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ORACLE

The Top 5 Cloud Trends for 2023 & Beyond

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Organisations Have Moved to Hybrid, Multi-Cloud Environments

Organisations in Asia Pacific are no longer only focused on employing a cloud-first strategy – they want to host infrastructure and workloads where it makes most sense; and expect a seamless integration across multiple cloud environments.

45%
**Seamless integration across individual cloud workloads**
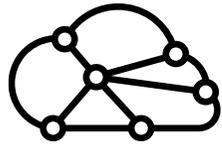
21%
Employ a cloud-first strategy

18%
Build cloud native applications

16%
Do 'lift and shift' migration

Cloud Underpins Organisations' AI Goals

While cloud can provide the agile infrastructure that underpins application modernisation, innovative leaders recognise that it is only the first step on the path towards developing AI-powered organisations. The true value of cloud is in the data layer, unifying data around the network, making it securely available wherever it is needed, and infusing AI throughout the organisation.

Cloud provides a dynamic and powerful platform on which organisations can build AI. Pre-trained foundational models, pay-as-you-go graphics superclusters, and automated ML tools for citizen data scientists are now all accessible from the cloud even to start ups.

Organisations should assess the data and AI capabilities of their cloud providers rather than just considering it an infrastructure replacement. Cloud providers should use native services or integrations to manage the data lifecycle from labelling to model development, and deployment.

Ecosystm presents the top 5 trends for Cloud in 2023 and beyond.

The Need for Cloud Cost Optimisation is Stimulating the Use of FinOps

Wastage is commonly estimated to account for around one third of cloud spending. With most organisations expanding their reliance on cloud, it is now a significant line item in IT budgets. Organisations have begun to monitor costs more closely but native optimisation tools from cloud providers are often basic.

Cloud FinOps and cost optimisation services will become vital as economic uncertainty persists. Many organisations are already comfortable with visibility features, such as tagging, utilisation reporting, and reserved instance recommendations. FinOps should integrate with existing cloud management suites to provide centralised control to IT operations teams.

Organisations will only justify the adoption of cost optimisation tools if they are automated and simple to implement. Future adoption will focus on AI-enabled proactive execution, such as policy enforcement, footprint rightsizing, and spot instance procurement.

Public and Private Cloud is Finally Meeting at the Edge

An effective hybrid cloud strategy requires early planning to decide which is the right cloud, for the right workload, at the right time. Competitors from across the cloud ecosystem have realised they must work together for clients to successfully deploy a hybrid environment.

The need for lower latency in IoT applications is driving investments in infrastructure at the network edge. The value of these systems, however, will only be maximised if they are part of a broader hybrid cloud environment. Video or time series data transferred to high performance computing systems in the cloud can help refine AI inference models and then be acted upon at the edge. Data can be generated and processed on site but with disaster recovery ensured in the cloud.
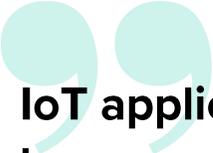
IoT applications at the edge function at a scale and pace beyond the capabilities of human operators. Savings made by the move to cloud can fund continuous reskilling programs, enabling infrastructure teams to exploit new automated tools, such as AIOps, serverless infrastructure, and data fabric.

Sustainability Will Become an Added Benefit of Cloud

For enterprises attempting to reduce their IT carbon intensity, cloud plays a critical role. The largest cloud providers have signed renewable power purchase agreements and achieved low data centre power usage effectiveness ratios (PUEs) that most enterprises lack the scale for themselves.

The need to reach sustainability goals has become tangible recently, with several high-profile data centre outages caused by heatwaves. Compounding the issue are the high energy prices that will result in growing costs for enterprises, whether they operate their own data centres or opt for cloud.

Enterprises will need to consider rising electricity prices, power supply constraints, and carbon emissions as they conduct their data centre capacity and cloud planning for the next few years. Major power consumers should implement efficiency measures, such as AI-based energy management, now to avoid the gaze of the regulator.

Industry Cloud is Accelerating Business Innovation

The extensive range of IaaS and PaaS offerings on hyperscale cloud platforms has enabled businesses to rapidly develop innovative capabilities. However, this often entails significant configuration, integration, and orchestration of services, involving collaboration with partners or cloud engineers to build unique services.

Industry-specific cloud capabilities expedite value realisation for organisations. By combining infrastructure, platform, and application-level capabilities, businesses can swiftly adopt essential processes and functionalities specific to their industry.

Technology providers that build industry cloud capabilities will focus on customisations at scale, to adhere to specific regulatory requirements and geographical considerations.

While industry cloud will gain popularity, there will also be a greater need for cloud platform providers to partner with the right services providers that can help wrap customisation services around their industry cloud offerings.

#5 The Cloud Will be on Enhancing Resiliency as the Value of Data and Uptime Grows

The cost of downtime continues to climb as organisations digitise operational and customer-facing services. **Uptime Intelligence** reports that the proportion of data centre outages costing over $1M rose to 25% in 2022, up from 11% only three years earlier. Resiliency and security are converging, with ransomware now a major cause of extended outages exacerbated by reputational damage.

Organisations are increasingly embracing the automated and distributed features of cloud to enhance their resilience. Back-up validation, disaster recovery testing, and compliance monitoring can all be automatically conducted in the cloud without affecting the production environment. The ability to resume operations from nearby availability domains can accelerate recovery from hours down to minutes.

Smart regulators recognise the potential for cloud to offer a new level of resiliency to critical industries. Organisations will need partners to help spread risk across multiple cloud providers, develop an exit strategy to avoid lock in, and monitor compliance.

Ecosystm Opinion

Oracle's momentum in the cloud market is evidenced by its cloud infrastructure and applications business growing at a combined rate of 50% in its latest quarter. Its cloud footprint has increased to 44 regions with seven more planned. Oracle is rapidly becoming a rival to AWS and Azure as its enterprise clients migrate to the cloud.

The main reasons for this momentum are:

Over half of Oracle's apps revenue stems from cloud. Now enterprises are migrating to cloud databases, Oracle's stronghold. It aims to capture infrastructure spend as its footprint grows.

Enterprises are taking a multi-cloud approach to spread risk across multiple providers. Oracle is embracing its position as a multi-cloud option by partnering with AWS and Azure.

Oracle provides flexible deployment models, including public, cloud@customer, hybrid, and on-prem. It offers a common technology platform for customers to build the app stack on.

As Oracle scales up its cloud business, efficiencies are driving up margins. This profitability has allowed Oracle to continue expanding its data centre footprint and further enabling geographic expansion.

Case Studies

Data Intelligence

BACKGROUND

Children's Medical Research Institute (CMRI) is an Australian medical and biological research institute that advances healthcare research for children in the areas of cancer, epilepsy, eye disorders, and other genetic diseases.

OBJECTIVE

- Optimisation of processes to improve performance
- Seamless data collaboration across researchers, data scientists, and operations teams
- Machine learning service to manage the entire model lifecycle, provide access to open-source libraries and tools, and empower data scientists

SOLUTION

- OCI
- OCI Data Science
- OCI Object Storage

OUTCOMES

- A reduction of numerical simulation time from 30 days to 5 with OCI Data Science
- Improvement in resource efficiency by 30-50%
- 30% cost savings
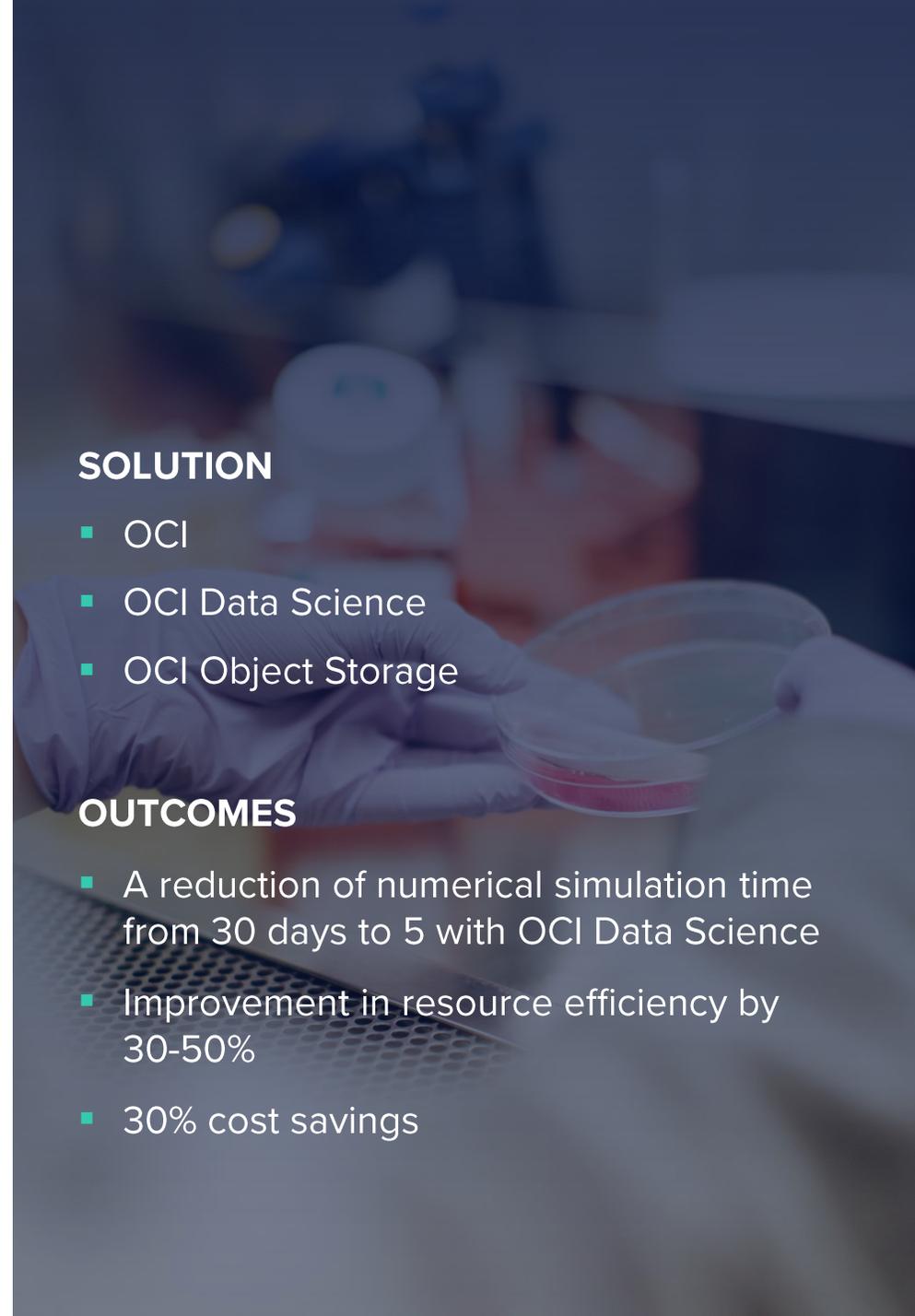
MYNET

Cost Optimisation

BACKGROUND

Mynet is a Japan-based online business company founded in 2006 that offers mobile games services and other services. Mynet acquires existing game titles, and redesigns and repackages them to reach a broader mobile gaming audience.

OBJECTIVE

- Access to highly available, resilient, and high-performing infrastructure
- Reduction of operating costs
- Seamlessly integration to third-party cloud vendors

SOLUTION

- OCI
- OCI Object Storage
- OCI Block Volumes
- OCI Load Balancer

OUTCOMES

- Cost saving of 80% in most game titles, adding up to USD 1M over 12 months
- 6x improvement in batch operation performance
- Improvement in game performance and scalability
- Uniified view of cloud security posture across OCI customer tenants

SAIL GP™

Sustainability

BACKGROUND

SailGP is an international sailing competition, across a season of multiple grands prixs. Their ambition is to be the world's most sustainable and purpose-driven global sports and entertainment platform.

OBJECTIVE

- Better data processing for real-time analytics and competitive advantages

- Deeper connection with fans and partners

- A robust simulator, allowing teammates to virtually race F50s from any location

- Detection of complex anomalies and potential failures to pinpoint sensors and subsystems for safer operations and proactive replacement

SOLUTION

- OCI

- Oracle Autonomous Data Warehouse

- Oracle Stream Analytics

- OCI Object Storage

- OCI Anomaly Detection Service

OUTCOMES

- Real-time analytics using over 240,000 data points collected from 800 sensors within seconds

- Reduced carbon footprint because of remote IT staff and the use of Oracle FastConnect

- Sailing simulator for athlete training

- Enhanced performance and costs savings

NVIDIA

AI/ML on the Cloud

BACKGROUND

NVIDIA is a pioneer in accelerated computing. Their work in AI and the metaverse is transforming the world's largest industries and is impacting society profoundly.

OBJECTIVE

- An AI supercomputing service on a hyperscaler Scalable and highly available infrastructure

- AI Foundations model-making services spanning language, images, video and 3D, and biology

SOLUTION

- OCI

- DGX Cloud on OCI

- OCI Compute

- Oracle AI Infrastructure

OUTCOMES

- Putting the opportunities for AI-driven innovation within reach of every enterprise

- Enhanced Generative AI capabilities through purpose-built RDMA networking that delivers near line rate performance with microsecond latency and eliminates blocking issues for RDMA-dependent workloads.

About Oracle

Oracle offers suites of integrated applications plus secure, autonomous infrastructure in the Oracle Cloud. For more information about Oracle (NYSE: ORCL), please visit us at **oracle.com**.

About Ecosystm

Ecosystm is a Digital Research and Advisory Company that brings together tech buyers, tech vendors and analysts onto one integrated platform to enable the best decision-making in the evolving digital economy.

Our Mission is to democratise technology research, with an emphasis on accessibility, transparency, and autonomy.

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