

Gaining New Insights from Data Lakes

Real-life success stories from big data pioneers.



Unlocking the Opportunity Within Big Data

We live in a world where everything we do creates data. There's more and more of it every day, with every purchase, website visit, or smartphone interaction leaving its own data record behind. For you, this can mean more and more opportunities.

This deluge of data, from all its sources and in all its forms, will hold valuable insights; insights that could highlight ways to increase growth, create new sales opportunities, or provide previously untapped options for extending your marketing reach. The hard part is in knowing how to access and action it.

Due to the vast amounts and variety of data—and it's estimated that 2.7 zettabytes exists in the digital universe today¹—finding these valuable insights is no easy task. At least, not without the right solutions.

To succeed in a big data economy, you need the right strategy, platform, and tools that enable you to properly execute it.

This means collecting data from various sources, making sure it is secure and available to those who need it, and finding new ways to analyze it to gain the insights that can transform your business.

¹ MarTech, "Big Data Brings Marketing Big Numbers," martech.zone/ibm-big-data-marketing/.

A Simple, Smarter Way to Deal with Data

Oracle Big Data and Analytics solutions will meet needs of everyone in your organization, from technical users at the IT level to strategic business leaders looking for new insights and opportunities.

This complete, integrated portfolio, available both on premises and in the cloud, provides data collection, management, experimentation and analytic capabilities designed to simplify the process of unlocking value from your data, helping you to meet your short- and long-term business goals and get ahead of the competition.

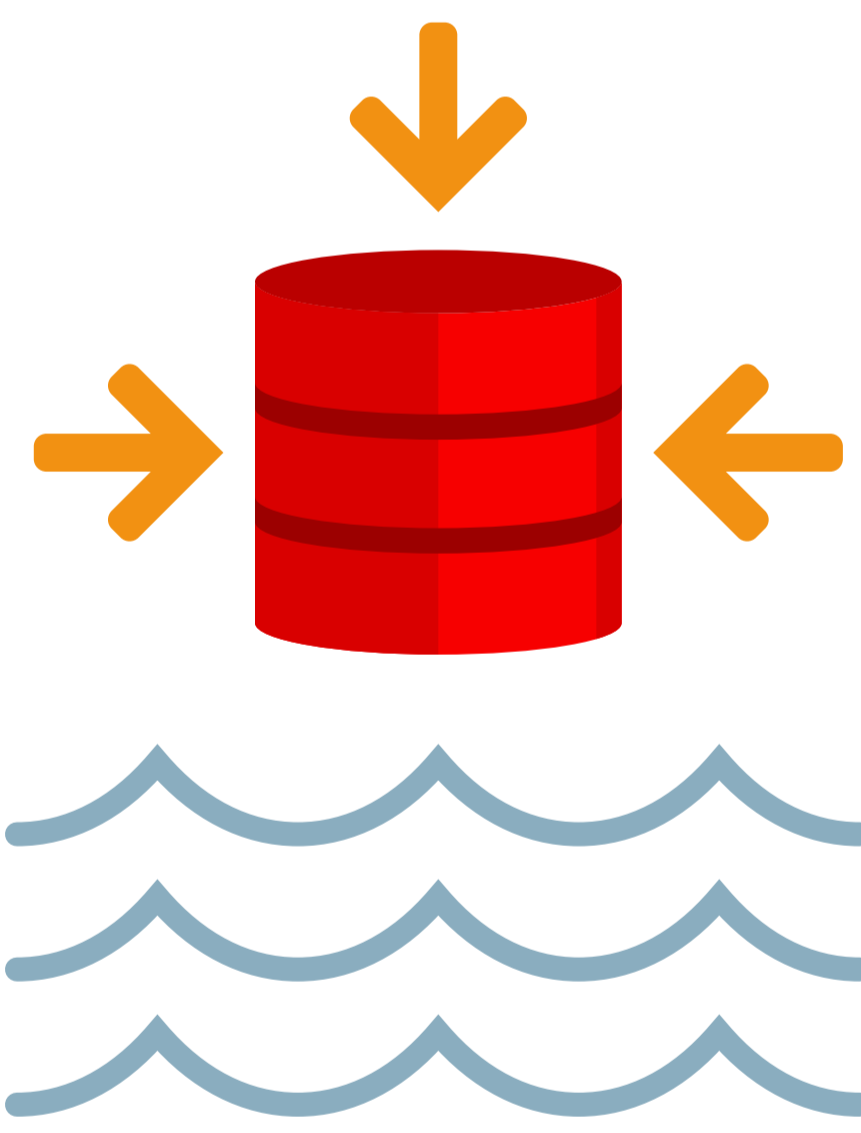
These can help you:

- **Simplify access to all data**—including RDBMS, Hadoop, and NoSQL—quickly and securely for everyone within the organization
- **Unveil new insights** with cutting-edge analytics tools, and predictive and statistical modelling
- **Visualize critical business patterns** anytime, anywhere to spot key trends
- **Power extreme performance** with in-memory parallel machine-learning algorithms, and optimized frequently updated big data services
- **Reduce TCO and simplify management** when used in the cloud
- **Take advantage of the latest in open-source innovation**

Organizations Succeeding with Big Data

Oracle simplifies the process of unlocking the value from all data with a complete, integrated portfolio of big data solutions. Today, we have customers that are successfully:

- [Building data lakes, to simplify access to all data](#)
- [Building data labs, to experiment and identify the hidden value in all data](#)
- Creating new applications to deliver transformational services, addressing
 - [Customer insights](#)
 - [Campaign optimization](#)
 - [Predictive maintenance](#)
 - [Fraud detection](#)



Start Your Big Data Journey

Once you've seen what others have achieved, you can understand why to start your own big data journey.

Your Next Step

Why not build your own data lake, following our self-guided tutorial? This advises how to populate and analyze your data lake based on object storage from a variety of file and streaming sources. You'll also learn how to execute real-time and batch processing with Oracle's managed Spark and Kafka cloud services.

[Discover more](#)

Experience Oracle

You can experience Oracle Big Data and Analytics solutions most easily via Oracle Cloud Platform. If you sign up now, you'll receive US\$300 in free credits towards any services.

[Learn more](#)

Why Cloud?

To understand more about why the cloud is the best platform to transform your business with big data, learn more in our ebook.

[Read more](#)



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Building Scalable Data Lakes

A data lake is the foundation of any big data and analytics solution, combining all sources of data in a single location from which various datamanagement, discovery and analytics actions can take place.

Having this foundation as the basis of your platform can dramatically increase your ability to gain new insights from data and unlock new opportunities for your organization.

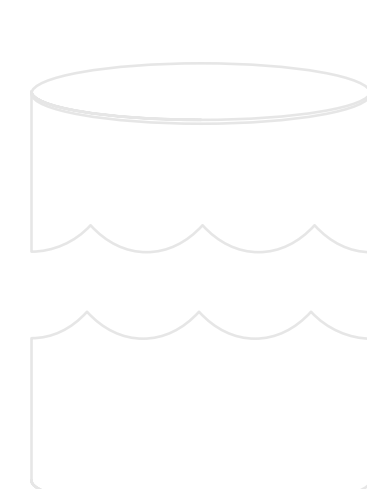
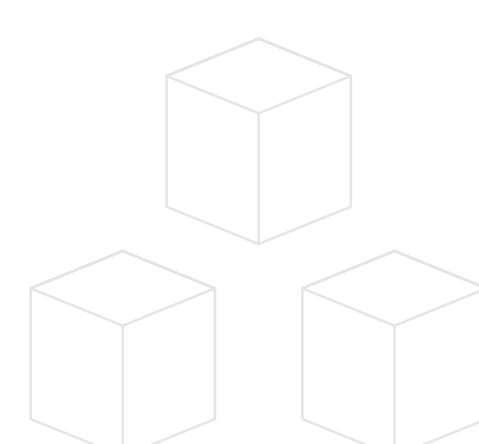
Read the case studies in this section to see how Oracle has helped organizations like yours:

- Consolidate data into a single pool to simplify analysis
- Gain new insights into operational performance and customer behavior
- Define, monitor, and drive business improvements using advanced analytics

mStart

Telefónica

Randstad



m>Start

mStart Improves Customer Experiences While Cutting Transportation Costs

Founded in 2010, mStart is a Croatian provider of business and technological IT solutions oriented towards development, implementation, integration, and IT support for the agriculture, industrial, and retail sectors.

The company is part of the Agrokor food production and distribution group, and has a strong focus on reducing energy usage, water consumption, and carbon dioxide emissions.

The companies mStart serves handle more than one million retail transactions every day. That volume of transactions generates a lot of data, which mStart was eager to put to use.

Challenges

Quite simply, mStart needed to find a new way of extracting powerful insight from its data.

The company wanted to use customer data to improve customer experiences and service delivery; use transport data to reduce costs and optimize supply-chain operations; and use internal data to improve the efficiency of its own processes.

Solutions

By deploying the Oracle Big Data Appliance, mStart increased business agility and gained real-time insight into the activities of more than 2,000 stores serving 1.2 million customers daily in five countries. Those stores can now intelligently make same-day amendments to prices and promotions to boost revenue and optimize inventory management.

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Head of Marketing, mStart



Telefónica

Telefónica Gets a Handle on Its Terabytes of Data

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Telefónica Spain has more than three million convergent fixed and mobile customers, more than 17 million mobile customers, and approximately 40 percent market share in mobile telephony, television, and internet. New technologies that enable the company to analyze audience preferences and then act on that intelligence have been key to a radical revamp of the company's marketing activities and resulting customer-satisfaction ratings.

Challenges

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“ By opting for Oracle Big Data Appliance, Oracle Exadata, and Oracle Exalogic, we reduce costs, ensure a seamless integration with our systems and networks, make better business decisions, and offer more personalized services. ”

Carolina Bouvard Nuno
BI and Transformation Director,
Telefónica Spain



randstad

Randstad Uses Big Data to Put a Big Dent in Unemployment

Founded in the Netherlands in 1960, Randstad Group is the world's second-largest provider of staffing and HR services.

In France, Randstad is among the market leaders, with 3,500 employees in 730 agencies and offices, and annual revenue in excess of US\$3 billion.

Sometimes, improving recruitment can have positive effects; not only for individual businesses, but for whole economies. That's why, when Randstad found a way to match jobs with candidates more quickly, it ultimately had an impact on France's unemployment level.

Challenges

Randstad was in the position to positively affect the job market in France, but doing so would require a lot of data management. The HR company also wanted to expand its range of services to enhance competitiveness, provide decision support for recruiters using historical data and trend analysis, and help it broaden the scope of its searches to find better matches.

Solutions

Using various Oracle products and services—including Oracle Big Data Appliance and Oracle Big Data Connectors—Randstad used big data analysis of job markets to increase competitiveness, develop new staffing services, and form closer bonds with companies and candidates.

The recruiters were also able to match candidates with jobs more quickly, based on proven data. And, in working with local government bodies, it attracted investment to set up training programs, helping to reduce overall regional and national unemployment.



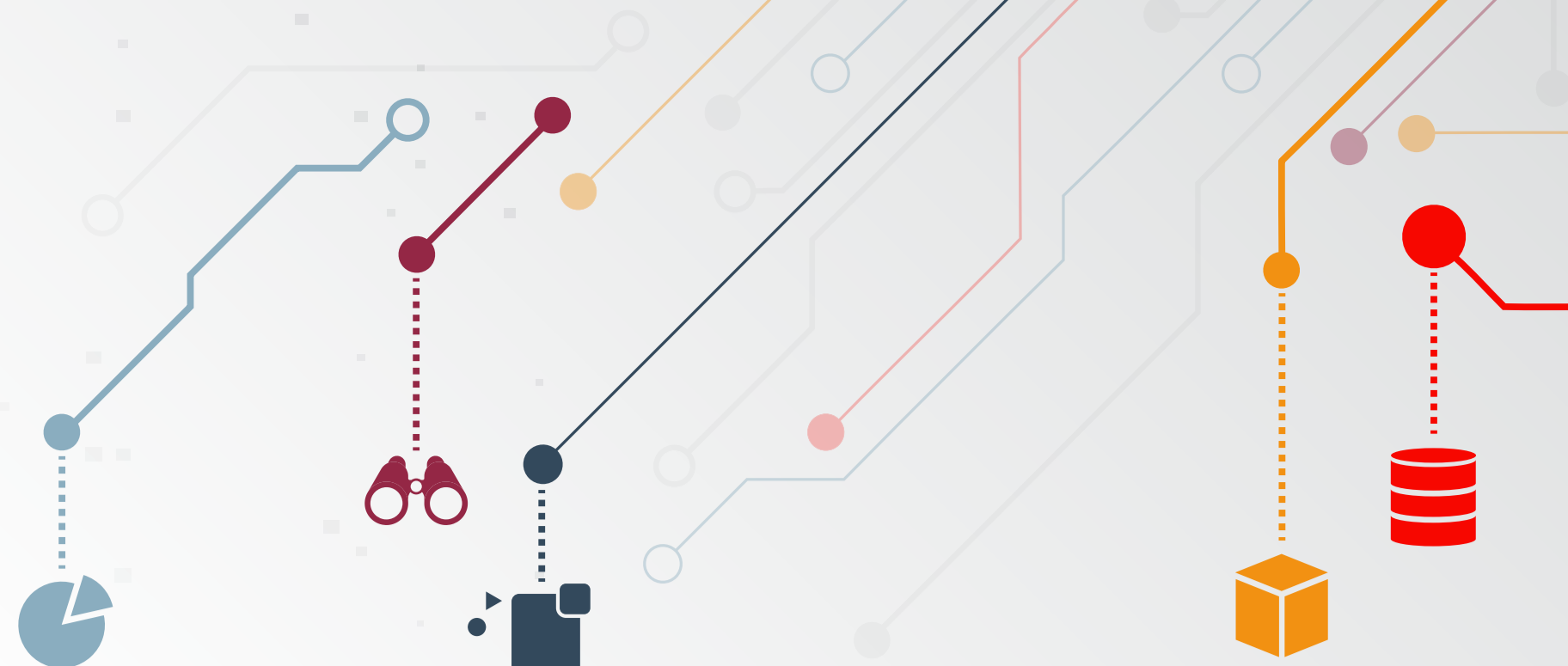
“ Thanks to Oracle Big Data Appliance, our staff can recruit better-suited candidates faster. The detailed analytics provide a distinct competitive edge, not only for Randstad but also for our clients and candidates across all job functions and industries. ”

Christophe Montagnon
Director of Operations, Information Systems and Quality Control, Group Randstad France



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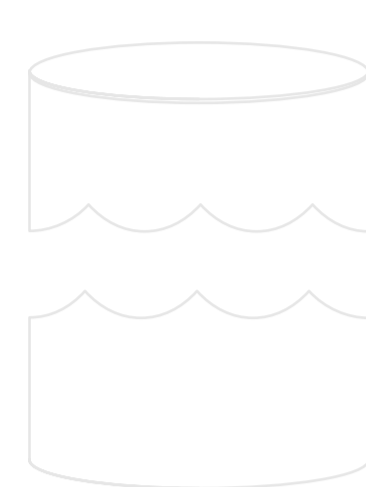
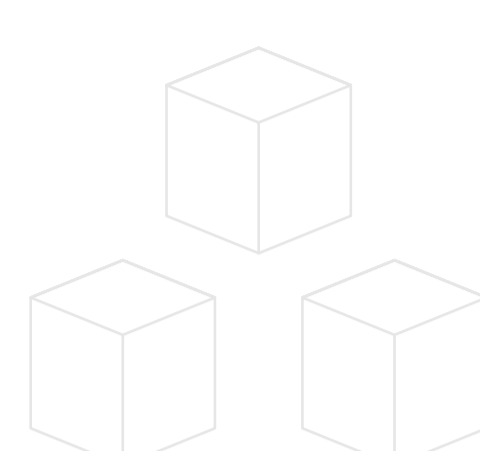
Building a Data Lab

A data lab is an incubator for innovation that enables fast experimentation with massive amounts of data. This allows you to discover, manipulate, visualize, and iteratively model data, and explore it for its potential.

Data labs can scale seamlessly, giving you the freedom to collaborate as a team, share insights, and conduct further experimentation as and when you need to. Data labs help the analyst or business expert work as part of a team with the data scientist. One knows the business and the potential of the data; the other knows machine learning and algorithms, and how to apply them.

Read the case studies in this section to see how Oracle has helped organizations like yours:

- Use simulation tools to experiment with petabytes of data
- Improve disaster recovery thanks to lab-based simulations
- Identify potential savings of more than US\$156 million



CERN

NHS Business Services



CERN Tests Big-Data and Cloud Technologies in Support of its Ground-Breaking Physics Research

Established in 1954, CERN (the European Organization for Nuclear Research) is the largest particle-physics laboratory in the world. Most famously, CERN is home to the Large Hadron Collider, the most powerful particle accelerator in existence.

CERN uses big data, cloud computing, and analytics to help researchers unravel the mysteries of the universe, one petabyte at a time. CERN has been a long-term user of Oracle solutions, such as the Oracle database since version 2.3. Since 2003, CERN and Oracle have also partnered to drive innovation in ICT through CERN openlab.

Challenges

The Large Hadron Collider is one of the most complex machines ever built. In addition to the petabytes of physics data it produces by smashing particles together at close to the speed of light, its control systems produce vast quantities of systems-monitoring information. Analyzing these data streams — and extracting key insights — is vital in making sure researchers at the laboratory are able to continue pushing back the frontiers of our knowledge about the universe.

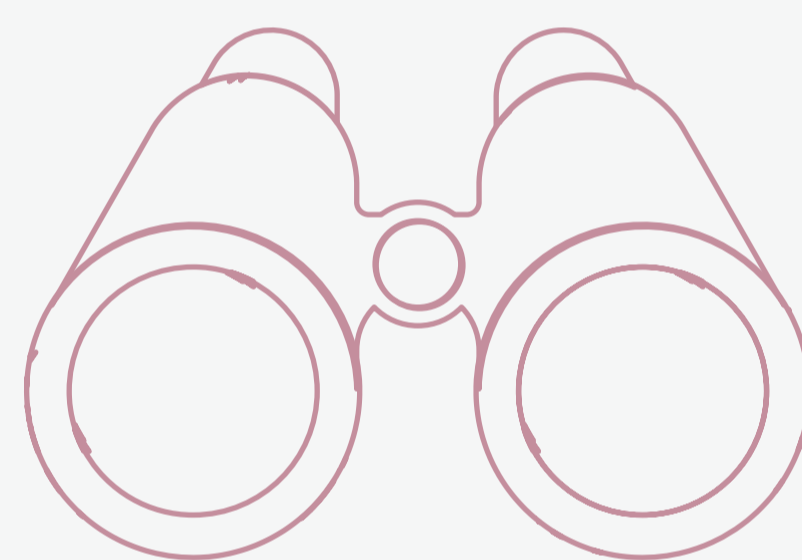
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Johannes Gutleber
Senior Engineer, CERN



NHS Identifies Potential Savings of US\$156 Million Using Advanced Analytics

The NHS (National Health Service) is the largest and oldest single-payer healthcare system in the world. It provides healthcare to every legal resident in the United Kingdom, and free emergency treatment for everyone, including visitors.

The NHS Business Services Authority learned to make the most of its data thanks to new Oracle learning labs, and identified huge potential savings.

Challenges

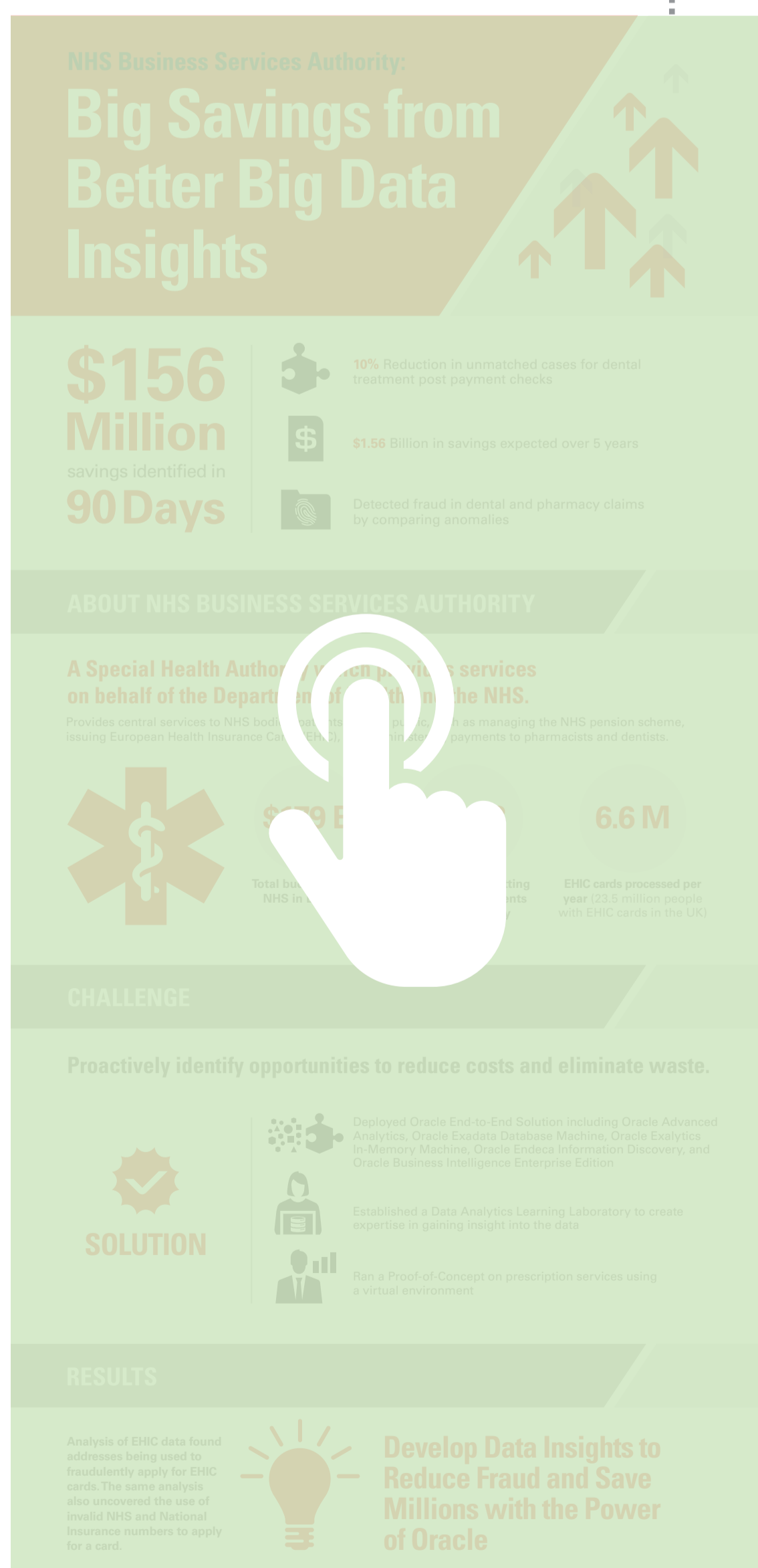
Providing centralized services for the NHS—which is responsible for delivering healthcare to 65 million citizens—is no easy task. With so much data on hand, the Business Services Authority wanted to find a way to maximize its value.

Solutions

Using Oracle Advanced Analytics, Oracle Business Intelligence on Oracle Exadata, and Oracle Exalytics, the Business Services Authority set up a Data Analytics Learning Lab to gain more insight from its data.

Within three months of operation it had reworked processes for European Health Insurance Card applications, used anomaly detection to identify and prevent fraud, and analyzed text to measure employee satisfaction and engagement related to sick leave.

Most importantly, the organization was able to optimize treatment while reducing the use of less-effective medical procedures, and identify potential savings of US\$156 million.



“ The overall solution is very fast, and our investment very quickly provided value. We can now do so much more with our data, resulting in significant savings for the NHS as a whole. ”

Nina Monckton
Head of Information Services, NHS Business Services Authority



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Improving Customer Insights

Insight into customer behavior is fundamental to success, supporting and driving the customer-experience initiatives that can provide significant competitive advantage.

These insights hinge on the fast and accurate analysis of customer information to help better understand needs and deliver the personalized interactions today's consumers expect.

Read the case studies in this section to see how Oracle has helped organizations like yours:

- Gain a 360-degree view of customer behavior
- Speed customer loyalty analysis from one week to just four hours
- Monitor over 100 different customers a day

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Wargaming.net

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BI and Transformation Director,
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WARGAMING.NET

LET'S BATTLE

Wargaming.net Sees a 63 Percent Increase in Revenue Through Big Data Analytics

Wargaming Group Limited is an international game developer and publisher headquartered in Cyprus, where it operates across 16 offices and development centers. It hosts games for over 100 million players.

Wargaming.net set out to uncover which characteristics make people more likely to pay for their online games, then target those users with appropriate messaging to make them convert.

Challenges

With over 100 million players and 300 billion events a day, Wargaming.net had huge amounts of data to monitor so it could appropriately target its pay-to-play users.

Solutions

Wargaming.net deployed Oracle Advanced Analytics and Oracle R Advanced Analytics for Hadoop on Oracle Big Data Appliance and Oracle Database Appliance.

The company is now able to quickly understand and segment players, correct gameplay problems, and deliver the right messaging to the right players at the right time.

So far, Wargaming.net has used this capability to correct a problem in gameplay that was causing dropout among those players most likely to pay, increasing chances of conversion by 42 percent. The company also managed to increase revenue by 62 percent in one region.



“ I can say fairly confidently that Wargaming now has the leading-edge team of data warehousing, data engineering, and analytics solutions over any other gaming company in the world. ”

Craig Fryar
Head of Business Intelligence
Wargaming.net



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Enhancing Campaign Optimization

Modern marketing takes place over more channels than ever before, which leaves many organizations struggling to know where to invest and how to measure the effectiveness of their efforts.

The only way to overcome this is to gain clear insight into what's working and what isn't, and use that information to decide the channels to use in future campaigns.

But, without the right solutions in place, this can be a huge ask.

Read the case studies in this section to see how Oracle has helped organizations like yours:

- Segment customer data in real time to improve marketing accuracy
- Increase chances of conversion by 42 percent
- Increase revenue by 62 percent in a single region

DX Marketing

StubHub

Telefónica

Wargaming.net

DX Marketing

Intelligence. Accelerated.

DX Marketing Accelerates Analytics Project Delivery by 70 Percent

DX Marketing utilizes over 700 million offline and online behavioral profiles and more than 45,000 data segments to build targeted audiences and marketing strategies that companies can use to communicate effectively with households across the United States.

DX Marketing was the winner of the 2016 Oracle Cloud Platform Innovation Award for Data Management.

Data and analytics underpin DX Marketing's core operations and services. To help customers target their audiences effectively and reach people with the right messages through the right channels at the right time, DX Marketing needs to extract powerful insight from huge volumes of data at speed.

Challenges

With the volumes of data it handles constantly increasing, DX Marketing needed a scalable big data and advanced analytics platform, equipped to handle hundreds of millions of records—and more as the company and its database grows.

The platform also needed to be highly secure, so that sensitive customer data was protected—a particular concern for healthcare clients that make up 25 percent of DX Marketing's business.

Solutions

By deploying Oracle Database Cloud Service (including built-in Health Insurance Portability and Accountability Act compliance), Oracle Advanced Analytics, Oracle Marketing Cloud, and Oracle Business Intelligence Cloud Service, DX Marketing gained a scalable, robust, and secure environment for its direct marketing solutions.

Oracle Advanced Analytics now ensures faster analysis, profiling, and modeling, helping DX Marketing to decrease time to market for customer campaigns by up to 70 percent—from four to six weeks to just three days.

“With Oracle Cloud and Oracle Advanced Analytics, we have incredible amounts of data at our fingertips, and can extract knowledge and discover new insights that help propel our business forward.”

Michelle Plecha
PhD, Data Scientist, DX Marketing

StubHub

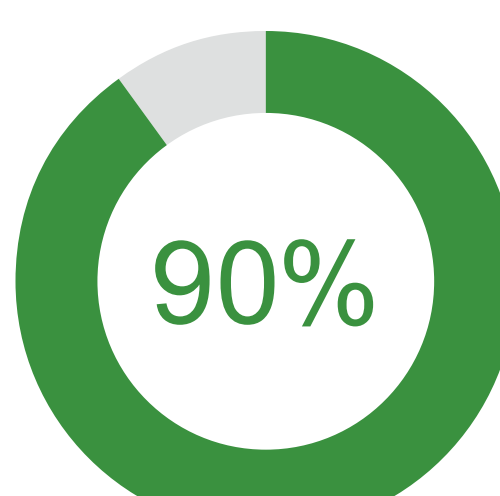
StubHub Gains New Insights into Customer Behavior and Fraud Detection

Owned by eBay, StubHub is the world's largest ticket marketplace, enabling fans to buy and sell tickets to tens of thousands of sports, concert, theater, and other live entertainment events.

Using real-time analytics, StubHub gained fresh insights into customer behavior and potentially fraudulent activity.

Challenges

In 2000, StubHub reinvented the ticket resale market, and now it's looking to increase its competitive advantage. The company wanted to utilize big data and real-time data analysis to provide tailored product recommendations and customer service, improve churn prediction, and spot possible instances of fraud early on.



Solutions

Using Oracle Database options, including Oracle Advanced Analytics and Oracle Partitioning, StubHub was able to store information about its millions of customers—coming from 25 data sources—in a single data warehouse.

From here, data scientists work with customer data inside the database, exploring it graphically and using multiple tools to drive predictions and insights. This has dramatically improved StubHub's agility and responsiveness.

Finally, as well as developing highly targeted promotional campaigns and offers, StubHub has been able to reduce a known fraud issue by up to 90 percent using Oracle Advanced Analytics.

“Today, we have a cohesive set of solutions for big data analysis that help us acquire the data we need, discover new insights, make improved business decisions, and scale associated information systems for ongoing analysis.”

Brian Motzer
Principal Database Administrator, StubHub

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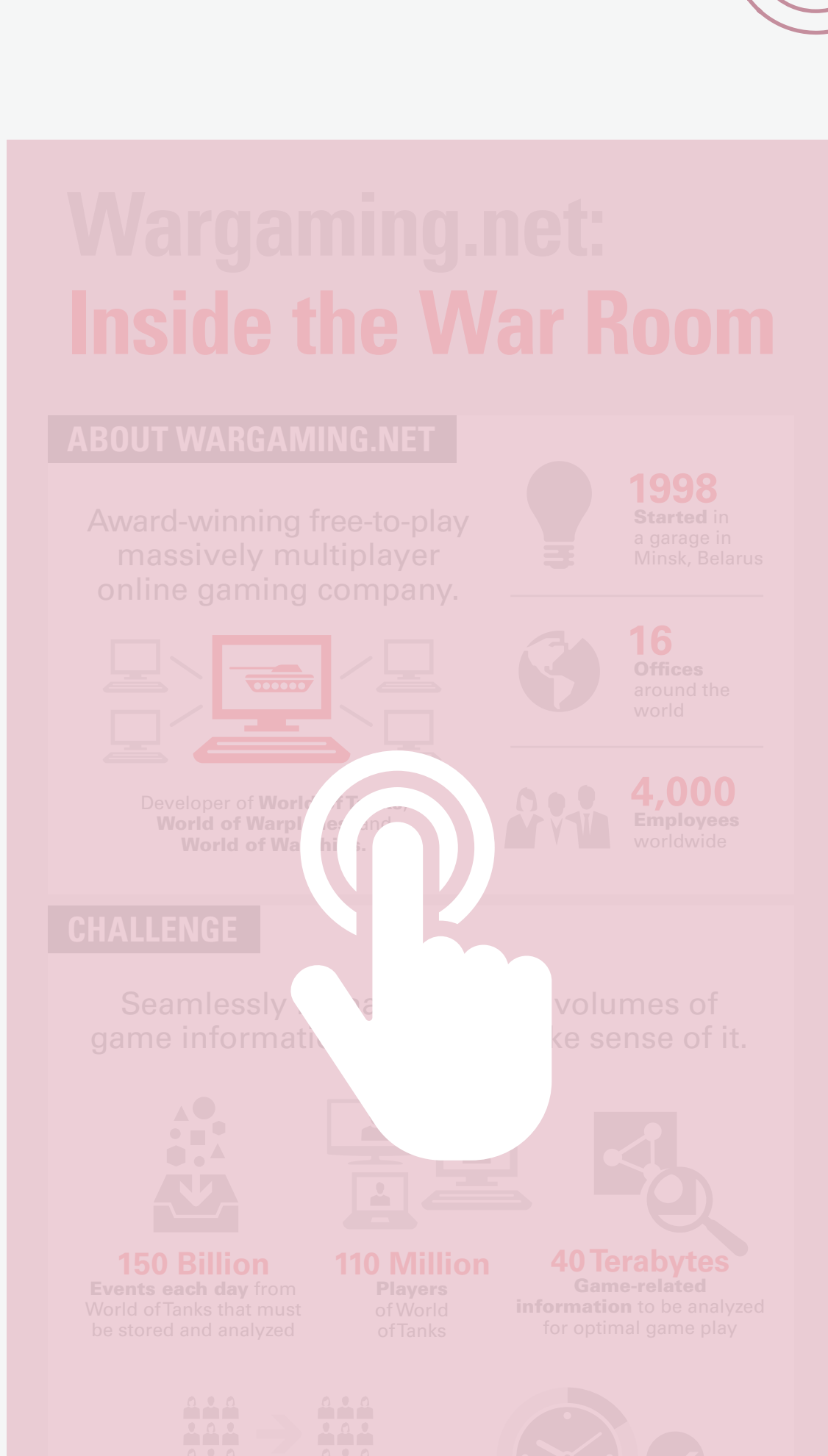
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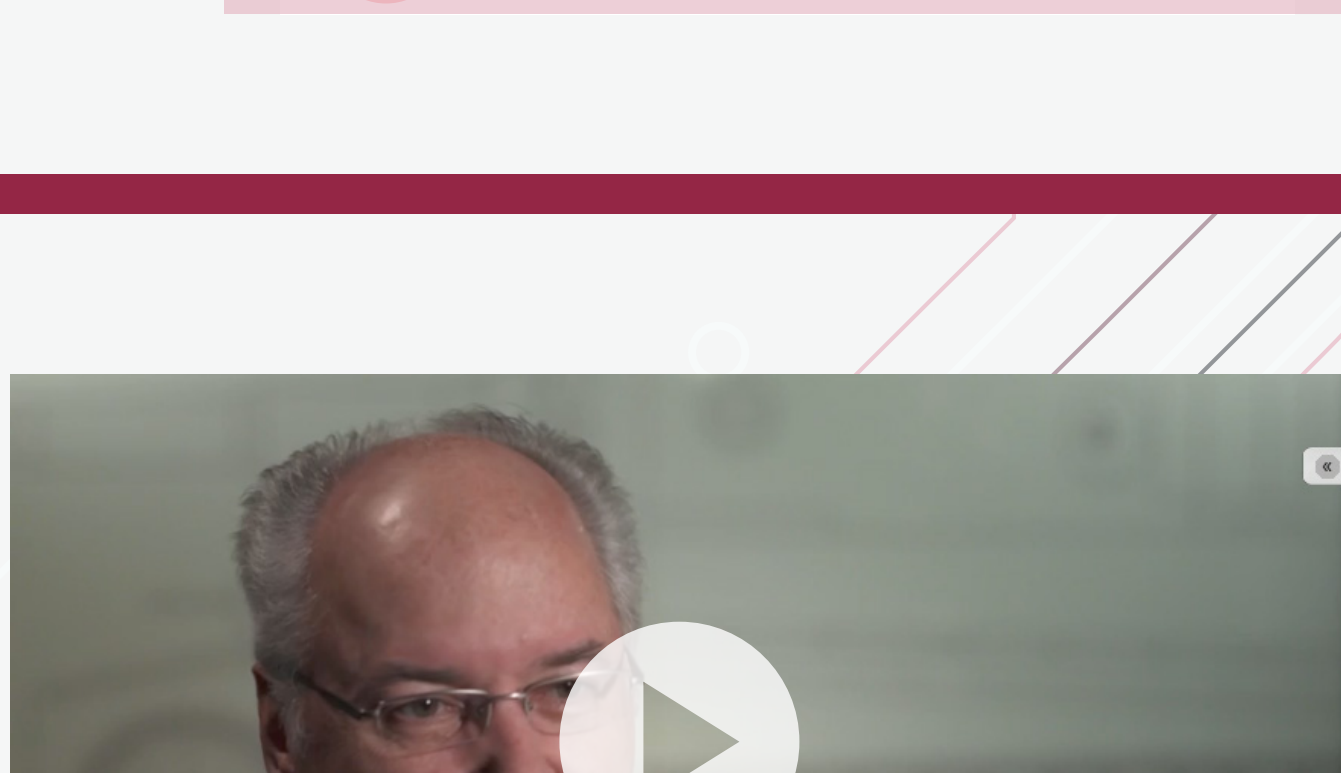
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Enabling Predictive Maintenance

For asset-intensive industries, such as manufacturing or utilities, one of the biggest challenges is ensuring mission-critical plant and equipment continue to operate at maximum efficiency so that customer-service commitments are met.

The most effective way to do this? Moving from reactive to proactive maintenance.

Predictive maintenance creates new business opportunities for enhanced service contracts, usage-based payment, and delivery of reliability as a service—but to achieve any of these things, you need to be able to make the most of the data.

Read further to learn how some leading organizations are working with Oracle to:

- Use simulated environments to predict fault conditions and improve disaster recovery
- Ensure consistent and superior product quality in production environments
- Reduce warranty and service costs, and minimize roadside breakdowns in commercial fleets

CERN

GEMÜ

Lochbridge



CERN Tests Big-Data and Cloud Technologies in Support of its Ground-Breaking Physics Research

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Johannes Gutleber
Senior Engineer, CERN



GEMÜ Group Improves Processes with Real-Time Insights

Founded in Germany in 1964, GEMÜ Group is a global leader in the manufacture of valves and measurement and piping products for the process media industry.

GEMÜ Group employs over 900 employees in Germany, and more than 1,600 worldwide. It currently manufactures at sites in Germany, China, Brazil, France, Switzerland, and the USA.

GEMÜ Group deployed Oracle IoT Cloud Service to integrate real-time and historic data insights into applications and processes across the entire business.

Challenges

As a global manufacturer of valves and products for the process industry, GEMÜ Group needed a way to ensure consistent and superior product quality and safety across all aspects of production.

Product servicing is of huge importance to its ongoing success, having a direct impact on the lifecycle performance of its goods and the safety of its teams.

Solutions

To achieve its goal, GEMÜ Group deployed the Oracle IoT Cloud Service to apply real-time and historic data insights to the group's processes and applications—all housed in a single, cloud-based encrypted solution.

As a result, GEMÜ Group can now deliver superior product quality and employee safety. With an integrated solution, staff can easily monitor and maintain production quality, exchange critical and core components when flagged, and use newly analyzed data to make ongoing improvements to processes.

“ Lifecycle performance is one of our key issues on site. We need to maintain the quality of production and components, and this means regularly exchanging critical and core components. ”

With Oracle IoT Cloud Service, we can analyze these components, and link the data back to the service portal. It's all paperless, allowing us to get better results, deploy alerts, and keep data encrypted and secure.

Werner Flögel
Manager, Electronics and Product Management, GEMÜ Group



Lochbridge Reduces Costs and Improves Customer Experience

Lochbridge is a technology consulting and services provider specializing in the Internet of Things. It helps transform businesses by leveraging emerging technologies and its almost 20 years of Connected Car experience.

Lochbridge helps its clients map their connected journeys, build connected innovations, and turn connected data into insights upon which they can act to enhance customer experience, drive revenue and cost-efficiency, and improve product quality.

Challenges

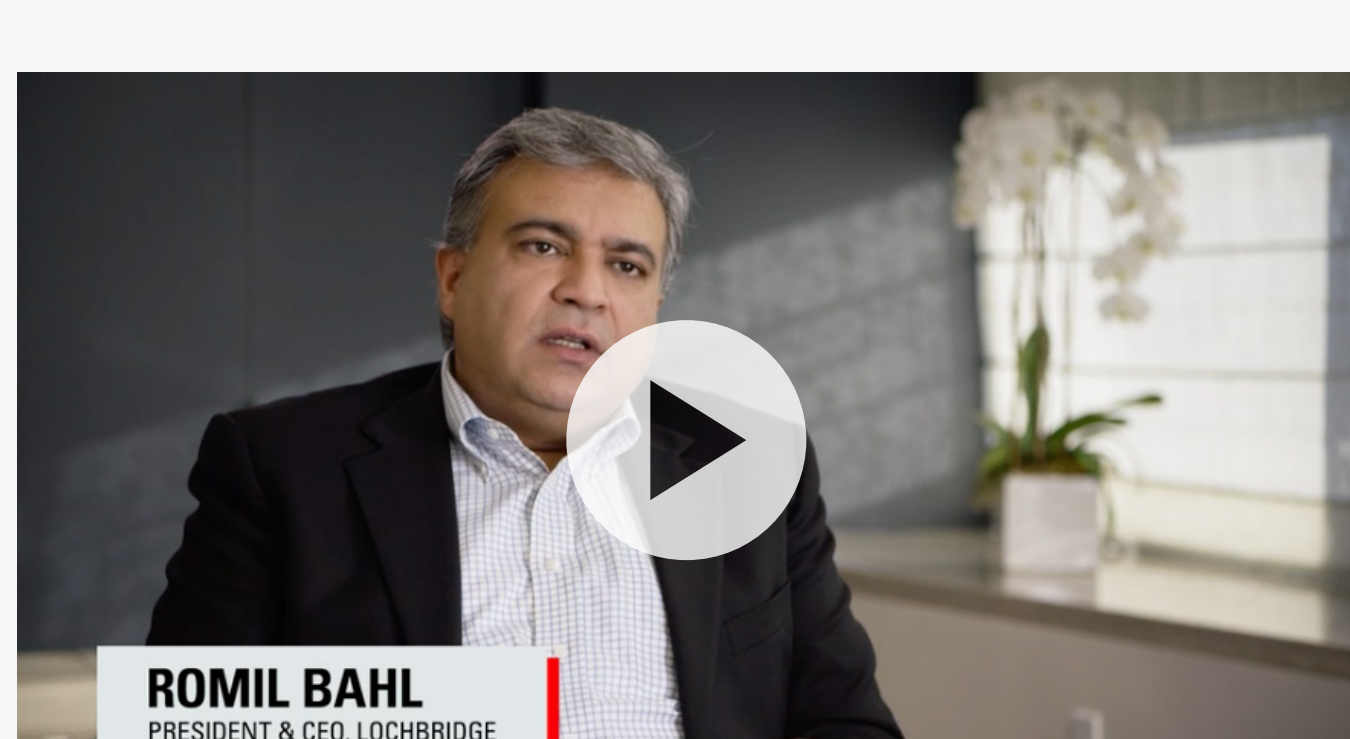
Lochbridge wanted to help its manufacturing customers reduce warranty costs, minimize breakdowns, and drive proactive service management. Lochbridge's IoT technologies and subject matter experts knew the best way of doing this was by connecting smart products and converting connected data into insights to carry out predictive maintenance in a cost-effective way.

Solutions

Lochbridge has implemented solutions on Oracle Cloud (diagnostics as a service, asset tracking as a service, and risk analytics as a service) to help connect and monitor smart products in real time, study their health, and predict service needs.

Not only do the solutions share information about what is happening now; they also inform customers what is likely to happen next, using prognostics (predicting future events based on data mined).

Ultimately, Lochbridge was able to reduce costs, maximize its offering, and improve customer experience.



Gaining New Insights from Data Lakes

Real-life success stories from big data pioneers.

Advancing Fraud Detection

With machine learning and graph analytics, a lot of big data today is being used to examine and detect different types of fraud across a wide range of industries.

Once a type of fraud has been detected, data insights can be used to ensure its continuous prevention—so long as tools are in place to quickly collect and analyze the right information.

Read further to learn how some leading organizations are working with Oracle to:

- Reduce occurrences of a known fraud issue by up to 90 percent
- Rapidly analyze petabytes of data to reduce risk
- Use advanced anomaly detection to prevent fraud

An Post

NHS Business Services

Stubhub

Turkcell



An Post Gives Its Postal Service a Boost with Big Data and Analytics

An Post is Ireland's national postal service and one of the country's largest companies, providing a wide range of parcel and postal distribution, communication, retail, and financial services.

Challenges

As one of Ireland's largest and most reputable companies, An Post had big plans. Firstly, it wanted a solution to help seamlessly manage its millions of transactions every day; secondly, it wanted to offer new services to its customers to meet the increasing demands on modern post offices.

The company also wanted to enhance management reporting across operations, finance and HR, enabling real-time detailed insights across the business and improved efficiencies.

Solutions

An Post deployed a big data and analytics platform using Oracle Exadata Database Machine, Oracle Advanced Analytics, and Oracle Database 12c innovations. Together these solutions enabled readily available, enterprise-wide business analytics used to define, monitor, and drive business improvements.

The platform was also set up to reduce time to value on the company's data capital, and—all importantly—to combat any instances of fraud.

The result was a real-time overview of An Post's entire operations and the automatic consolidation of data from the largest electronic network in Ireland.

Oracle helped An Post consolidate data from the largest electronic retail network in Ireland, involving millions of daily transactions from 1,100 post offices.

“ We always look first to Oracle for all our IT needs because its products cover the complete stack. Only Oracle Exadata, running Oracle Database 12c innovations such as Oracle Multitenant, is able to fulfill the needs of our incredibly data-driven business, handling millions of daily transactions. ”

John Cronin
Group Chief Information Officer, An Post



NHS Identifies Potential Savings of US\$156 Million Using Advanced Analytics

The NHS (National Health Service) is the largest and oldest single-payer healthcare system in the world. It provides healthcare to every legal resident in the United Kingdom, and free emergency treatment for everyone, including visitors.

The NHS Business Services Authority learned to make the most of its data thanks to new Oracle learning labs, and identified huge potential savings.

Challenges

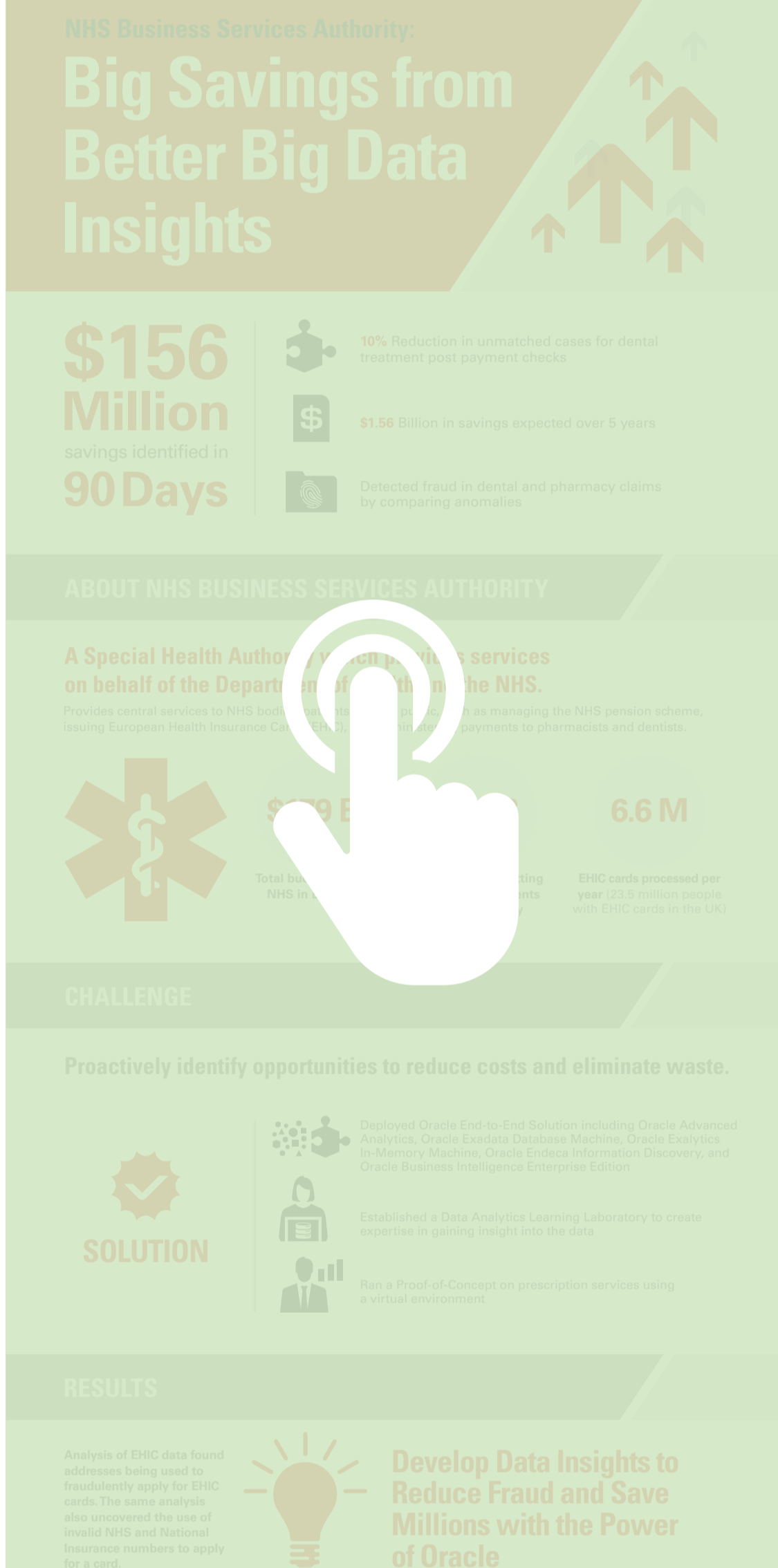
Providing centralized services for the NHS—which is responsible for delivering healthcare to 65 million citizens—is no easy task. With so much data on hand, the Business Services Authority wanted to find a way to maximize its value.

Solutions

Using Oracle Advanced Analytics, Oracle Business Intelligence on Oracle Exadata, and Oracle Exalytics, the Business Services Authority set up a Data Analytics Learning Lab to gain more insight from its data.

Within three months of operation it had reworked processes for European Health Insurance Card applications, used anomaly detection to identify and prevent fraud, and analyzed text to measure employee satisfaction and engagement related to sick leave.

Most importantly, the organization was able to optimize treatment while reducing the use of less-effective medical procedures, and identify potential savings of US\$156 million.



“ The overall solution is very fast, and our investment very quickly provided value. We can now do so much more with our data, resulting in significant savings for the NHS as a whole. ”

Nina Monckton
Head of Information Services, NHS Business Services Authority



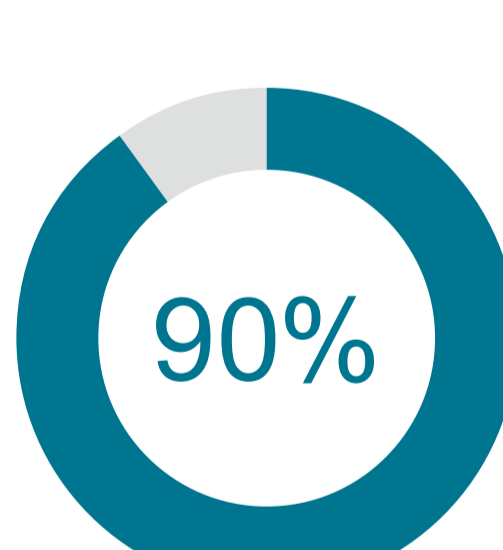
StubHub Gains New Insights into Customer Behavior and Fraud Detection

Owned by eBay, StubHub is the world's largest ticket marketplace, enabling fans to buy and sell tickets to tens of thousands of sports, concert, theater, and other live entertainment events.

Using real-time analytics, StubHub gained fresh insights into customer behavior and potentially fraudulent activity.

Challenges

In 2000, StubHub reinvented the ticket resale market, and now it's looking to increase its competitive advantage. The company wanted to utilize big data and real-time data analysis to provide tailored product recommendations and customer service, improve churn prediction, and spot possible instances of fraud early on.



Solutions

Using Oracle Database options, including Oracle Advanced Analytics and Oracle Partitioning, StubHub was able to store information about its millions of customers—coming from 25 data sources—in a single data warehouse.

From here, data scientists work with customer data inside the database, exploring it graphically and using multiple tools to drive predictions and insights. This has dramatically improved StubHub's agility and responsiveness.

Finally, as well as developing highly targeted promotional campaigns and offers, StubHub has been able to reduce a known fraud issue by up to 90 percent using Oracle Advanced Analytics.

“ Today, we have a cohesive set of solutions for big data analysis that help us acquire the data we need, discover new insights, make improved business decisions, and scale associated information systems for ongoing analysis. ”

Brian Motzer
Principal Database Administrator, StubHub



Turkcell Combats Calling Card Fraud with Oracle Advanced Analytics

Based in Istanbul, Turkcell is the leading mobile phone operator in Turkey, with 68.9 million subscribers as of 2015.

Oracle helped Turkcell overcome serious issues surrounding communications fraud, potentially saving millions of dollars.

Challenges

Communications fraud, or the use of telecommunications products or services without intention to pay, is a major issue for Turkcell and the telecommunications industry in general.

It is estimated that prepaid card fraud represents an average loss of US\$5 per US\$10,000 in transactions a year. For a company the size of Turkcell, this could mean millions of dollars.

Solutions

To combat communications fraud and money laundering, Turkcell introduced advanced analytical solutions that monitor key parameters of prepaid card usage, issue alerts, and block fraudulent activity.

Doing this required extremely fast analysis of one petabyte of uncompressed customer data to identify patterns and relationships, and build predictive models.

With Oracle solutions, the company was able to monitor parameters for up to 10 billion daily call-data records and value-added-service logs, and sift through huge data volumes at an extremely fast rate—minimizing the risk and cost of fraud.

“ We selected Oracle because in-database mining to support antifraud efforts will be a major focus for Turkcell in the future. With Oracle Exadata Database Machine and the analytics capabilities of Oracle Advanced Analytics, we can complete antifraud analysis for large amounts of call-data records in just a few hours. Further, we can scale the solution as needed to support rapid communications data growth. ”

Hasan Tonguç Yılmaz
Datawarehouse/Data Mining Developer, Turkcell

