks and delays to ripple throughout the organization. By contrast, Exalogic’s built-in redundancies and efficiencies help UL keep downtime to a minimum and almost completely avoid end-user impacts.

Managers say the Exalogic system runs about 5 to 10 times faster than the earlier environment. Meanwhile, compute nodes are running at just above idle (1% to 1.5% of peak)—even with as many as 1,000 users online—leaving plenty of headroom for
Consolidating on a single platform makes it easier for UL to ensure compliance with industry regulations and control business risk. Administrators now leverage a single tool for managing user identities and system access across the company.

growth. The performance boost means that UL customers are able get information quicker than before, which should drive better decision-making. The IT group plans to deploy Oracle Traffic Director to balance loads across the platform and further boost application performance. “We have already seen a performance increase and that means that UL customers can get information faster and easier,” Anschuetz says. UL anticipates savings from physically consolidating on a single platform and trimming the resources needed to manage the environment. Due to Oracle Exalogic’s ability to quickly and efficiently deploy environments, the IT group now provides the same level of service to UL’s production and development environments with a smaller staff.

Consolidating on a single platform also makes it easier for UL to ensure compliance with industry regulations and control business risk. Administrators now leverage a single tool for managing user identities and system access across the company. “We have just one system of record and no longer worry about doing security checks across multiple layers,” Anschuetz, UL’s CIO, says.

Moreover, moving to an Oracle Exalogic environment is supporting UL’s green business initiatives; and although the energy cost savings can’t be quantified yet, executives say that phasing out its large N Class servers in favor of just a few Exalogic racks has significantly reduced energy consumption.

**CASE STUDY 3**
**Sascar Fuels Success with High-Performance Engineered Systems Platform**

**Organization**

Offering real-time intelligence to track vehicles, Sascar helps companies with fleet and risk management by monitoring vehicle routes, speeds, mileage, cargo, and passengers. The Brazil-based company manages over 230,000 vehicles for 116,000 customers across 15,000 companies. Its web portal receives approximately 3,000 hits simultaneously on any given day.

**Challenges**

With data volumes exploding at a rate of 6 GB per day, Sascar struggled to scale its information systems platform to keep pace. Vehicle information collected by Sascar generates up to 5,000 messages per second, which flooded the old infrastructure and sent nearly 20% of messages to a backup queue that caused delays. Compute resources were running at near 100% capacity virtually all the time.

To keep pace, Sascar was adding nearly a dozen servers a year. Processing delays were common in this environment, which featured disparate systems spread across
“Oracle Exalogic Elastic Cloud is tailor-made for running Oracle WebLogic Suite and Oracle SOA Suite—on which we run our client-facing web platform—as well as other tools we use to determine vehicle positioning and routes over the past few hours, days, or months.”

Cristian Simons, Systems Development Manager, Sascar

the data center. Rising complexity made it hard for Sascar’s IT team to manage the IT infrastructure. In fact, Sascar needed a team of eight people to manage eight systems running on 70 servers. The servers were unstable and required restarts at least once a week—a process that took as long as 10 minutes. Other issues cropped up every few weeks, leading to late nights and weekend shifts.

Customers were frequently inconvenienced by these maintenance issue and stymied by Sascar’s complex platform, which required customer to access as many as three different server-based systems to monitor their fleet of vehicles. “Many of our clients operate like air traffic controllers, planning risk management for load transportation from the moment of departure until arrival at the destination,” says Cristian Simons, systems development manager at Sascar. “Each company must have a large volume of real-time information to help recover vehicles or loads when goods are lost in traffic accidents or theft.”

Solution

To handle exploding transaction volumes and modernize its IT infrastructure, Sascar started by replacing 70 servers with Oracle Exalogic Elastic Cloud and Oracle Exadata Database Machine. Sascar consolidated its applications on the new IT infrastructure to increase data processing speeds and simplify IT maintenance. The Exalogic platform also provided the foundation for Oracle WebLogic Suite and Oracle SOA Suite to accelerate web response times for customer inquiries.

Benefits

The Exalogic-driven consolidation helped Sascar address structural IT issues such as a lack of storage space and scalability, as well as poor business application performance. It also enabled Sascar to simplify maintenance and improve IT productivity, while the consolidated platform helped Sascar cut hardware costs in half by eliminating the need to buy new servers at a rate of about a dozen a year.

By consolidating applications on the Oracle Exalogic Elastic Cloud, Sascar increased system availability to nearly 100% and now can handle 50,000 messages per second—10 times the capacity of the previous system. And with the web-based Oracle Exadata and Oracle Exalogic integrated solution, Sascar can update the system, fix bugs, and add new functionality as needed—without impacting customers.

Labor productivity has surged: The company has been able to reduce its IT staff by a factor of four. And by spending less time on system management and troubleshooting, Sascar can focus on optimizing the performance and functionality of its core business applications. Furthermore, the simplified Oracle solution allowed Sascar to reduce training efforts to just an eighth of its previous level. Not least, all of these improvements have enhanced the customer experience, giving customers instant access to the vehicle data they need to make fast and accurate decisions on a daily basis.
CASE STUDY 4
Leading Measurement-Equipment Maker Transforms E-Commerce Site with Exalogic

Organization
Scientific research and measurement go hand-in-hand. Without accurate tools to track and measure data, scientists can’t conduct reliable research. To ensure the utmost in measurement accuracy, scientists, engineers, and investigative teams turn to this leading measurement-equipment maker. The company has designed and manufactured instruments and equipment to facilitate research in every aspect of our modern world, including food safety, air quality, drug therapies, cancer research, wireless technologies, GPS, aeronautics, and national defense.

Challenges
While most of the measurement-equipment maker’s products are sold through direct sales, the company’s e-commerce website had the potential to become a lucrative source of revenue. However, the legacy website, built with Microsoft’s .NET platform, was fraught with problems, everything from recurring system failures to the lack of operational flexibility. Usability issues were numerous and ranged from a lack of content, a cumbersome user interface, ineffective search capabilities, and a faulty shopping cart. All of this contributed to a poor customer experience, low user adoption, and lagging site-retention rates. Most customers ended up placing orders by phone.

Solution
The company decided to revamp and modernize its e-commerce site by moving to an Oracle engineered systems platform running key Oracle applications such as ATG Web Commerce, Endeca, and Identity Management—all in a virtualized environment. When utilized as the cornerstone of a full Oracle stack, Exalogic provides customers with pre-integrated hardware, software, compute, storage, and network components for market-leading scalability, reliability, and availability—the very challenges that a leading measurement-equipment maker needed to address.

The equipment maker chose to implement Oracle Exalogic X2-2 in a conventional deployment because it could consolidate multiple environments on a single machine. Using only two compute nodes, deployed all of the website’s environments, including testing and production, in virtualized segments on the same physical rack. The applications were isolated with partitioning, while separate virtual servers were provisioned for Oracle ATG Web Commerce, Oracle Endeca, Oracle Traffic Director (OTD), and Oracle HTTP Server.
Delivered on time and under budget, the genomics e-commerce site was the company’s first web development project to achieve this goal in recent history. Oracle Virtual Assembly Builder, with its efficient application-deployment tools optimized for Exalogic, helped the company’s development team implement the solution six-times faster than with traditional methods.

Benefits

The measurement-equipment maker is already seeing benefits from its Oracle Exalogic platform. Operationally, Exalogic has given it the reliability, flexibility, and scalability it needed to turn its genomics e-commerce site into a stable, productive revenue stream. In addition, by enabling system consolidation and lowering software ownership costs, Exalogic is helping the company save hundreds of thousands of dollars.

The company now has an innovative platform on which to build a competitive web presence; and as the technology landscape evolves with new devices and social media, the full Oracle stack solution will allow the company to keep pace. In fact, the company is expected to earn a net ROI of $600,000 in three years from its Oracle investment. Key benefits include:

- **Dependable 99.9% uptime.** Oracle Exalogic consistently outperformed comparable Microsoft .NET and other hardware servers. As shown in figure 4, Exalogic helped boost uptime of the company’s genomics website from 90% to 99.9%.

- **$550,000 software maintenance.** Since Exalogic requires fewer CPUs to achieve high service levels, the company could purchase fewer software licenses per processor. Exalogic also comes with affordable sub-capacity licensing options, allowing the company to purchase virtual partition licenses rather than an entire compute node, reducing overall maintenance costs by a factor of five.

- **45% increase in e-commerce revenue.** Performance tests of the genomics website on the Exalogic platform are showing extremely fast response times compared to the legacy environment—with pages served in 0.15 seconds or less. Customers can now find products in roughly half the clicks of the previous site. As a result, the company has seen a 4% increase in net new customers and revenue is rising at a 45% rate.

“We were running on legacy technology that we could not scale. Our older systems and platform lacked a lot of features. The innovative capabilities of Exalogic made the decision easy from an IT perspective.”

**Director, IT, Leading Measurement-Equipment Maker**

![Figure 4. E-commerce revenue growth at a leading measurement-equipment maker](image)
ABOUT THIS CASE STUDY

Research and analysis for this study was conducted by Mainstay based on interviews with employees of the featured companies, review of planning documents and searches of industry literature.

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- **Infrastructure Consolidation.** As the company shifted from its legacy .NET platform, it consolidated nine back-end servers and moved to a 100% virtualized environment. The new genomics online infrastructure sets the stage for the organization to expand e-commerce capabilities to other lines of business, ultimately consolidating up to 50 systems on the Exalogic platform.

- **Fast Troubleshooting.** With Exalogic and the built-in Oracle Enterprise Manager, the company now has an application-to-disk view of the entire system. That means when issues arise, IT can troubleshoot two times faster than with other platforms. Simplified maintenance means it should be able to consolidate IT resources within the next two years.

- **Productivity Boost.** Since the leading measurement-equipment maker’s switch to Exalogic, business users say they can more easily access the Exalogic-driven website, enabling more informed business decisions. The Exalogic platform also allows users to publish web content faster—in one hour compared to eight. Site updates that used to take a week via IT, now take just one day. And by shifting web update tasks from IT to the marketing team, technical resources are free to focus on more strategic technology projects.

- **Accelerated Deployment of Future Online Stores.** Deployed in just six months, the genomic website features state-of-the-art architecture, navigation, search capabilities, content publishing functionality, and local support for multiple languages and countries. Moreover, with Exalogic underpinning the platform, the company can take advantage of economies of scale and add new e-commerce tenants to the infrastructure as needed. This will speed the rollout of new online stores and reduce overall deployment costs.