

IDC PeerScape: Practices for Maximizing the Business Value of Digital Infrastructure Consumption-as-a-Service Subscriptions

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IDC PEERSCAPE FIGURE

FIGURE 1

IDC PeerScape: Digital Infrastructure – Practices for Maximizing the Business Value of Consumption-as-a-Service Subscriptions

 Your Challenges	 Peer Insights
<p>Business Risk from Underprovisioning Capacity Traditional on-premises capacity planning drives overprovisioning to avoid the risk of business delays.</p>	<p>Practice 1 Use the consumption-as-service surge capacity to de-risk business operations.</p>
<p>Limited Internal IT Staff and Skills It's difficult to maintain current SLAs and support emerging requirements with existing staff.</p>	<p>Practice 2 Shift life-cycle mgmt. to consumption-as-a-service vendors to free internal staff to support LOB needs.</p>
<p>Design and Configuration Complexity Modern infrastructure is often complex and requires a specific knowledge to specify correctly.</p>	<p>Practice 3 Focus on KPIs and business outcomes, and let the vendor determine feeds and speeds.</p>
<p>Finance Organization Questions ROI Finance often questions ROI or delays funding major infrastructure projects because of the budget.</p>	<p>Practice 4 Partner with application owners to engage finance early in the process.</p>

Source: IDC, 2021

IN THIS EXCERPT

The content for this excerpt was taken directly from IDC PeerScape: Practices for Maximizing the Business Value of Digital Infrastructure Consumption-as-a-Service Subscriptions (Doc #US47595521). All or parts of the following sections are included in this excerpt: IDC Opinion, IDC MarketScape Vendor Inclusion Criteria, Essential Guidance, Vendor Summary Profile, Appendix and Learn More. Also included is Figure 1.

EXECUTIVE SUMMARY

IDC's digital infrastructure research shows that over 60% of enterprises have interest in shifting at least some of their on-premises/hosted digital infrastructure spending to the consumption-as-a-service model for subscription offerings. These organizations want to better match IT spending to business requirements while addressing stringent data protection and supply chain integrity concerns.

Most major digital infrastructure suppliers, including Dell Technologies, Cisco, Hewlett Packard Enterprise (HPE), and NetApp, have introduced consumption-as-a-service subscription offerings that allow customers to consume dedicated on-premises or hosted infrastructure on an on-demand basis. These offerings allow enterprises to focus on business outcomes and to link infrastructure spending and refresh decisions to business KPIs and SLAs. These agreements typically go beyond traditional leasing arrangements to incorporate proactive, remote vendor life-cycle support services, pre-provisioning of surge capacity, and responsibility for decommissioning the equipment at the end of the subscription. For many organizations, this represents a fundamental change in the way that digital infrastructure is architected, supported, and funded.

This IDC PeerScape describes four practices for maximizing the business value of digital infrastructure consumption-as-a-service subscriptions. Collectively, these practices allow enterprises to partner more deeply with application and business owners, better align infrastructure spending with business needs, and free up internal staff to focus on critical business priorities. This document evaluates these approaches and presents examples of organizations that have successfully used these practices to deliver tangible business benefits.

"Digital infrastructure consumption-as-a-service subscriptions are becoming an important option for sourcing and supporting complex dedicated compute, network, and storage environments," explains Mary Johnston Turner, research vice president, IDC Future of Digital Infrastructure Agenda. "To take full advantage of these opportunities, enterprises need to rethink the way they describe requirements to focus on business outcomes and leave the feeds and speeds decisions to their vendors."

PEER INSIGHTS

Practice 1: Use the Consumption-as-a-Service Surge Capacity to De-Risk Business Operations

Challenge

Traditional approaches to the procurement of dedicated on-premises infrastructure are time consuming and complex. One of the most challenging aspects of the process is correctly estimating capacity requirements for memory, CPU, storage, and so forth. Different types of workloads have different configuration requirements and dependencies with some being more memory intensive and

others being more processing intensive. In addition, modern cloud-native development approaches drive almost continuous updates and changes to applications that over time, can have a substantial impact on storage, processing, and network connectivity requirements. Given the depreciation accounting rules, traditional capex investments need to be sized for capacity requirements at least three years down the road. In practice, that means it needs to be sized for not only current capacity requirements but also future capacity requirements several years ahead. Frequently, organizations will end up specifying and paying for much more capacity than they currently need. Even if they ultimately use the extra capacity, it will have already wasted some portion of its useful life sitting idle. This type of approach drives up costs of doing business to ensure that resources will be available when the business needs them.

Example

A European online healthcare delivery service provider was experiencing rapid business growth as it rolled out services related to COVID-19 testing and treatments. The infrastructure needed to support the business had to meet strict security and compliance requirements in order to protect confidential health data and comply with GDPR requirements. In many cases, potential clients were looking for short-term access to services to support local spikes in demand. To deliver services cost effectively, the organization needed to spin-up resources on-demand and spin them down just as quickly – often in just a matter of days.

Working with Arkphire – an Irish IT procurement partner supporting consumption-based infrastructure-as-a-service solutions from several vendors, including Dell Technologies and Cisco – the healthcare service provider was able to deploy a Dell Technologies APEX Flex on Demand platform configured with 20% spare capacity available on demand. Beyond the immediate cost savings, the on-demand pay-as-you-go flexibility enabled the organization to offer cost-effective short-term solutions running on dedicated on-premises infrastructure that fully satisfied data privacy requirements. Equally important, the company was able to reduce the time required to launch a new site to under 30 days, significantly less than the 90 days it took using traditional infrastructure purchasing approaches.

Guidance

Many consumption-as-a-service subscriptions for dedicated on-premises infrastructure offer customers cloud-like usage-based pricing for infrastructure that is installed with extra built-in surge capacity that can be accessed, and paid for, only when needed. This allows customers to better match infrastructure spending to business requirements over time without overpaying for capacity before it is required.

Practice 2: Shift Life-Cycle Management to Consumption-as-a-Service Vendors to Free Internal Staff to Support LOB Needs

Challenge

The scale and complexity of enterprise infrastructure environments continues to rise as digital business drives an explosion of new applications, new sources of data, more expansive use of advanced analytics and automation, and broader distribution of resources across datacenters, public clouds, and edge locations. Many IT organizations find themselves short on head count and lacking high-demand skills such as SRE, Kubernetes, or software-defined programmable automation capabilities. Just keeping existing systems and mission-critical applications up and running can be difficult, and it can be almost impossible to train and retain experts on many emerging technologies. The result is that IT organizations frequently fall behind on modernization projects and continue to be weighed down, supporting technical debt.

Example

A major sustainable design, engineering, and consultancy company in the Netherlands is working to decommission legacy storage platforms as part of an effort to modernize its IT infrastructure by migrating to a more flexible private cloud. The company is working with a managed infrastructure services partner to create and operate a managed, hosted datacenter to serve as an interim staging area while applications are migrated from legacy platforms and modernized for the private cloud. The cost of providing sufficient transitional backup and archiving resources was a major concern, as was having sufficient staff available to manage both the legacy and modern systems simultaneously. The company considered using public cloud-based storage in the interim but rejected that choice because of security and GDPR data protection concerns.

Instead, the company opted to deploy a consumption-based solution that includes remote life-cycle management support services as part of the subscription fees. The vendor takes responsibility for tasks such as aggregate storage pool provisioning, disk drive replacement, and other technology refresh services. The vendor also takes responsibility for decommissioning the equipment at the end of the contract. The time savings for internal staff are significant. As an example, the internal team typically spent more than a month planning and coordinating relatively simple refresh activities such as OS updates for storage arrays. By shifting these types of responsibilities to the vendor as part of the subscription agreement, the managed infrastructure services team has been able to save at least 20% of staff FTE hours to concentrate on operational requirements that are higher priority for the business.

Guidance

Many digital infrastructure consumption-as-a-service subscriptions include life-cycle support services as part of the agreement. Under subscription models, the vendor defines system configurations and remotely manages life-cycle updates, patching, repairs, and troubleshooting. This allows the customers to shift in-house IT staff to higher value-added activities that more directly benefit the business. Customers can deploy consumption-as-a-service platforms quickly and then scale them up as workloads are migrated from legacy to modern infrastructure. Vendor-provided services are often more automated and standardized and have lower error rates than a typical customer can achieve with internal staff.

Practice 3: Focus on KPIs and Business Outcomes, and Let the Vendor Determine Feeds and Speeds

Challenge

Traditional enterprise digital infrastructure evaluation and procurement efforts have included significant attention to appropriately sizing and configuring memory, processing speeds, OSs, storage capacity and drive technologies, I/O, connectivity, and other attributes required to support specific workloads and user groups. Enterprise IT teams are typically responsible for working with the vendors and the application owners to develop this assessment with an expectation that it will support business needs for several years. The growth of hyperconverged, software-defined, composable architectures, edge computing systems, open-source software, purpose-built GPUs, and so forth are making decisions about appropriate digital infrastructure configurations and designs more complex than ever. Simultaneously, the ability to accurately predict workload capacity and performance requirements several years into the future is becoming more difficult because of the impacts of agile development, AI/ML analytics, and widespread automation. For many enterprises, the risk and costs to the business are rising if the organization makes a wrong decision about the sizing and configuration of capex infrastructure investments.

Example

The Netherlands-based sustainable design, engineering, and consultancy company considered several different performance tiers offered under a flexible consumption based model, with a focus on the performance outcomes required by the business. Specifically, they considered the frequency and speed of data access required by the business and were able to specify the desired level of performance, storage capacity, and cost. Given that the specific use case was focused on expanding back-end capacity for backup and archiving, the company opted for a lower-cost, lower-performance tier that fully met its needs. The company framed the decision in terms of business requirements rather than whether it should be using SATA or SSD drives. The vendor mapped the different drive technologies to the different performance tiers and offered pricing and support to align with the desired SLAs and KPIs.

The European online healthcare delivery service provider, and its partner Arkphire, focused their evaluation on project-specific goals related to supporting rapid application launches. This assessment was anchored by metrics related to the time needed to deliver initial and surge capacity and system uptime metrics. The subscription model, including pre-provisioned on-demand surge capacity, allowed for the organization to cost effectively scale resources up and down while meeting critical timelines for application launches.

Guidance

Digital infrastructure consumption-as-a-service subscriptions allow enterprises to focus on business outcomes and KPIs when specifying what they want to purchase. Consumption-based offerings are typically available using predefined "T-shirt" sizes that map to different operational tradeoffs, pricing levels, and support tiers. The value of this approach is that the customer is able to shift the focus to the needs of the business and can rely on the vendor to deliver the best "feeds and speeds" configurations needed to deliver on the specified outcomes and KPIs. The SLAs become the basis of the system specification discussion, and the internal IT teams can better focus on ensuring that business needs are fully supported immediately and over time.

Practice 4: Partner with Application Owners to Engage Finance Early in the Process

Challenge

Traditional capex infrastructure purchasing is often compartmentalized across technology silos. Network, storage, and compute platforms may be on different refresh and depreciation cycles, and comprehensive infrastructure updates can be difficult to cost justify. Capex proposals are heavily scrutinized by finance organizations. Once a contract is approved, it can take weeks or months to get the equipment on site and ready for use. If additional capacity is needed because of unexpected increases in application or storage requirements, the procurement process has to start over again from scratch. IT often struggles to articulate the business ROI from improving flexibility and scale by retiring technical debt. In many cases, the application owners opt to deploy new applications onto public cloud resources to sidestep these internal disagreements and delays.

Example

The European online healthcare delivery service provider, and its partner Arkphire, had struggled to engage application owners in collaborating to optimize the cost of infrastructure. The application teams focused on speed and were not incented to do the type of planning and automation needed to optimize software licenses or infrastructure costs. The availability of subscription-based, consumption-driven

infrastructure has allowed IT and developer teams to partner more productively by focusing on the benefits and business value of having guaranteed infrastructure availability and built-in technical refresh guarantees. This has allowed the IT and developer teams to collaboratively engage the finance organization early in the discussion, with an emphasis on the ability to scale over time. The finance team, in turn, values the ability to cost effectively future proof the infrastructure and to support business agility by ensuring that all required dependencies across hardware, software, and services will scale linearly and consistently over time under the APEX Flex on Demand plan, which treats the full infrastructure technology stack as a single consumption-based subscription.

Guidance

The shift to consumption-as-a-service subscriptions for digital infrastructure changes the conversation with finance and application owners. Infrastructure architects find that it is easier to build a business case for a packaged subscription that includes all related dependencies for one predictable price. Cost predictability helps to simplify the way IT organizations talk to application owners about the cost and ROI for a project and makes it easier to engage finance organizations early in the conversation. Rather than debating the benefits of upgrading individual components with finance, the IT and application teams can jointly advocate for the business value delivered by having full-stack, on-demand, scalable, and supported infrastructure deployed to support specific business outcomes immediately and over time.

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