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Future Proof Your Critical Technology Infrastructure

NAVIGATING THE VMWARE CROSSROADS

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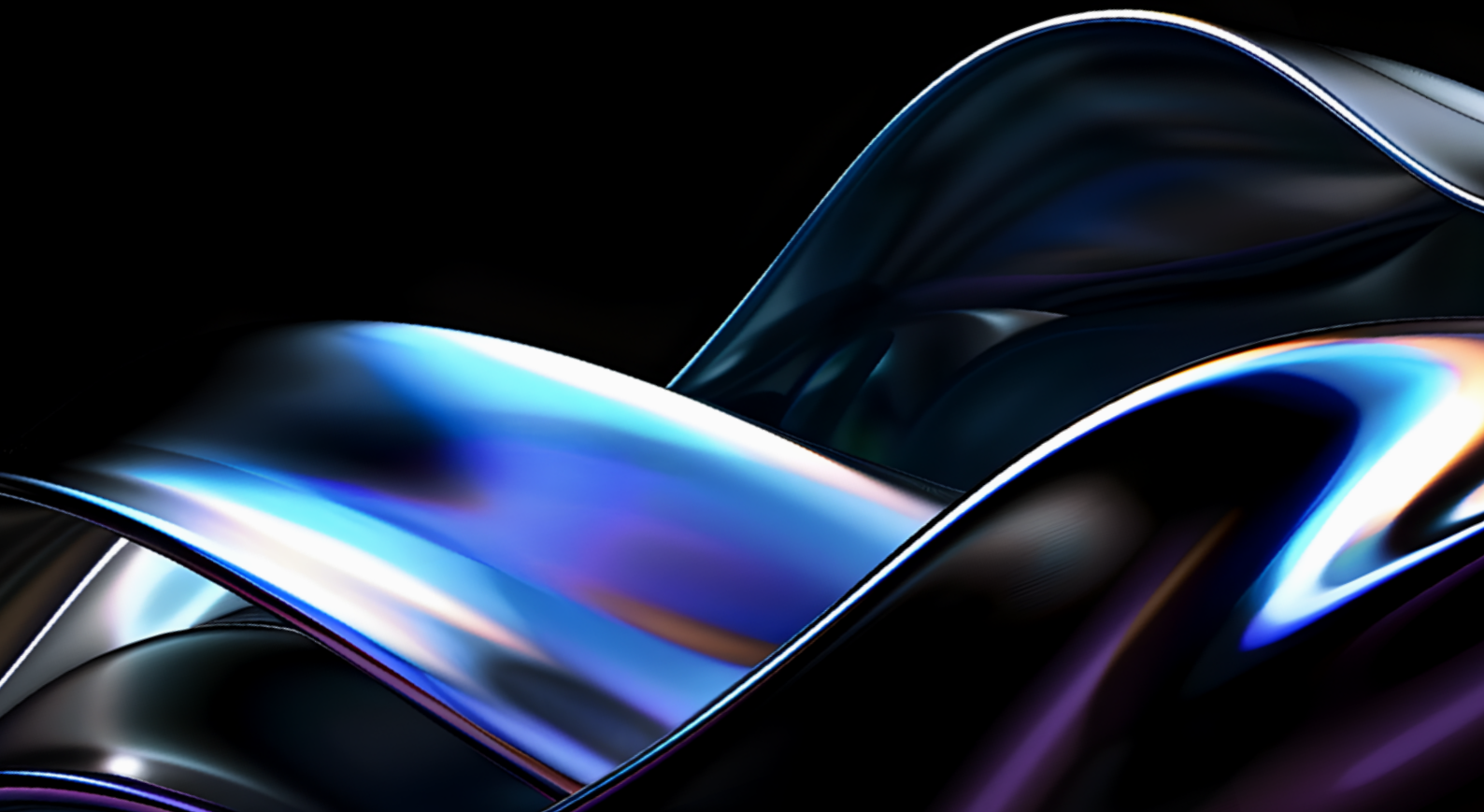


Executive Summary

As organisations navigate the complexities of multi-cloud environments, including on-premises, co-located private cloud, and multiple hyperscalers, they are seeking ways to streamline operations and enhance agility.

Hybrid cloud services offer a promising solution, providing the flexibility of public clouds while optimising workloads for specific needs. However, not all hybrid cloud solutions are created equal, and organisations must carefully evaluate their options to ensure they align with their strategic, technical, and financial goals.

Many organisations in Asia Pacific are facing a critical decision regarding their VMware investments considering the Broadcom acquisition and subsequent changes in licensing, bundling, and pricing. This shift, combined with the growing complexity of multi-cloud environments, has created a sense of urgency for organisations to re-evaluate their cloud strategies.

This whitepaper examines five key approaches organisations can take with their VMware agreements. Each approach has unique benefits and challenges, essential for informed decisions. By evaluating and selecting the best fit for their strategic objectives, organisations can navigate VMware agreements and develop a resilient, future-proof hybrid cloud strategy.

Leaders want Growth without the Cost of Growth

An organisation's cloud and application hosting strategy must align with its technology, digital, and broader business strategies, despite financial or licensing pressures. In today's economic environment, business leaders aim for growth without traditional costs by increasing productivity through better tech use and embracing AI. This involves cutting costs (including headcount), reskilling, renegotiating supplier agreements, altering payment terms, and rapidly adopting AI to drive much of this productivity growth over the next few years.

AI Will Drive Technology Spend and Infrastructure Modernisation

As tech leaders plan their future technology infrastructure and application strategies, they must consider other major initiatives, especially AI. While 2024 focused on AI discussions and strategies, 2025 will see a significant increase in spending to make data, infrastructure, and applications AI-ready.

In Asia Pacific, AI is viewed primarily as a productivity enhancer. Boards and senior management prioritise AI to boost productivity, delivering growth without added costs or cutting costs without shrinking the top line.

AI will require a significant amount of new infrastructure spend as organisations build hybrid cloud capabilities to train AI models and inference at the edge.

Key Benefits Sought from AI Adoption

60%
Improve productivity

57%
Drive innovation

54%
Reduce operating costs

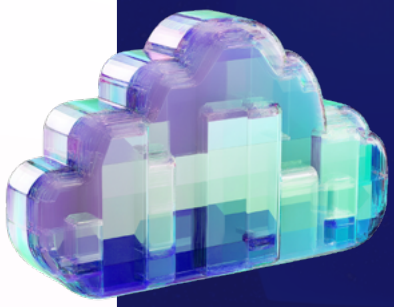
N= 519
Source: Ecosystm Digital Enterprise Study, 2024

Technology Priorities are Shifting to Hybrid Cloud

AI is an edge and hybrid cloud story. Many AI workloads require local capacity for inference and learning near or at the edge, ensuring intelligent outcomes. Data for AI models, spread across distributed environments, must be secure, prompting organisations to keep it within their hybrid cloud setups. By strategically deploying AI workloads, hybrid cloud optimises costs and resource utilisation, offering the best of both worlds: the cost-effectiveness of public cloud and the control of private cloud. Additionally, hybrid cloud environments can be managed using familiar tools and processes, reducing the need for specialised AI expertise and accelerating implementation.

Tech leaders are rethinking their cloud and infrastructure strategies, moving away from a one-size-fits-all approach.

The evolution and maturity of hybrid cloud solutions empower organisations to strategically place workloads where they best serve business and customer needs, accelerating the realisation of AI strategies.



The number of "public cloud first" organisations identifying as "public cloud first" has significantly decreased from 70% in 2021 to just 23% in 2024. Organisations are opting for a hybrid cloud strategy, where workloads are hosted where it makes the most business sense.

SOURCE: ECOSYSTM, 2024

VMware Acquisition: A Catalyst for Architectural Change

The VMware acquisition by Broadcom has accelerated inevitable architectural decisions for many organisations.

Factors beyond license agreements, such as hardware refresh cycles, application upgrades, and AI adoption, will influence the timing of shifts to VMware competitors, public clouds, Kubernetes, or hybrid models. Application modernisation is shifting the focus from virtualisation to containerisation, accelerating the transition from VMs towards future-ready application architectures.

While some organisations have renewed contracts with VMware by Broadcom, this only temporarily delays long-term infrastructure and application hosting decisions.

There are five primary approaches organisations can take:

1. **Stay with VMware**
   Adapt to its evolving platform
2. **Migrate to the Public Cloud**
   Transition to a cloud provider for scalability, flexibility, and managed services
3. **Switch to a Competitor**
   Evaluate alternative platforms
4. **Adopt Containerisation and Kubernetes**
   Explore a container-based approach with Kubernetes to enhance agility, portability, and enable microservices architecture for modern applications.
5. **A Customised Approach**
   Combine elements of the above options to create a customised strategy that balances cost, performance, and risk.

These may not be mutually exclusive — we expect that most organisations will need to take a mix of the options due to the timing of ELA expiry, the appetite for legacy application modernisation and the availability of skills inside and outside of the organisation. And above this, all decisions need to be made with a focus on enabling the organisation's broader strategy and business goals.

What is clear is "doing nothing" is not a viable option, as even staying with VMware will require adjustments.

#1 STAY WITH VMWARE

Staying with VMware isn't a "do nothing" approach for many customers. Organisations need to reassess which products add value, identify potential new bundles, determine which products are no longer necessary, and evaluate whether VMware's roadmap aligns with their future requirements.

BENEFITS

Continuity	Avoiding complexities and downtime associated with migrating to a new platform.
Preserved Investments	Maximising the hardware and training investments, avoiding sunk costs from switching platforms.
User Familiarity	Reducing the need for retraining IT teams and end-users as they are accustomed to the interface and functionalities.
Support for Existing Workloads	Ensuring performance and stability for mission-critical and legacy systems, with regular updates and technical assistance to maintain security — dependent on the licenses and add-ons purchased.

CHALLENGES

Cost Increases	Increased licensing fees can impact the IT budget, affecting other critical areas or delaying projects. These increases may result from bundling previous standalone products or removing perpetual licenses, reducing funds for growth and innovation.
ROI Concerns	Alternative solutions might offer similar functionalities at a lower total cost of ownership. Dependence on VMware may hinder the adoption of emerging technologies or more cost-effective solutions in the future.
Uncertain Product Roadmaps & Service Commitments	VMware's new ownership may impact long-term planning and investments, with a potential shift toward private cloud solutions. Concerns remain about Broadcom's commitment to ongoing innovation within the VMware stack. Changes in product support lifecycles and service quality could disrupt operations and increase costs, raising questions about future service levels.
Partner Consolidation	Some VMware customers may need to establish relationships with new partners or transition to direct relationships as the partner model is consolidated.

Broadcom is streamlining VMware's partner environment, potentially impacting the availability of services for certain partners and OEMs.

CHECKLIST TO ADAPT TO NEWER VMWARE FEATURES

- Analyse Current and Future VMware Expenses
- Compare Costs and Benefits of Remaining with VMware to Alternative Solutions
- Audit and Optimise VMware Use
- Implement VMware Best Practices for Configuration, Security, and Performance

#2 MIGRATE TO THE PUBLIC CLOUD

While the "public cloud first" strategy is becoming less prevalent, public cloud adoption continues to grow due to its flexibility, scalability, and availability. AI, with its cloud-based training and edge-based deployment, is a major driver of this growth. Many organisations already have workloads in the public cloud, including those running on VMware.

Public cloud gives access to cutting-edge services like AI, ML, IoT, and big data analytics.

BENEFITS

- **Cost Flexibility.** Shifting from CapEx to OpEx improves cash flow and enables experimentation.
- **Scalability.** Dynamic resource allocation ensures optimal performance without over-provisioning.
- **Faster Deployment.** Rapid setup accelerates time-to-market for new products and supports DevOps practices.
- **Managed Infrastructure & Security.** Providers handle maintenance, updates, and security, freeing up IT teams.
- **High Availability & Performance.** Robust infrastructure and disaster recovery solutions ensure business continuity.

CHALLENGES

- **Complexity of Migration.** Migrating workloads to the public cloud is complex, straining network bandwidth with potential charges for data transfer. Ensuring data security is crucial, requiring encryption and verification.

Legacy applications may need modifications or re-engineering for compatibility, leading to increased costs and delays.

- **Management Challenges.** Very few organisations land on a single public cloud platform. Many workloads are likely to span multiple public cloud environments, which increases the management overhead, monitoring requirements, and process dependencies.
- **New Skill Requirements.** IT Teams must master cloud-specific technologies and best practices, possibly obtaining certifications to ensure expertise.
- **Cost Uncertainty.** Usage-based billing can fluctuate due to changing demand and resource sprawl. Complex pricing models and extra costs from data egress, premium support services, or advanced features add to the uncertainty.

CHECKLIST FOR PUBLIC CLOUD ADOPTION

- Conduct a Thorough Analysis of Cloud Platforms
- Upskill and/or Redeploy Your Infrastructure Team
- Implement Cloud Governance
- Assess Your Cloud Readiness
- Create a Migration Strategy
- Deploy a Hybrid Management Platform

#3 SWITCH TO A COMPETITOR

The VMware acquisition has prompted many customers to consider alternative vendors. This competitive landscape has led to increased product innovation, special migration offers, and enhanced customer focus from competitors. Some competitors are also embracing AI to help their customers fast-track their AI investments and applications.

While VMware has a competitive offering, competitors are rapidly evolving, providing advanced capabilities that can surpass VMware, especially when combined with integrated hardware capabilities.

BENEFITS

Competitive Pricing

Alternative vendors often offer more flexible licensing models, aligning better with budget and usage patterns. Additionally, integrated platforms can reduce the total cost of ownership by eliminating the need for separate solutions for compute, storage, and networking.

Negotiation Leverage

Evaluating multiple vendors increases bargaining power. Vendors may offer discounts or extended support to win business.

Integrated Management

Consolidated solutions — like hyper-converged infrastructure, hybrid environment management, VMs and container management, and proprietary architectures — simplify data centre management by combining functionalities into a single system. A unified management interface centralises monitoring and administration, reducing the need for multiple tools. Simplified scalability allows for linear expansion by adding nodes to the cluster, making it easier to scale resources as needed. Enhanced features, such as built-in backup and disaster recovery, improve operational efficiency and reduce reliance on third-party solutions.

CHALLENGES

Migration Complexity

Migrating workloads involves converting virtual machine formats, adjusting configurations, and ensuring data integrity. Some applications may require testing and adjustments to function on the new platform.

Vendor & Partner Ecosystem

New platforms may require hardware upgrades or replacements, and applications that rely on VMware-specific features may need adjustments to function properly. Building familiarity with the new vendor's support team takes time, and existing relationships with consultants or partners may need to be reevaluated.

CHECKLIST FOR A VENDOR SWITCH

- Conduct a Technical and Cost Evaluation
- Create a Proof of Concept
- Upskill Your Tech Team
- Create a Migration Plan
- Select and Deploy Migration Partner/s and Tools

#4 ADOPT CONTAINERISATION AND KUBERNETES

Adopting containers and Kubernetes modernises IT infrastructure and applications, enhancing scalability, flexibility, and efficiency — key to many AI deployments. This involves packaging applications into containers and using Kubernetes for orchestration. While containers will be integral to future tech architectures, they will coexist with VMs for the foreseeable future.

Kubernetes is central to AI development – as AI adoption increases, so will the adoption of containers and Kubernetes.

BENEFITS

- **Modernisation.** By breaking down monolithic applications into smaller, independent microservices, organisations can enable concurrent development, faster release cycles, and improved system stability. Additionally, containers facilitate CI/CD practices, allowing for frequent and reliable software releases, ensuring consistency across different environments.
- **Cloud Agnostic.** Open-source technologies like Docker and Kubernetes reduce dependency on proprietary solutions, allowing organisations to choose the most suitable infrastructure for their needs without being locked into a specific vendor.

Containers can run consistently across both on-premises and cloud environments, simplifying migration efforts and enhancing disaster recovery capabilities.

- **Efficiency and Scalability.** Containers require fewer resources than virtual machines, allowing for higher application density and cost savings. Additionally, Kubernetes enables automatic scaling based on demand, ensuring optimal performance and resource utilisation.

CHALLENGES

- **Skills Gap.** Adopting containers and Kubernetes requires shifting to DevOps methodologies, re-engineering existing workflows for CI/CD, and managing resistance through effective communication and training.

Organisations will need to upskill existing teams or hire specialists to navigate the steep learning curve of Kubernetes.

- **Application Refactoring & Testing.** Legacy applications will need significant changes to run in containers, requiring extensive testing to ensure compatibility and performance.
- **Operational Complexity.** Managing numerous containers and microservices can be complex, requiring sophisticated tools and practices. It also requires monitoring and logging solutions to maintain visibility and troubleshoot issues. Security considerations, such as image vulnerabilities and runtime threats, require effective security policies across the distributed environment.
- **Mixed Environments.** Organisations will still need to manage existing VMs from VMware or other providers alongside Kubernetes, adding to the complexity.

CHECKLIST FOR CONTAINERISATION AND KUBERNETES ADOPTION

- Create a Containerisation Strategy
- Select and Deploy a Unified VM and Containers Management Platform
- Upskill Your Infrastructure and Development Teams
- Implement DevOps Practices
- Invest in Monitoring and Collaboration Tools

#5 A CUSTOMISED APPROACH

Many businesses will adopt a multi-faceted strategy for application hosting, using a combination of on-premises, cloud, VMware, and competitor solutions. This hybrid approach leverages the strengths of both on-premises infrastructure and cloud services, offering flexibility, cost optimisation, and risk mitigation tailored to specific business needs.

Hybrid approaches allow legacy applications to run on dedicated hardware while new applications benefit from the cloud.

BENEFITS

- **Flexibility.** By managing critical workloads on-premises and leveraging cloud services for scalability, organisations can optimise resources and enhance performance. This flexibility helps in cost optimisation by balancing on-premises and cloud resources, avoiding unnecessary expenditure on underutilised infrastructure or cloud instances.
- **Workload Optimisation.** By deploying applications where they perform best, organisations can ensure efficiency. Hybrid approaches help comply with regulatory requirements, storing sensitive data on-premises and less sensitive data in the cloud. Distributing workloads enhances business continuity, reducing the risk of a single point of failure. Using the cloud for temporary environments like development, testing, or training reduces the burden on on-premises resources and can lead to energy savings.

  High-performance, low-latency applications are suited for on-premises deployment, while scalable apps benefit from cloud hosting.
- **Risk Mitigation.** By replicating data across different environments, organisations can enhance disaster recovery capabilities and improve negotiating power with vendors. This strategy also enables the adoption of new technologies from diverse providers, keeping IT environments competitive.

  Diversifying vendor relationships also helps mitigate the risks associated with vendor lock-in.

CHALLENGES

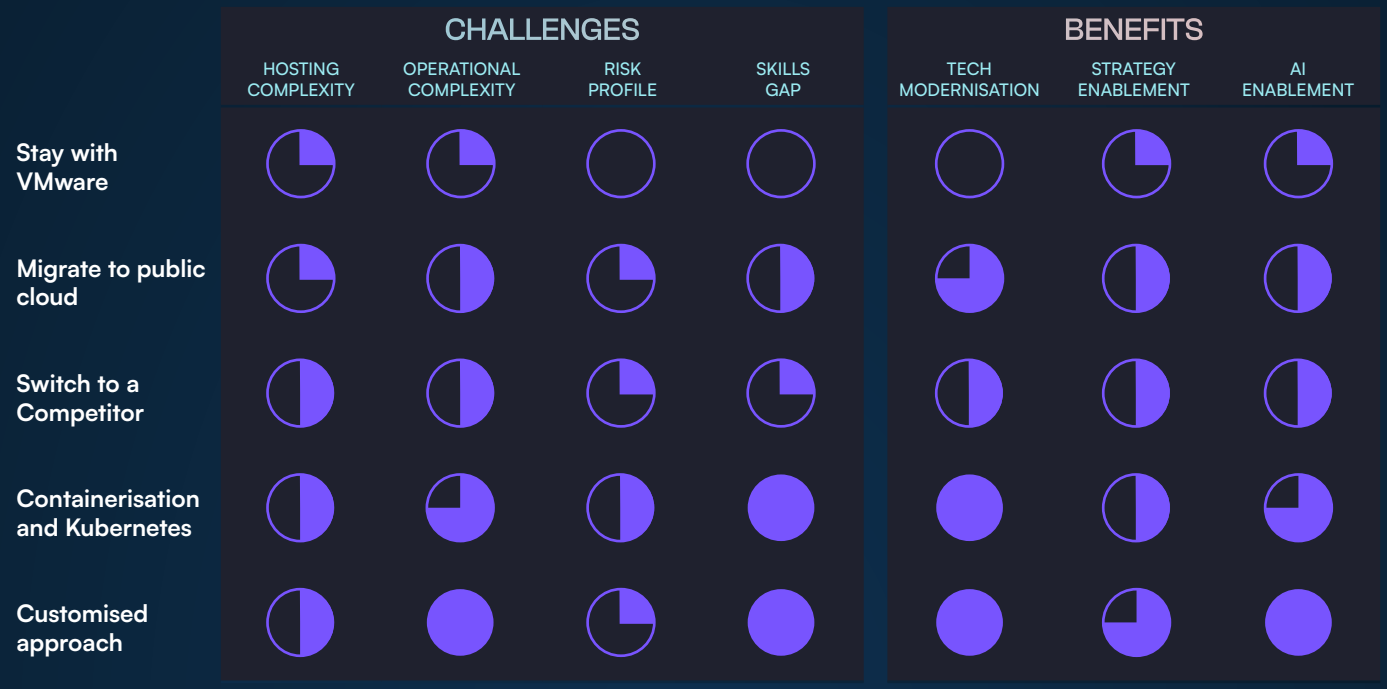
- **Integration Complexity.** Ensuring seamless communication between on-premises and cloud systems can be complex due to differences in platforms and data formats. Maintaining real-time data consistency across environments is critical but technically challenging.
- **Network Considerations.** Data transfer between environments can introduce latency, affecting application performance. Extending networks to the cloud introduces security risks that need to be considered.
- **Management Overhead.** Managing multiple platforms with separate tools can increase operational complexity. Additionally, maintaining cost visibility across multiple environments can be challenging, making it difficult to optimise resource utilisation and control expenses.

  Ensuring consistent security, compliance, and governance across environments demands careful coordination.
- **Skill Requirements.** IT teams must be proficient in both on-premises and cloud technologies, requiring training and ongoing education.

CHECKLIST FOR A CUSTOMISED APPROACH

- Create an Architectural Review
- Develop a Hybrid Architectural Design
- Profile Workloads to Identify Best Operating Environment
- Implement Tooling and Automation to Streamline Migration and Management
- Ensure Strong Compliant Data Governance Practices and Procedures
- Create Consistent and Robust Security Policies

A Decision Matrix to Choose the Right Approach



Source: Ecosystm, 2024

Considerations that Should Feed into the Decision Matrix

THE HOSTING STRATEGY

1. **Current and Future Workload Requirements**
   Evaluate the types of applications and their importance to your business, determine performance needs, and estimate growth projections over the next 3-5 years.

2. **Innovation and Digital Transformation**
   Assess the ease of adopting advanced technologies like AI, ML, or IoT, support for modern development practices, and how the option positions your organisation to respond to market changes and customer needs.

3. **Long-Term Strategic Implications**
   Ensure alignment with business objectives, consider total lifecycle costs, and align with vendors whose future plans support your long-term goals.

4. **Application Compatibility**
   Evaluate technical requirements, estimate refactoring efforts, and plan thorough testing for new platforms.

5. **Scalability and Performance Requirements**
   Determine elasticity needs, identify performance optimisation needs, and ensure the chosen option can accommodate future growth.

6 **Vendor Lock-In**
Decide on multi-vendor strategies, evaluate the benefits of open standards, and consider ease of future migration away from a vendor.

7 **Organisational Capacity for Change**
Assess staff expertise, identify gaps that may require training or hiring, and consider the organisation's openness to technology adoption and process changes.

OPERATIONAL & COST IMPLICATIONS

1 **Vendor Support**
Evaluate technical support, response times, and vendor expertise. Assess financial health, innovation commitment, and future alignment.

2 **Operational Complexity and Management Overhead**
Identify needs for unified management platforms or additional tools. Consider automation for deployment, scaling, and maintenance. Determine if your team can manage operational demands or needs additional resources.

3 **Timeline for Implementation**
Estimate the transition time to the new option. Ensure the timeline fits business cycles, avoiding peak periods. Allocate time for planning, testing, and phased implementation.

4 **Total Cost of Ownership (TCO)**
Calculate initial investments, including change costs and recurring expenses like licensing, infrastructure, maintenance, and support. Identify potential savings through resource optimisation, pay-as-you-go models, or bundled services.

COMPLIANCE & RISK

1 **Potential Risks and Mitigation**
Identify operational risks like downtime, data loss, or service disruptions. Evaluate security risks, including data protection and compliance. Develop mitigation strategies, such as backup solutions, phased migrations, or enhanced security measures.

2 **Compliance and Regulatory Requirements**
Understand data residency laws and specific industry regulations (e.g., HIPAA, PCI DSS). Ensure each option can provide compliance reports and support audits.

3 **Security Approach**
Evaluate built-in security measures like encryption and access controls. Assess the capability to detect, prevent, and respond to security incidents. Ensure the option supports consistent application of security policies.

4 **Disaster Recovery and Business Continuity**
Evaluate redundancy and failover capabilities. Determine if the option meets your recovery time objectives (RTO) and recovery point objectives (RPO). Consider integrating backup and restore functionalities with your current systems.

Ecosystm Opinion

Your technology investments over the next few years will be crucial to enabling your AI-driven, digitally enabled business.

Spend time now to architect your cloud infrastructure and applications strategy to ensure your organisation has the ability to adapt to changing market conditions and pivot towards the new opportunities that AI will present.

In many respects, the Broadcom acquisition of VMware has come at the right time — as it gives your organisation the ability to build a modern technology environment that is fit for the future.

TIM SHEEDY

VP Research, Ecosystm

Tim Sheedy is the VP of Research at Ecosystm - a digitally native technology research and advisory firm. Tim brings more than 20 years of experience in designing and implementing cloud, IoT, AI and automation strategies to the Ecosystm network, to support businesses in their IT decisions. In his role he sets the research strategy for Ecosystm, and works with the advisor and analyst community to deliver a future vision for the technology sector.

In his previous role, Tim spent 12 years at Forrester Research, most recently as a principal analyst, helping IT leaders improve their digital capabilities. Prior to this, he was research director for IT solutions at IDC in Australia, where he assisted IT vendors in designing solutions to better fit market requirements, and IT buyers in improving the effectiveness of their IT functions. Beyond the office, he boasts an international reputation as an entertaining and informative public speaker on the key trends in the IT market. He graduated from University of Technology Sydney with a BA majoring in Marketing and Research.

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NUTANIX

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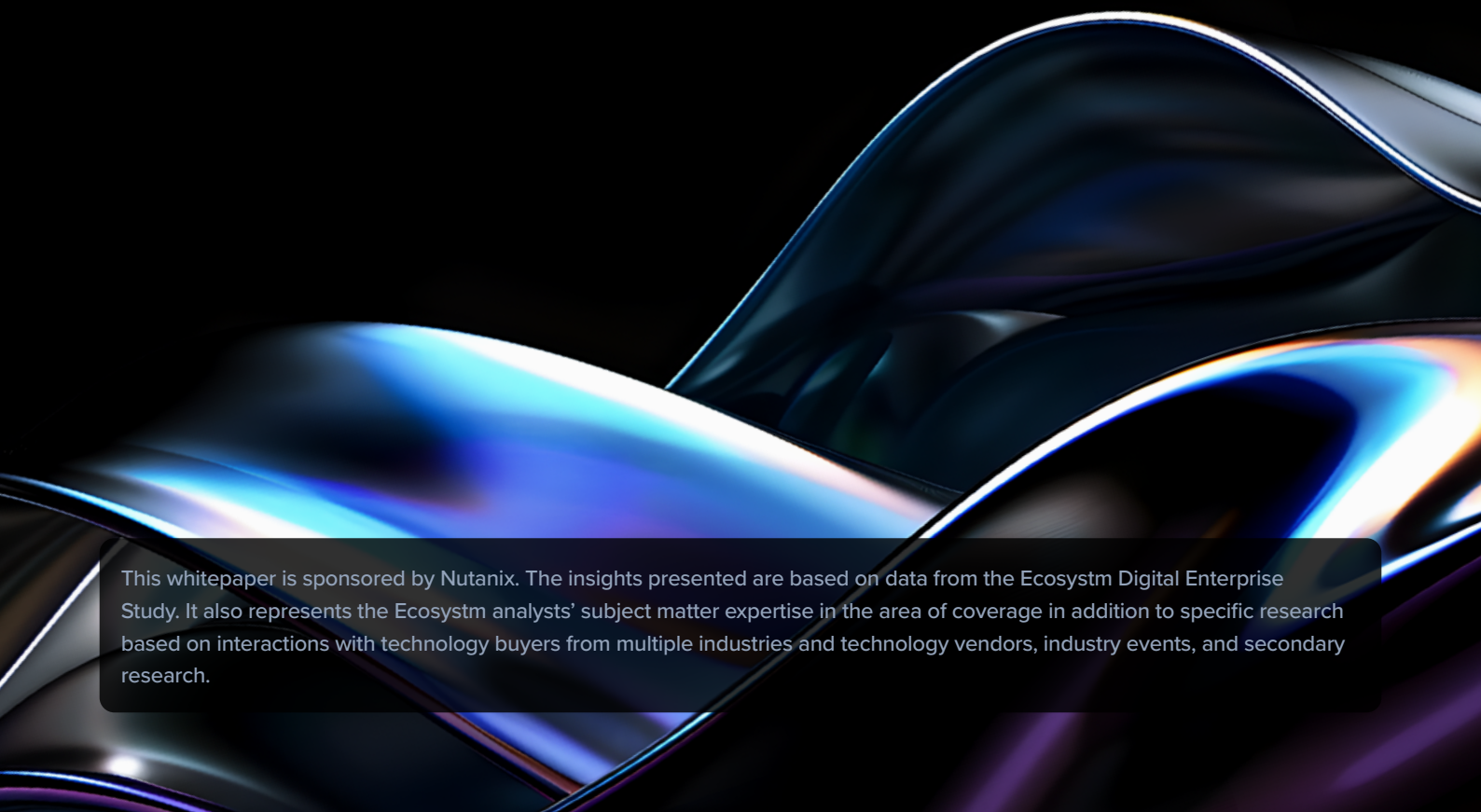

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