Deloitte.

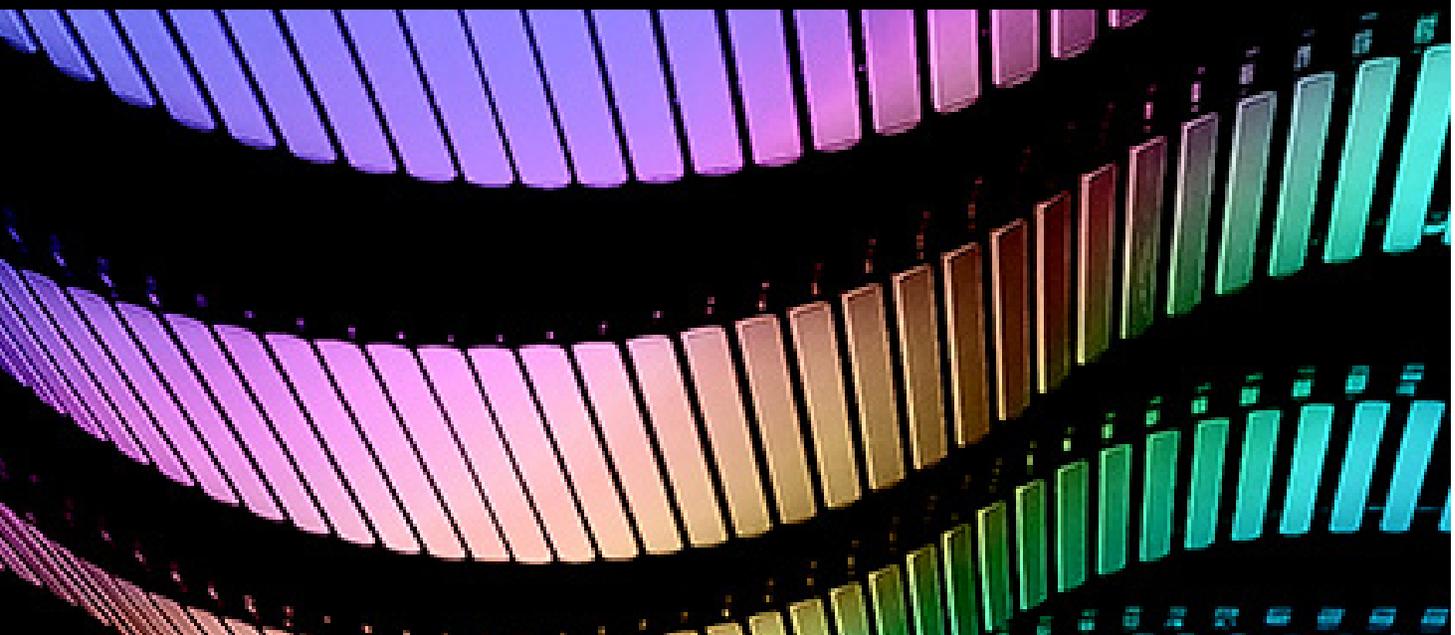Deloitte Tech Trends 2025:
Accelerating AI with Oracle Cloud Infrastructure (OCI)

Deloitte Tech Trends 2025:
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EXECUTIVE SUMMARY

AI is the common thread across every trend in [Deloitte's Tech Trends 2025](#) report. Already embedded into the foundational infrastructure of Oracle products, the question is not if AI will bring transformational opportunities to Oracle customers, but when will they take advantage of them and to what degree. To set the stage for this perspective on the Tech Trends 2025 report, Bill Briggs, chief technology officer for Deloitte, and Mark Hura, executive vice president of Oracle's North America cloud infrastructure organization, examined the future of AI through an Oracle lens. They further described Oracle's roadmap and strategies in each of the six emerging trends, along with exploring what the next high-value use cases might look like in a world where AI is expected to become so ubiquitous that it will be a part of the unseen substructure of everything we do, and we eventually won't even know it's there.

AI everywhere: Like magic, but with algorithms

Across infrastructure, data, networking, and cloud applications, AI is embedded into each layer of the Oracle stack. Oracle's leadership in AI stems from foundational decisions made over a decade ago, such as developing the Exadata platform to support large-scale data processing and clustering, which now underpin the performance and scalability of Oracle Cloud. As a pioneer in data management, Oracle supports a significant share of the world's enterprise data, making it well positioned to help organizations align their AI and data strategies. Through the full breadth of Oracle Cloud, including SaaS, PaaS and IaaS, Oracle collaborates with leading researchers and model providers to empower customers to leverage advanced AI capabilities and unlock the full potential of their data and drive innovation across their business.

Spatial computing takes center stage

Spatial computing is an emerging technology that can significantly enhance workflows and decision-making through immersive simulations and AI integration, but it requires organizations to invest in advanced infrastructure for high-performance processing and data management. Oracle is leveraging this technology by collaborating with medical device manufacturers to integrate health data into Oracle Health, powered by the OCI platform, streamlining access to critical patient information and laying the groundwork for future innovations such as personalized medicine based on real-world and genetic data. Additionally, Oracle's public safety solutions, including OCI Vision, equip first responders with real-time insights and actionable intelligence, improving their ability to respond swiftly and effectively to emergencies. More than VR headsets, Oracle is bringing real and valuable solutions and insights to organizations that further their mission and goals.

What's next for AI?

Oracle takes a forward-thinking approach to AI by embedding advanced AI capabilities across its applications, databases, and cloud infrastructure. Through strategic collaborations with leading GenAI providers and a unified API standard, Oracle enables organizations to easily access, customize, and deploy cutting-edge AI models and solutions. Oracle's fully managed SaaS offerings feature AI directly integrated into business processes, while its data science platform supports custom model development and deployment. With innovations in the Oracle Database 23ai, Oracle delivers scalable, high-performance infrastructure that brings AI processing closer to enterprise data. This integrated platform can enable organizations to accelerate AI adoption, drive operational efficiency, and stay ahead in a rapidly evolving technological landscape.

Hardware is eating the world

OCI has been designed from the ground up for enterprise scale, security, and flexibility. As the market has shifted towards an increasing demand for high-performance computing to support AI solutions, Oracle's infrastructure strategy and architecture have been effective. OCI Dedicated Region allows customers to run all Oracle cloud services, including SaaS applications, within their own data centers, confirming data sovereignty and integration between public and private environments. Furthermore, Oracle's Roving Edge Infrastructure extends OCI's capabilities to remote and far edge locations, enabling AI workloads with security and connectivity, and making advanced AI accessible even in areas where it traditionally hasn't been available. In addition to flexible compute shapes, Oracle also offers multiple deployment options that give its customers the ability to run their Oracle workloads wherever they like, while taking advantage of a highly efficient performance layer. With Oracle's distributed cloud, customers can deploy OCI's 150+ AI and cloud services at the edge, in their own datacenter, across clouds, or in the public cloud and can help address a variety of data privacy and sovereign AI requirements.

IT amplifies the reach and remit of tech talent

OCI is built around efficiency, automation, and simplicity, enabling customers to reduce costs and streamline operations. Leveraging AI, Oracle's Autonomous Database automates performance analysis, maintenance, and security, allowing IT teams to focus on strategic business initiatives rather than routine tasks. Oracle is embedding AI across its entire technology stack, including SaaS applications, empowering IT to guide business users in adopting new capabilities and positioning IT as a trusted advisor. Furthermore, tools like Oracle Code Assist can further simplify solution development, enabling faster innovation and delivery, and enhancing overall customer satisfaction.
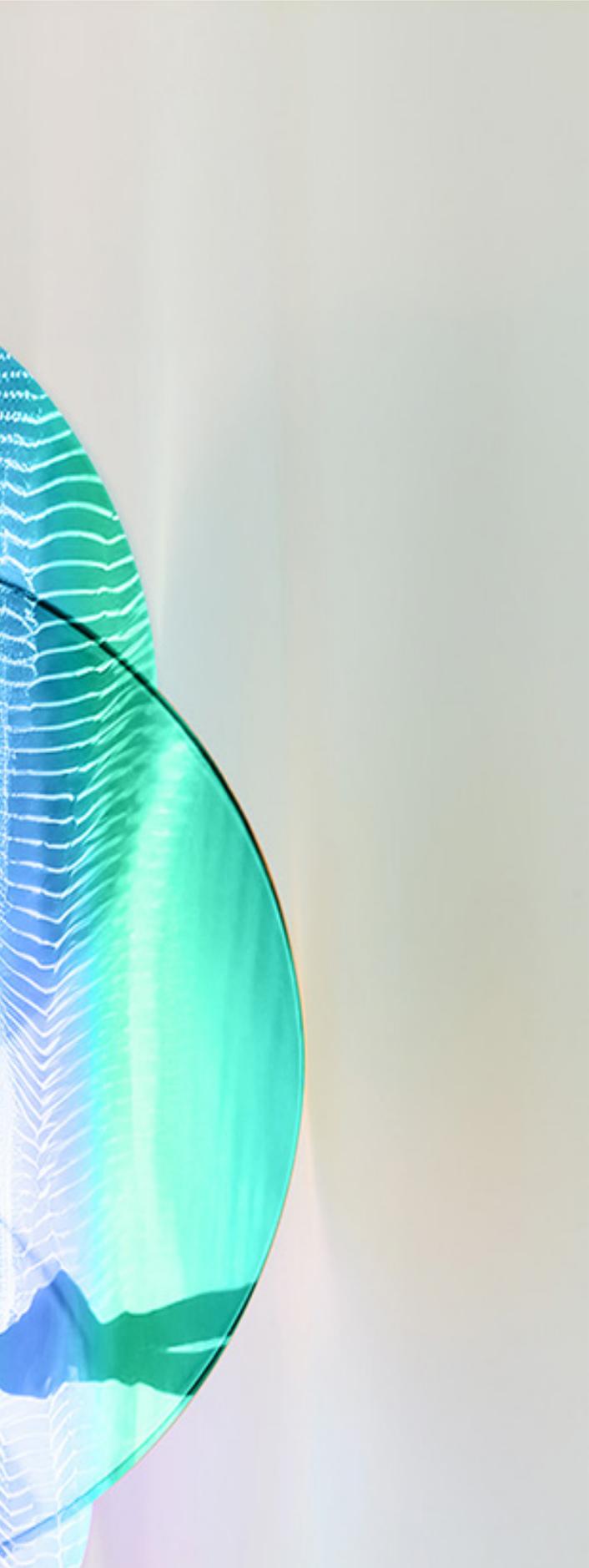
The new math: Solving cryptography in an age of quantum

Cryptographic failures can present serious risks by potentially exposing sensitive data and organizational vulnerabilities, making robust security measures essential. Oracle aims to address these challenges through a defense-in-depth approach, enabling security controls by default in OCI and continuously enhancing protections with features like Oracle Cloud Guard and Zero Trust Packet Routing for granular network control. Automated patching solutions such as Oracle Autonomous Database, Autonomous Linux, and Ksplice reduce vulnerability windows by streamlining security updates. Recognizing applications as a primary attack surface, Oracle is also advancing passwordless authentication to strengthen user access security. As threats evolve, Oracle remains focused on innovating adaptive security solutions, while empowering customers to actively utilize these tools to safeguard their environments.

CORE MODERNIZATION

The intelligent core: AI changes everything for core modernization

Oracle is embedding AI across its core offerings, including Fusion Cloud Applications, Fusion Analytics Warehouse and Oracle Analytics Cloud, to deliver technology and data directly to users, enhancing efficiency and business value. As a fully integrated provider of SaaS, platform and infrastructure services, Oracle offers more than 50 AI agents within its business applications at no extra cost, using these innovations internally to demonstrate their effectiveness. Oracle's extensible platform enables customers to build and integrate AI models effectively, as shown by Deloitte's collaboration with a medical center to deploy an AI-powered Buyer's Assistant that streamlines procurement and improves decision-making. Additionally, with the introduction of AI Agent Studio for Fusion, Oracle enables SaaS users to extend the application with custom AI agents tailored to their organization's unique needs.

CONCLUSION

Breadth is the new depth: The power of intentional intersections

Oracle's biggest challenge and opportunity is to educate current and prospective customers about the breadth of its platform and the innovation embedded throughout. While customers have choice and some may be early on in their AI journey, they should be aware of how agentic AI and other innovations could make them more productive and efficient, and can enable them to do more while spending less.

AI EVERYWHERE
LIKE MAGIC, BUT WITH ALGORITHMS

"To remain competitive today, Oracle customers need the very best performance and capabilities that exist, and if somebody chooses something other than Oracle for a strategic reason, that's fine. Let's give them the ability to make those choices; it doesn't have to be all-or-nothing all the time."
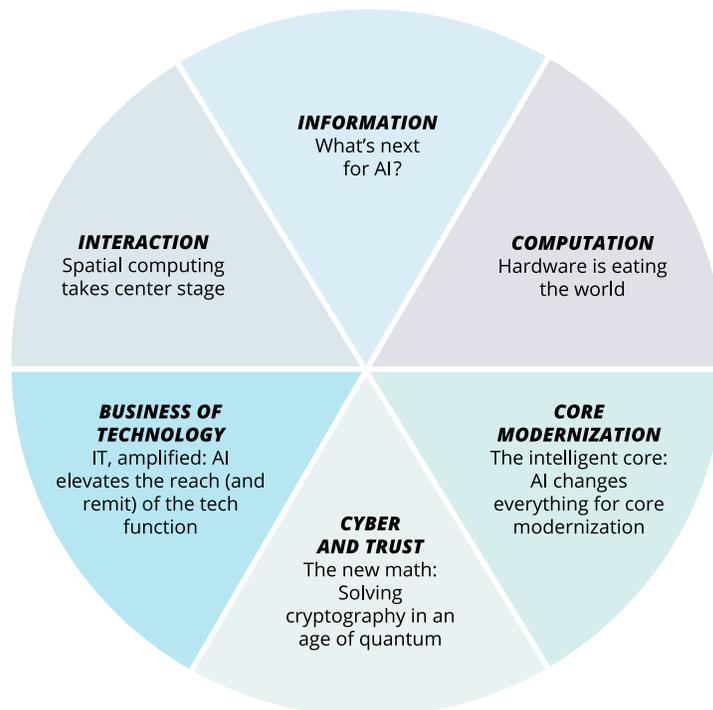
-Mark Hura
Executive vice president, North America cloud infrastructure,
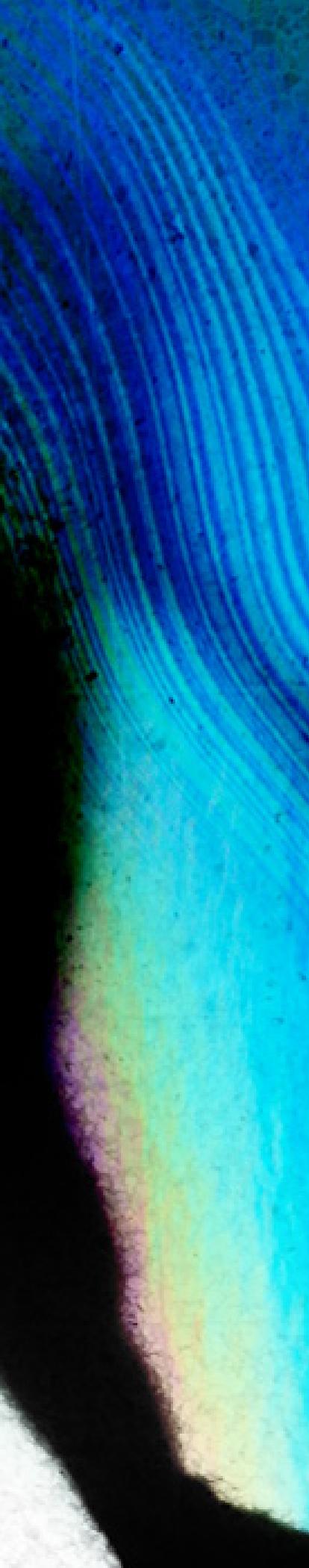Oracle

Whether we realize it or not, AI is already woven into our lives to a great extent. From streaming services to online shopping platforms, it is humming in the background, personalizing consumer experiences and streamlining business processes. Two years after Generative AI (GenAI) burst on the scene, it's reasonable to think that the future of technology is simply...more AI. However, there is much more to the story, the core of which is about AI becoming ubiquitous.

Tech Trends 2025, the 16th iteration of Deloitte's flagship technology report, previews a future in which AI will be as foundational as electricity is to daily business and our personal lives. As the report asserts, we won't proactively use it; we'll simply experience a world in which it makes everything work smarter, faster, and more intuitively—like magic but grounded in algorithms.

The six chapters of Tech Trends 2025 reflect this emerging reality as they explore the latest developments across six macro forces of information technology—interaction, information, computation, business of technology, cyber and trust, and core modernization. This perspective examines these forces through an Oracle lens to explore how organizations can capitalize on developments in AI and other advancements by applying Oracle Cloud technologies. We hope it will spark ideas for harnessing the power of the Oracle ecosystem to accelerate your digital transformation efforts—and ultimately to innovate and operate more effectively while you grow.

INFORMATION
What's next for AI?

INTERACTION
Spatial computing takes center stage

COMPUTATION
Hardware is eating the world

BUSINESS OF TECHNOLOGY
IT, amplified: AI elevates the reach (and remit) of the tech function

CORE MODERNIZATION
The intelligent core: AI changes everything for core modernization

CYBER AND TRUST
The new math: Solving cryptography in an age of quantum

AI everywhere like magic, but with algorithms

SPATIAL COMPUTING TAKES CENTER STAGE

If eye-catching virtual reality (VR) headsets are the first thing that come to mind when you think about spatial computing, you're not alone. But spatial computing is about more than providing a visual experience via a pair of goggles. It also involves blending standard business sensor data with the Internet of Things, drone, light detection and ranging (LIDAR), image, video, and other three-dimensional data types to create digital representations of business operations that mirror the real world. These models can be rendered across a range of interaction media, whether a traditional two-dimensional screen, lightweight augmented reality glasses, or full-on immersive VR environments.

Spatial computing offers new ways to contextualize business data, engage customers and workers, and interact with digital systems, making its current applications as diverse as they are transformative. For example, a visual interaction layer that pulls together contextual data from business software can allow supply chain workers to identify parts that need to be ordered or marketers to grasp a product's overall aesthetics to help them build campaigns. Employees across an organization can make meaning of and, in turn, make decisions with detailed information about a project in ways anyone can understand.

For now, real-time simulations have emerged as spatial technology's primary use case, but they are likely just the start. Data is the differentiator that will curtail or spur progress. Building the data pipelines to get the correct spatial data into visual systems is a thorny engineering challenge as much of this data is new and diverse and has few standards around it. As a result, organizations often struggle to pull it into a visualization platform and render it in a way that provides value to the user in their day-to-day work. Taking a more systematic approach to ingesting, organizing, and storing spatial data, in turn, makes it more available to modern AI tools, and that's where the real learning begins.

Spatial computing takes center stage with OCI

While still in the early stages, spatial computing has the potential to improve workflows and enhance decision-making through immersive simulations and AI integration. Organizations wishing to stay ahead of this curve will soon need to consider whether they have the foundational infrastructure necessary to support the high-performance processing and advanced data management capabilities that spatial computing requires.

As Oracle continues to examine how users interact with technology, there is an ongoing analysis of finding ways to make the biggest impact. Oracle is collaborating with several medical device manufacturers to enhance the integration of data from medical devices into services such as Oracle Health supported by the OCI platform. This helps enable a unified medical system to swiftly incorporate critical patient data alongside their most recent MRI results. Integrating personal health tracking devices could provide a more comprehensive view of an individual's health. This concept can be further expanded by exploring collaboration with healthcare providers and pharmaceutical companies. By combining anonymized patient data with drug discovery efforts, medications can be refined for enhanced efficacy using real-world data as a foundation. Envisioning a future where personalized solutions are based on an individual's unique health circumstances and DNA is not beyond reach.

Further, Oracle's Public Safety business utilizes solutions such as OCI Vision, enabling first responders and security services to gain real-time insights into potential anomalies and equipping front-line personnel with current, actionable intelligence. Leveraging the capabilities of OCI, these professionals can approach complex and potentially hazardous situations with enhanced data and critical insights.
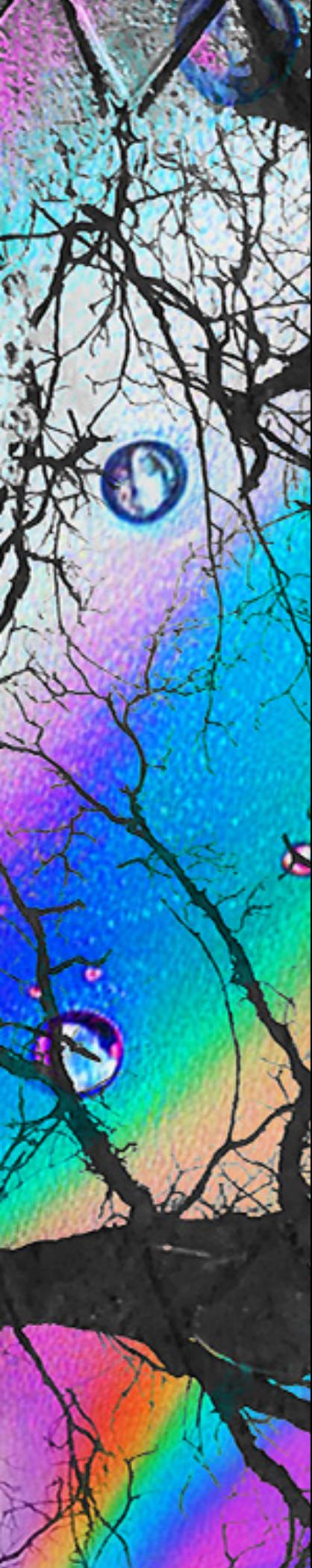
WHAT'S NEXT FOR AI?

As the speed of AI's advancements outpace expectations, leading organizations are already considering AI's next chapter. Instead of relying on foundational models built by large players in AI, many are considering a more targeted approach.

While large language models (LLMs) continue to advance, a new slate of smaller models and agents are proving to be more effective at discrete tasks. This is causing some to consider small language models (SLMs) and open-source options for the ability to train LLMs on smaller, more accurate data sets. Together with multimodal models and AI-based simulations, these new types of AI are building a future where organizations can find the right type of AI for each task.

In the years to come, the progress toward a growing number of smaller, more specialized models could once again move the goalposts of AI. Organizations may witness a fundamental shift in AI from augmenting knowledge to augmenting execution. Investments being made today in agentic AI, as this next era is termed, could upend the way we work and live by arming consumers and businesses with armies of silicon-based assistants. Imagine AI agents that can not only answer questions but also carry out discrete tasks, like delivering a financial report in a board meeting, or applying for a grant. "There's an app for that" could well become "There's an agent for that."

"The excitement, hype, and hope of the AI movement 18 months ago was, 'Oh great, we don't have to deal with all the hard stuff anymore,' which couldn't be further from the truth."

-Bill Briggs
Chief technology officer,
Deloitte Consulting LLP

What's next for AI with OCI?

Oracle has a forward-thinking approach to delivering AI services, aiming to seamlessly integrate advanced AI capabilities across its entire suite of solutions, including applications, databases, and infrastructure. It provides a robust platform for running AI solutions across the entire Oracle Cloud. Recognizing the importance of industry-leading innovation, Oracle has formed partnerships with companies specializing in enterprise-grade GenAI models. This can enable customers to access state-of-the-art models and deploy their preferred solutions on OCI, leveraging flexibility and choice.

Oracle is one of the few cloud application providers offering fully managed SaaS solutions with AI features embedded, rather than as add-ons or extras. This integrated approach aims to deliver an effective user experience, with AI-driven capabilities woven directly into business processes. Currently, Oracle offers more than 50 AI-powered agents within its application suite, a number that continues to grow as Oracle remains committed to optimizing business operations for its clients.

As a platform provider, Oracle continually introduces new AI services by leveraging collaborations with leading LLM providers. To streamline adoption, Oracle offers a unified API standard across its AI services, empowering developers to build solutions, such as chatbots, on OCI's GenAI service with minimal code. Oracle supplies the base code, allowing developers to focus on customization. This streamlined approach extends to advanced solutions like the Oracle Retrieval Augmented Generation (RAG) Agent.

Oracle delivers fully managed AI services for language, speech, image, and document processing, which can be integrated into an application ecosystem to drive automation and free up staff for higher-value tasks. Additionally, Oracle's data science platform enables organizations to develop and deploy custom machine learning and AI models. With OCI Data Science, users can import models from sources such as Hugging Face, tailor them to specific business needs, and deploy them to GPU-enabled or standard servers with a single click.

Oracle continues to advance its AI capabilities with the introduction of Oracle Database 23ai, which allows users to leverage the database as a vector store for generative AI embeddings, integrate ONNX-compliant machine learning models, and deploy knowledge graphs without requiring external engines. By embedding these services directly within the database, Oracle brings AI processing closer to the data, simplifying access to critical enterprise information.

At the infrastructure level, Oracle is dedicated to delivering leading solutions for AI workloads. By enabling chip-level communication between GPU-enabled servers, Oracle has deployed the world's largest cluster of NVIDIA GPUs, comprising over 130,000 units, and OCI continues to scale rapidly to meet the evolving needs of customers around the globe.[1]

Ultimately, Oracle offers a suite of AI solutions designed to meet organizations wherever they are on their AI journey, with a commitment to continuous innovation and a growing portfolio of AI-driven services that can enable enterprises to harness the latest advancements and trends in AI.
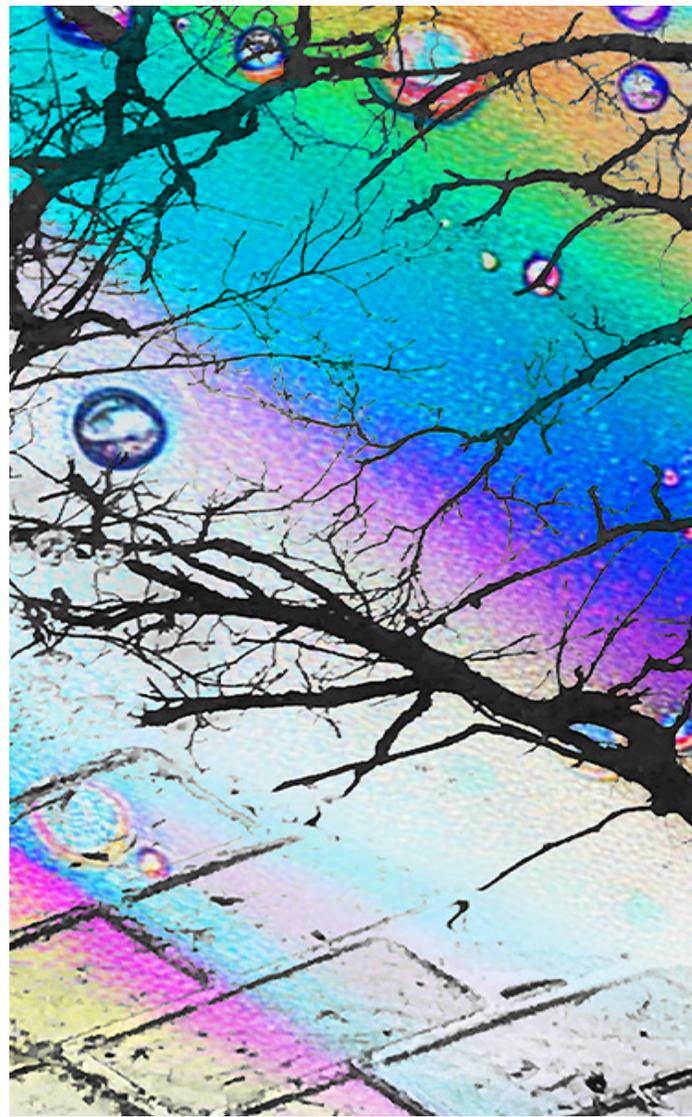
"Organizations are increasingly focusing on the fundamentals. Whether they use OCI or some other infrastructure, they're buckling down and cementing their methodologies around AI and data."

-Chris Pasternak

Managing director and global Oracle chief technology officer, Deloitte Consulting LLP

HARDWARE
IS EATING THE
WORLD

After years of "software eating the world," it's hardware's turn to feast. This is largely due to the need for advanced chips to power AI workloads, along with increasing integration of AI into end-user devices, the Internet of Things, and robotics. Case in point: NVIDIA is now one of the world's most valuable (and watched) companies as specialized chips become an invaluable resource for AI computation workloads.[2] According to Deloitte research based on a World Semiconductor Trade Statistics forecast, the market for chips used only for GenAI is projected to reach over US$50 billion this year.[3]

While GPUs are crucial for handling the high workloads of LLMs or content generation, and central processing units are still table stakes, neural processing units (NPUs) are now in vogue. NPUs, which mimic the brain's neural network, can accelerate smaller AI workloads with greater efficiency and lower power demands,[4] enabling organizations to shift AI applications away from the cloud and apply AI locally to sensitive data that can't be hosted externally.[5]

With this in mind, the future of AI may increasingly be found on the edge. As NPUs proliferate, more devices could be equipped to run AI models without relying on the cloud. With quicker response times, decreased costs and greater privacy controls, hybrid computing—that is, a mix of cloud and on-device AI workloads—could become essential for many organizations.

Furthermore, personal computers embedded with AI chips are poised to supercharge knowledge workers by providing access to offline AI models while "future-proofing" technology infrastructure, reducing cloud computing costs, and enhancing data privacy. Although AI's increased energy demands pose sustainability challenges, advancements in energy sources and efficiency are making AI hardware more accessible. Looking forward, AI's continued integration into devices could revolutionize the Internet of Things and robotics, transforming industries like health care through smarter, more autonomous devices.

"Multi-cloud has been a trend; it continues to be a trend; and it's expected to be an even more critical for Oracle because of its interoperability and the integrations it has done with other cloud service providers to give their customers choice."

-Chris Pasternak
Managing director and global Oracle chief technology officer,
Deloitte Consulting LLP

Hardware is eating the world with OCI

Enterprise scale infrastructure has been the heart of OCI since its inception in 2016. As the first cloud designed from the ground up in the cloud era, OCI emphasizes scale and security, starting at the hardware layer. The original goal was to provide a highly secure and flexible solution to support Oracle's key platform and application services, such as Oracle Exadata and Fusion Applications. As the market has shifted towards an increasing demand for high-performance computing to support AI solutions, Oracle's infrastructure strategy and architecture have proven to be an ideal fit. This is evidenced by organizations choosing to train their foundational models using OCI, a decision that could benefit both Oracle and its customers.

OCI Dedicated Region delivers all of Oracle's cloud services, including SaaS applications, within the data center of the customer's choice, which sets it apart from other cloud providers. By using the same automation tools and solutions, OCI Dedicated Region facilitates a smooth transition between the public cloud and a customer data center. This enables customers to operate their own private version of OCI while maintaining data sovereignty. Oracle's hardware options support an emphasis on delivering Sovereign AI solutions. Deloitte has chosen OCI as the sovereign cloud solution for its Silicon2Service (AI Factory as a Service) offering, enabling clients to execute their AI workloads anywhere, either in the public cloud or OCI Dedicated Region without modifying any code or operational processes.

Oracle further extends its capabilities with Oracle Roving Edge Infrastructure, which expands a customer's OCI footprint to the far edge. Leveraging the network, security, and infrastructure strengths of OCI, Roving Edge Infrastructure enables customers to run workloads directly where the work is being performed. Its ability to operate both connected and disconnected from OCI allows it to function in remote locations. Additionally, it offers the option to enable multiple GPUs, making AI accessible in areas where it traditionally hasn't been available. This innovation holds potential for industries by allowing them to bring the latest AI advancements directly to the field.

Taking this strategy even further, Oracle is the first major hyperscaler to partner with the other hyperscale clouds to deliver OCI native services on those cloud platforms. Specifically, Oracle offers database services like Exadata Cloud Service natively in the other clouds. This approach to partnership can drive greater choice for organizations to run their key workloads where they want, how they want. Oracle customers can continue to supplement their solutions built on other clouds with their most important data stored in Oracle databases.

"Oracle changed the paradigm of having racks and racks of servers; with OCI Dedicated Region 25, now a whole cloud region fits into just three racks."

-Don Schmidt

Managing director and global Oracle Cloud Infrastructure leader, Deloitte Consulting LLP

COMMITTED TO MODULARITY:

Oracle's Amazing Shrinking Dedicated Region

Oracle's Dedicated Region offering just got smaller, with a new configuration called Dedicated Region 25.[6] While it might not sound like it at first, this is a very good thing! This new offering allows businesses to bring the full power of OCI to their own data centers, but now with a minimum of just three racks. This is a significant shift from Oracle's previous requirement of a 12-rack minimum. By reducing the infrastructure to as little as three racks, Oracle is making its powerful cloud capabilities more accessible than ever before. It also gives customers greater flexibility to meet their unique needs, allowing them to deploy a dedicated cloud in a small, scalable footprint, build applications with cutting-edge services and tools, and deploy AI infrastructure anywhere they desire.

Hardware is eating the world

IT AMPLIFIED

AI ELEVATES THE REACH (AND REMIT) OF THE TECH FUNCTION

For years, IT has been under pressure to streamline sprawling cloud spend and curb costs. Since 2020, however, investments in tech have been on the rise thanks to pent-up demand for collaboration tools and the pandemic-era emphasis on digitalization.[7] As demand for AI sparks another increase in spending, the finding from Deloitte's 2023 Global Technology Leadership Study continues to ring true: Technology is the business, and tech spend is increasing as a result.

Long viewed as the lighthouse of digital transformation throughout the enterprise, the IT function is now taking on AI transformation. Because of GenAI's applicability to writing code, testing software, and augmenting tech talent in general, forward-thinking technology leaders are using the current moment as a once-in-a-blue-moon opportunity to transform IT across five pillars: infrastructure, engineering, financial operations, talent, and innovation.

One area of particular interest is the traditional software development lifecycle, where manual testing, inexperienced developers, and disparate tool environments can lead to inefficiencies. Fortunately, AI-assisted code generation, automated testing, and rapid data analytics are having an impact, saving developers more time for innovation and feature developments.

As both traditional and GenAI capabilities grow, every phase of tech delivery could see a shift from human in charge to human in the loop. Such a move could eventually return IT to a new form of lean IT, leveraging citizen developers and AI-driven automation.

IT amplified: AI elevates the reach (and remit) of the tech function with OCI

Efficiency, automation and simplicity are at the core of OCI. Oracle Database has long incorporated automation and now leverages AI to enhance efficiency further. The Oracle Autonomous Database, built on AI from the outset, offers automated performance analysis, issue resolution, and machine-run maintenance, providing customers with AI-driven benefits.

The AI in the Autonomous Database mitigates security gaps, proactively addresses issues, and boosts efficiency. This improvement allows IT organizations to shift their focus from routine database operations to more strategic initiatives that drive value for their business partners, underscoring the evolving role of IT, transitioning from technology execution to orchestration. This transition is demonstrated through Oracle's technology stack, encompassing everything from applications to infrastructure. Oracle is embedding AI throughout this stack, leaving it to IT to determine how best to leverage these capabilities. Consider the potential impact of the agentic AI capabilities that Oracle is embedding into its various SaaS applications. This is not about implementation or programming; rather, it involves introducing new capabilities and guiding the business on how to utilize them effectively. In this context, IT can also serve as a trusted advisor to the business. The AI agents

embedded in Oracle's Fusion Cloud Applications are designed to enhance the efficiency of the business operations supported by those applications. However, they do not address the unique processes and operations that differentiates a company from its competitors. This is where IT can step up, offering creative solutions that drive value and capitalize on the innovative capabilities of OCI's solutions and infrastructure.

Oracle has prioritized simplification even in the implementation of new capabilities. With tools like Oracle Code Assist, developers can transition from writing thousands of lines of code from scratch to simply instructing Code Assist on what they need. Code Assist equips IT with the tools to orchestrate new solutions across Oracle's technology stack. This enhancement enables IT to move faster and deliver results more quickly, which can increase the satisfaction of their core customers.

"Beyond enabling the business, IT is fast becoming the business."

-Don Schmidt
Managing director and global Oracle Cloud Infrastructure leader, Deloitte Consulting LLP

THE NEW MATH

SOLVING CRYPTOGRAPHY IN AN AGE OF QUANTUM

Experts predict that quantum computers, which could mature within five to 20 years, will have significant implications for cybersecurity because of their ability to break existing encryption methods and digital signatures. This poses a risk to the integrity and authenticity of data and communications. While the exact timeline is uncertain, the question—like so many others in the rapidly evolving world of technology—is not if, but when quantum computing will re-write the book on encryption practices.

Enterprises are starting to become aware of the risks posed by quantum computing to their cybersecurity. According to Deloitte's Global Future of Cyber survey, 52% of organizations are currently assessing their exposure and developing quantum-related risk strategies. Another 30% say they are currently taking decisive action to implement solutions to these risks.

Cryptography is now so pervasive that many organizations may need help identifying all the places it appears. It's in applications they own and manage, and in their partner and vendor systems. In their response to Y2K, organizations saw a similarly pervasive risk and addressed it promptly. Today, IT faces a new systemic risk that demands a proactive response. Emerging postquantum cryptography (PQC) algorithm standards from the U.S. National Institute of Standards and Technology (NIST) offer a path to mitigation.

Updating encryption practices is fairly straightforward—but it's a lengthy process, so organizations should act now to stay ahead of potential threats. Initial steps include establishing governance and policy, understanding current cryptographic exposure, assessing how best to prioritize remediation efforts across the infrastructure and supply chain, and building a comprehensive road map for internal updates and contractual mechanisms to ensure vendors meet the updated standards.

# *"Security has to be designed in. If it's just a wrapper, the veneer will get penetrated."*

-Mark Hura
Executive vice president, North America cloud infrastructure, Oracle

The new math: Solving cryptography in an age of quantum with OCI

The potential risk of cryptographic failure can pose significant challenges not only in terms of data storage and transmission encryption, but also by increasing the likelihood of discovered data being used to attack organizations. Decrypted data can potentially reveal insights into an organization's technical infrastructure, thereby exposing vulnerabilities that could lead to additional attacks on its core systems. Consequently, it is crucial to uphold the traditional defense-in-depth and least privilege models to mitigate these risks.

Oracle continually enhances and evolves the capabilities of its cloud products to counter emerging threats and help protect the security of customer data. Since the inception of OCI, Oracle has adhered to an "on by default" security stance, meaning security controls are enabled by default, and it is up
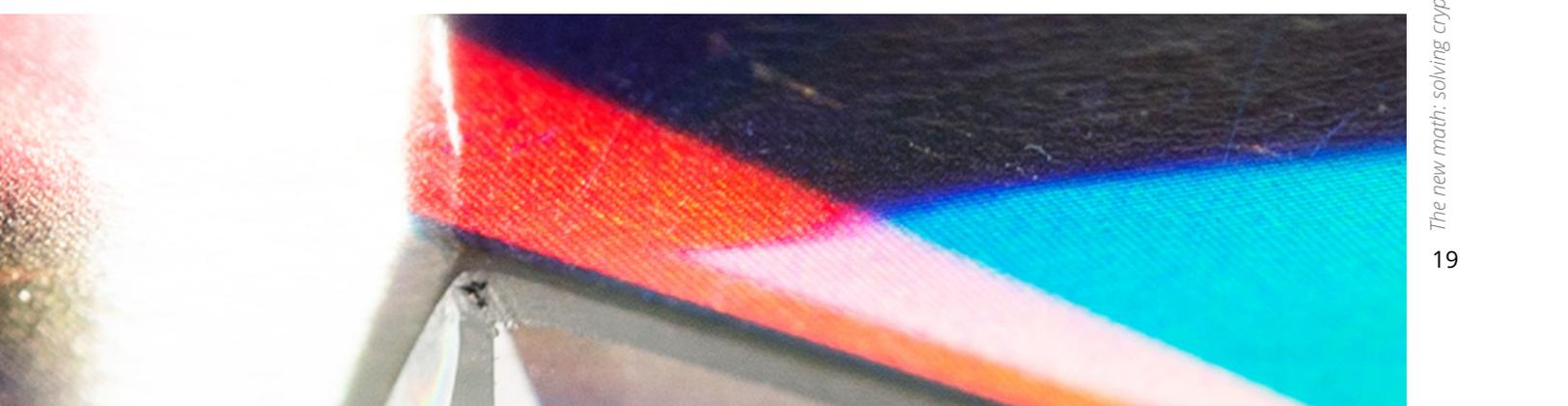
to the customer to disable them if desired. For instance, when a new network is deployed within a customer's tenancy, all firewall rules are initially set to reject status. This means no traffic is permitted to traverse the new network until the customer defines the appropriate rules to allow the desired traffic.

In addition to its "on by default" strategy, Oracle continues to enhance its security protections. Features like Oracle Cloud Guard, which monitors cloud resources in a customer's environment at no additional cost, and OCI Zero Trust Packet Routing (ZPR) are elevating security standards. ZPR, the latest innovation from OCI, transcends traditional network or subnet-specific solutions by tagging and inspecting traffic at the packet level. This provides customers with a more granular level of control over their network traffic, adding an extra layer to the defense-in-depth strategy.

Another common exploit for attackers is the delay between the exposure of vulnerabilities and their remediation. While applying patches to software and servers is often seen as a mundane task by IT professionals, it may be one of the most critical.

"Like an armored truck, security is engineered into OCI; you have to turn the safety features off, not on."

-Don Schmidt

Managing director and global Oracle Cloud Infrastructure leader, Deloitte Consulting LLP

There is typically a lag between the release of a security patch and its implementation, often due to resource constraints. However, with solutions like Oracle Autonomous Database and Oracle Autonomous Linux, administrators no longer need to rush to apply critical database and operating system security patches. These technologies handle the process automatically and transparently for users. Additionally, Oracle introduced solutions like Ksplice, which extends this capability to other operating systems at no cost for any server running on OCI.

The defense-in-depth approach would not be complete without addressing the application layer of the technology stack, as applications often serve as the primary entry point for exploits and vulnerabilities. Applications are the most common attack surface, particularly due to social engineering tactics like phishing scams. To enhance its protection profile, Oracle is currently implementing passwordless authentication across its SaaS application footprint. Although still in development, this capability aims to allow organizations to exercise greater control over user access to their data. While complex password rules once contributed to a more secure authentication process, the increasing sophistication of attackers and the inconvenience these rules cause for users have turned them into a vulnerability. Passwordless authentication simplifies this process by replacing complex passwords with straightforward solutions like biometrics and passkeys.

In summary, security will always be a critical focus for IT, and the landscape will continue to evolve. Whether it's advancements in cryptography or the increasing sophistication of deepfakes due to AI, security professionals will need solutions that adapt to these emerging threats. Oracle remains committed to prioritizing security in its innovations. Ultimately, it is up to customers to leverage these tools to strengthen their defenses.

THE INTELLIGENT CORE

AI CHANGES EVERYTHING FOR CORE MODERNIZATION

Many core systems providers have invested heavily in AI, rebuilding their offerings and capabilities around an AI-fueled or AI-first model. The integration of AI into core enterprise systems represents a significant shift in how organizations operate and leverage technology for competitive advantage.

Using core systems as a platform upon which AI innovations are built raises questions around AI orchestration that IT and business leaders will have to answer. Do they use the modules provided by vendors, use third-party tools, or, in the case of more tech-capable teams, develop their own models? Relying on vendors means waiting for functionality but may come with greater assurance of easy integration.

Another question is how much data to expose to AI. One of the benefits of GenAI is its ability to read and interpret data across different systems and file types. This is where opportunities for new learnings and automation come from, but it could also present privacy and security challenges. In the case of core systems, this means highly sensitive HR, finance, supplier, and customer information. Feeding this data into AI models without attention to governance could create new risks.

In the end, this transformation is about automating routine tasks and fundamentally rethinking and redesigning processes to be more intelligent, efficient, and predictive. But beware of the automation paradox: The more complexity is added to a system, the more vital human workers become. Adding AI to core systems may simplify the user experience, but it will make them more complex at an architectural level. Deep technical skills are still critical and as a result, AI-driven core modernization requires careful planning due to integration complexity, strategic investment in technology and skills, and a robust governance framework to ensure smooth operations.

The intelligent core: AI changes everything for core modernization with OCI

The power of AI lies in bringing technology and data to users, not the other way around. With this in mind, Oracle has been embedding AI into its core offerings, including Fusion Cloud Enterprise Resource Planning (ERP), Fusion Analytics Warehouse, and Oracle Analytics Cloud. Moving forward, AI is already baked into Oracle's roadmap of future capabilities across its entire platform.

When considering the breadth of services, Oracle is one of the few cloud providers offering true SaaS applications, platforms, and infrastructure, all integrated within the same data centers. To enhance the efficiency of these applications, Oracle has embedded more than 50 AI agents within its business applications, without imposing any additional fees on users. As the first user of its own innovations, Oracle uses these agents to manage its own business operations, demonstrating their value.

> *"Oracle AI Agents are directly embedded into the ERP; they bring the technology to the user, as opposed to making the user go to the technology."*
>
> **-Chris Pasternak**
> Managing director and global Oracle chief technology officer,
> Deloitte Consulting LLP

As IT leaders evaluate whether to build or buy their own AI solutions, they might consider allowing Oracle to manage routine tasks—such as journal entries, which are consistent across platforms—while focusing their internal efforts on developing unique solutions that differentiate their businesses. For instance, they could leverage Fusion Cloud Supply Chain Management (SCM) to manage supply chain fundamentals and industry standards, directing their custom development efforts towards optimizations where AI can predict disruptions, recommend alternative options, and identify opportunities for consolidation.

With the impending introduction of Oracle AI Agent Studio for Fusion Applications, SaaS users will gain an intuitive, user-friendly way to extend their applications without the needs for complex solutions. The AI Agent Studio allows users to create custom AI agents directly within the SaaS application, enabling tailored solutions for their unique business challenges. Additionally, it supports integration with external data sources via web services, further enhancing organizational capabilities and results.

Extensibility is a defining feature of Oracle's platform and its approach to AI. As both an infrastructure and application provider, Oracle structures its offerings to allow customers to build AI models either with or independently of core application systems. To fully leverage these capabilities, Deloitte collaborated with a medical center to deploy a supply chain agent for their Oracle Fusion application. By utilizing application data, integration services, generative AI services and infrastructure for data manipulation, Deloitte developed and deployed the Buyer's Assistant. This solution enables end users to eliminate the guesswork from procurement requests, quickly identifying the best products at the best prices with better terms. Ultimately, this solution is designed to reduce hours of manual research by buyers and helps drive better procurement options in the future.

AI Assistants Lend Buyers a Hand

GenAI agents are already transforming certain areas of the business, such as procurement. Take Deloitte's Buyers Assistant for example. Powered by Oracle's GenAI services, Deloitte's Buyer's Assistant can make the processing of non-contract requisitions more intuitive, efficient, and effective. The autonomous and proactive tool reviews and understands the purchase request and then suggests a course of action, while the buyer maintains control over final decisions. By automating the process of researching price agreements, suppliers, and validating results, the assistant enables buyers to focus on more strategic areas and activities.

BREADTH IS THE NEW DEPTH

THE POWER OF INTENTIONAL INTERSECTIONS

Organizations have long relied on innovation-driven new revenue streams, synergies created through mergers and acquisitions, and strategic partnerships. But increasingly, segmentation and specialization have given way to intentional intersections of technologies and industries. For example, when two technologies intersect, they are often complementary, but they can also augment each other so that both technologies ultimately accelerate their growth potential. Similarly, new opportunities can emerge when organizations aim to extend their market share by purposefully partnering across seemingly disparate industries.

As AI alters the way we work, live, and communicate, expertise in historical methods may not be as important as the vision to imagine and execute new intersections of AI with the macro technology forces we've covered in this report, such as AI applied to spatial computing and core modernization. If organizations can see beyond the silos of their specializations, we might very well find ourselves on the cusp of a reimagined renaissance. What convergence will your organization discover next?

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Breadth is the new depth: the power of intentional intersections

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