ACCENTURE TECHNOLOGY VISION
FOR ORACLE 2017

TREND 1
AI IS THE NEW UI

accenture

Accenture and Oracle's work together, showcased in this Accenture Technology Vision for Oracle 2017, demonstrates how organizations now have the vision and the means to turn the tables on new, would-be disruptors, and truly become disruptors themselves.

AMPLIFYOU

Accelerating digital advances are creating a people-centric technology environment in which the power is shifting to people to shape technology for themselves. The world of enterprise IT increasingly has the same design principle at its core. So what does that mean for Oracle technologies and the way Accenture helps clients to harness their power for transformational outcomes?

It's clear that the enormous potential of new technologies like artificial intelligence (AI), machine-learning, advanced analytics and virtual reality has barely begun to be realized. And, for the first time ever, even technology pundits are overawed by the surging speed of technology change. Think about it: 2.5 quintillion bytes of data are now being generated every day.[1]

More than ever before, we as humans control our own destiny. But the reasons why may surprise you.

This accelerated pace of change is the driving force behind the five trends we introduce and analyze in this year's Accenture Technology Vision for Oracle. These trends — AI is the New UI, Ecosystem Power Plays, Workforce Marketplace, Design for Humans and the Uncharted — are based on how Accenture sees Oracle's technologies driving the future business environment. Just as today, it's a future in which Oracle solutions and Accenture's delivery and implementation will be right at the heart of change and innovation.

Instead of being disrupted by technology developments, the big shift is that technology is now adapting to us. As this gathers momentum, organizations will increasingly be equipped to empower their people and enable them to reach new heights. As this report demonstrates, Accenture and Oracle are together working to help realize this new symbiosis between people and technology.

AI IS THE NEW UI

Experience Above All

By Steve Reid

"Alexa. Can you provide an analysis of underpenetrated markets from our supply chain data and suggest a phased sales campaign strategy?"

Sounds far-fetched? Not at all. As Accenture and Oracle's work together shows, artificial intelligence (AI) is emerging from the enterprise background to take its seat at the boardroom table as the key interaction point between the business and technology. As it matures, many of the former barriers to adoption are disappearing, making AI more commonplace in everyday life.

AI is now being used to add frictionless intelligence to people's interactions with technology, creating opportunities to make every interface both simple and smart. In the process, it's fulfilling its promise to augment and enhance human skills, and drastically reduce the time and effort that people will need to devote to get machines to take care of an increasing range of tasks and activities.

AI's ability to support new and more engaging forms of technology interaction is by no means restricted to the consumer context. In the enterprise world, how people interact with the systems they need to use every day is changing dramatically. It's an area of enormous opportunity: Accenture now leverages AI across its range of Oracle solutions and client engagements to accelerate and innovate new forms of interaction with enterprise technology.

AI'S UNSTOPPABLE **MOMENTUM**

In the 2017 survey for the Accenture Technology Vision, 79 percent of the survey participants agree that AI will help accelerate technology adoption throughout their organization. That confidence is reflected in the scale of investment in AI technology: Forrester predicts that investments will increase by more than 300 percent in 2017 compared to 2016.[2] 2017 is well underway, and AI is emphatically no longer a futuristic phenomenon. We're seeing daily news stories confirming its breadth of application: from reports that 90 percent of securities are now traded algorithmically,[3] to coverage of Ravn's 'sleuth robot' that assists forensic teams in large-scale litigation by processing 600,000 documents a day.[4]

The massive scale of investment into AI is predicated on the wide-scale adoption of AI technologies by the people who interact and work with them. To accelerate this adoption, it is important to have a multi-modal system design in which users can interact naturally with applications, using familiar voice- or text-based channels. In this way, AI will be critical to drive the self-service user interactions that support real-time and highly responsive business decision-making.

INTEGRATING AI IN THE ENTERPRISE

Crucially, AI creates new ways to deliver projects and support, allowing Accenture to innovate simply and leverage the vast amount of data (client and industry) correlated to the technology and work delivered. The result? Increased speed to value and reduced delivery risk.

One such innovation is Accenture myWizard®, a virtual platform that currently includes a number of intelligent virtual agents. These agents use machine learning to collaborate with their human co-workers in managing projects, applying analytics to deliver on business goals, making judgement-based decisions and monitoring all aspects of application development and management.

For Oracle-based solutions, Accenture myWizard provides market-leading tools and assets to build Oracle custom integrations. Accenture has invested significantly in developing the key features of this platform and integrating it with Oracle technology, leading AI technologies, as well as Accenture-developed tools and assets. The initial results have been impressive. Organizations can use the Accenture myWizard intelligent automation platform to eliminate repetitive application development tasks, helping software developers become up to 60 percent more productive on task-related work which enable them to focus on more strategic initiatives.[5]

The combination of Accenture data points from a large and diversified client base, coupled with advanced AI components and algorithms, has resulted in integrating virtual agents and bots that can advance Oracle application interaction and system support. Accenture myWizard also offers significant potential to reduce costs and support improved user experiences.

Oracle's footprint in software and data services uniquely positions its technology to make a significant contribution to enhance and develop how people interact with business services in the years ahead. Several key features of Oracle technology will be critical to how AI becomes embedded in everyday interactions. Below, Accenture takes a look at some of these factors and the impact they will have on organizations and individuals interacting with consumers and colleagues.

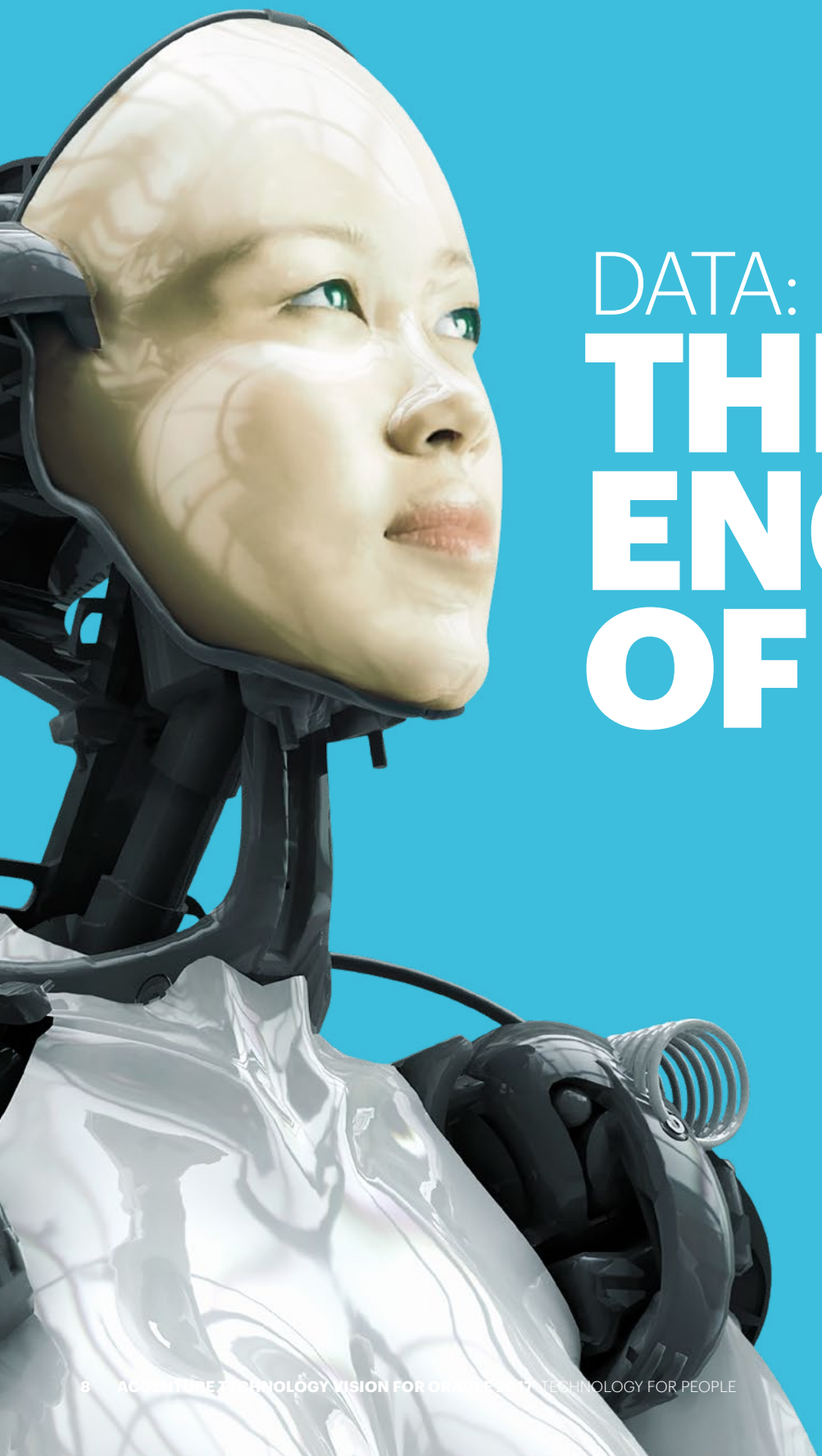
INTERACTING WITH ORACLE SYSTEMS THROUGH AI

The future of applications will shape the support and skills needed to help users interact with, and develop, Oracle systems. How they use these technologies will require approaches that are interactive, predictive and are constantly learning and retooling as technology continues to develop.

In this context, Google and its development of Site Reliability Engineering is a concept that has spread throughout Silicon Valley. It provides an interesting framework for examining how new support systems for the future of Oracle applications might develop. One primary component that impacts the future support of applications is the elimination of 'toil', the redundant, often manual, tasks skewed to lower-level activities, which application engineers carry out as part of their support processes. In Site Reliability Engineering, the toil factor is controlled by systems built on AI, including reactive patterning and an automated testing/quality process that improves system reliability and enhances user interactions.

AI takes over lower-level support activities and increases the ability of the application engineers to focus on value-adding system work and delivering an improved customer experience. In combination with Agile methodologies and DevOps, AI will deliver a 'liquid' system environment, with a smaller, highly-skilled, and dynamic team that works directly with users to anticipate and resolve issues, accomplish changes and enhancements, and participate in a multi-node feedback process. This will create a delivery mechanism that decreases hand-offs, is closely linked to overall user participation and experience, and has a laser focus on user empowerment rather than system functionality.

Data analysis will be one of the primary skill areas in the overall support model, blending business and technology roles. The building blocks for this data-driven organization will be anchored by virtual platforms that interact with Oracle systems and provide AI capabilities, whether as simple or complex bots and virtual assistants, or as multi-pronged integrations.



DATA: THE ENGINE OF AI

At the heart of the broad adoption of AI and AI techniques is data. Without data, there's no intelligence to artificially manufacture.

And data levels are growing all the time: analysis shows that there will be a 50-fold increase in the rate of data growth from 2010 to 2020, with 90 percent of the world's data having been created in the last two years.[6] Scope for the scale and pace of data growth beyond 2020 is faster than exponential, considering that just 25 percent of the world's economy is forecast to be digital by that date.[7]

It's not just the quantity of data that's growing. The availability of data, both structured and unstructured, is increasing all the time. This requires organizations to harness the power of data with predictive analytics, and also to secure and protect data stores. The expansion of data to multiple platforms has created a web of interaction that cannot effectively be managed through standard processes and practices as the volume and the underlying data points have become not only dispersed, but volumetrically expansive.

With nearly 50 percent of the world's data residing on its databases,[8] Oracle is uniquely positioned to be the leading global data-centric software provider. Oracle technology is rapidly moving the enterprise model to a data-powered ecosystem where the organization and curation of data define business insights and predict interactions between the market and an organization's supply chain, finance and talent management systems.

Oracle Adaptive Intelligent Applications enable businesses to address the growing volume and variety of data and data sources by defining and growing data management services and advanced analytics. These are based on insights gleaned from within Oracle's Data Cloud, a collection of more than six billion consumer and business profiles, with more than 45,000 attributes. Oracle's Adaptive Intelligent Applications use web-scale data and apply advanced data science to learn about an organization's users and their behavior, empowering businesses to function as data-driven enterprises.

Initially sourcing data from Oracle Software-as-a-Service (SaaS) solutions such as Oracle Sales Cloud, Oracle HCM Cloud, and Oracle ERP Cloud, it will also ingest and mash-up data from multiple third-party sources. Oracle has ensured that partners such as Accenture will be able to help speed innovation by employing open-source algorithms along with Oracle proprietary algorithms written by Oracle data scientists. The Accenture Innovation Centers for Oracle will be a key aspect of future development.

Technologies such as adaptive intelligence will play a significant role in increasing the value and speed to market of the data-driven enterprise by proactively mining data, alerting users to insights, and architecturally analyzing performance and system usage to actively tune the system and automate development operations without manual intervention. AI is at the forefront of making massive data volumes manageable.

Another key part of the AI/data equation will be the proactive protection and secure bursting of the data as part of the AI stream. As cybersecurity continues to attract public attention, it needs to be high on the agenda for the data-driven enterprise. The links between data security and the volume and availability of data provide both risks and opportunities for organizations.

The development of AI as a key component in a data-driven economy will help reduce organizational risk with predictive analysis, and create market opportunity to develop, enhance, and implement next-generation security practices. In the data-centric model of the future, not only will data become one of the key elements of organizational intellectual property, but the platforms, custom algorithms built around the data for analysis, and analytic output will represent a significant intellectual property footprint. That's why Accenture and Oracle are making investments in Identity and Access Management (IAM) with the aim of significantly enhancing the protection and control of access to data stores in an increasingly complex and challenging environment.

Within IAM, the use of AI is becoming increasingly critical to proactively scan for intrusions and vulnerabilities, and respond to cyber threats by creating an automation sequence that can counteract the attacks without operator intervention. When it comes to applications, AI's ability to identify users through facial recognition and digital fingerprinting will rapidly become not only the norm for system access, but also link to auto-customization of the user interface and content. It will preload information and data, and provide user-specific content based on learning from past system interactions and user profiles.

AI is at the forefront of making massive data volumes manageable.

An example of this in action is the Accenture Velocity Identity Platform for Oracle.[9] This is a unique set of IAM automation tools and pre-configured solutions that enable rapid deployments. Capabilities scale across nearly everything that companies have connected, from employees and customers to the many endpoints that span the Internet of Things. Controlling access to applications on a temporary or permanent basis, the platform gives organizations the ability to become predictive for issuing access, removing the need for human intervention to deal with many basic security support tickets.

CLOUD: ACCELERATING AI'S ADOPTION

The continued movement, development and adoption of cloud solutions is the other main driver of AI adoption. Cloud provides more computing power, cheaper storage and security solutions, and the economies of scale that are so important for large-scale adoption and future development.

As the overall technology environment becomes increasingly complex, integration points proliferate, and the ability of on-premises security to protect and provide access to data stores declines, the pivot to the cloud will accelerate rapidly over the next two to three years. In response, Oracle's technology strategy has repositioned from 'bridge' to 'reinvent', developing not only at the software layer, but at the integration and performance layers as well. Oracle has created a leading middleware, database and platform strategy and capability, structured for the business enterprise. It has focused its efforts on building a modern enterprise cloud architecture that integrates infrastructure, platform and software.

Oracle's prominence at the database level will be the basis for building the integrations that will be needed for the continued adoption of cloud services. Advances in system architecture will provide the performance organizations require to enable their use of analytics as a source of competitive advantage. In addition, to support the move to cloud, Oracle will need to continue forging key partnerships, and pursue acquisitions to deliver new technologies, scale and industry-specific relevance.

ACCENTURE AND ORACLE: ACCELERATING AI MARKET ADVANTAGE

Lastly, the flexibility of Oracle's software to integrate new technology provides Oracle practitioners with the ability to use Oracle Middleware components, and also to create 'as-a-Service' capabilities.

Accenture and Oracle's continuing collaboration through the Accenture Oracle Business Group to include as-a-Service offerings reflects the commitment of both organizations to create the data-centric platform of the future.

For example, the Accenture Cloud Hub for Oracle has prebuilt integrations into third-party AI engines that allow our clients to find insights from the 'dark data' that has been collecting for months or decades. That dark data does not need to be the unstructured data-lakes from which many businesses are striving to extract value. In fact, a quicker route to value could be the structured data that has been accumulating for years in an ERP system. This could provide a faster and easier route to valuable new business insights.

In addition, Accenture has developed more than 400 assets purpose-built for Oracle-based solutions, supporting an end-to-end process for the delivery of new technology and the development, support, and integration of future-focused activities in AI and robotic automation. The amalgamation of data, analytics, AI and automation, combined with the future of applications in a liquid support model, will power the enterprise of the future. This will contribute not only to a competitive advantage for organizations that embrace a flexible, innovation platform approach, but also a pronounced ability to accelerate market advantage with the rapid adoption of key disruptions in technology.

Remember the question we asked Alexa at the start? Well, we have an answer: Yes, Alexa can provide the analysis. Our researchers in the Accenture Innovation Center for Oracle have successfully integrated Amazon's Alexa with Oracle's Database. It's here, now.

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FOR MORE INFORMATION

Pat Sullivan
Global Oracle Technology Lead
patrick.sullivan@accenture.com

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