ESG WHITE PAPER

Accelerate IT Modernization with Dell Technologies Validated Designs

Achieve Competitive Success by Leveraging the Established Expertise of Dell Technologies

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Introduction

In a recent ESG research survey on data infrastructure trends, 59% of organizations surveyed reported that data represents a part of their business (i.e., they offer information-based products or services), and overall, 81% either already offer data-centric products or expect to within the next 24 months. [1] As an ever-growing number of businesses derive at least some revenue from digital services, to remain competitive they require scalable, highly efficient IT operations. IT's role has to evolve, too—from a cost center/business enabler to a full-fledged revenue driver.

As these revenue-creating digital initiatives ramp up, pressure on IT operations increases. The added IT complexity and increased burden on personnel impedes operations, slows down new initiatives, and reduces revenue opportunities instead of expanding them.

If an organization wants to achieve true competitive success without being overwhelmed by complexity, IT modernization is necessary. Such modernization efforts should center on maximizing the utilization of not only IT infrastructure, but also on re-thinking how it utilizes its IT personnel. One way to accomplish this goal is to leverage Validated Designs from IT leader [Dell Technologies](#). Dell Technologies Validated Designs are pre-configured, integrated, and tested solutions that offload much of the burden and uncertainty traditionally associated with new deployments, thereby reducing the cost, time, and risk involved.

The Modernization Dilemma

ESG research findings support the need for faster, better modernization, especially to help IT organizations accelerate access to data at scale across distributed cloud environments.

Nine out of ten surveyed IT decision makers report that their organizations must move faster when deploying applications, infrastructure, and services than three years ago, with 41% stating that they've had to accelerate their response speed by more than 50%. More than two-thirds say that they and their teams are under specific pressure to accelerate IT infrastructure provisioning/deployment to support developers/line-of-business teams. Additionally, 64% believe that the lack of modernization of their IT infrastructure is slowing ongoing IT operations and digital initiatives alike, and 46% agree that IT has become more complex over the last two years, in part due to the emergence of COVID-19 and the resulting large number of employees now working from home.[2]

> "When we gain time thanks to the performance of our Dell Technologies infrastructure and networking, we can do more to improve communications, sales outcomes, or business intelligence. That has changed the perception of the IT department from being seen as a cost center to becoming a value-adding resource."
>
> —*Adam Little, Senior Systems Administrator, New Belgium Brewing*

COVID certainly isn't the only recent driver of increased complexity, however. When ESG asked respondents what they considered to be the top reasons behind increases in IT complexity, 35% identified higher data volumes, 34% identified increases in applications leveraging modern architectures such as containers, and 34% identified the need to incorporate emerging technologies such as AI/ML analytics.[3]

Modernizing IT becomes even harder when businesses don't have an adequate number of IT experts at hand. The skills shortage issue has plagued IT for a while, and the situation doesn't appear to be getting any better. As Figure 1 shows, only 8% of respondents report having no skills shortage-related concerns. Among the rest, one of the most significant areas of

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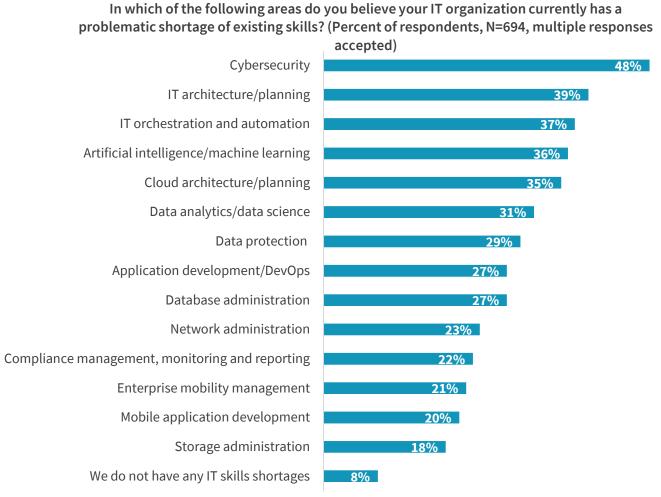[1] Source: ESG Research Report, *2021 Data Infrastructure Trends*, November 2021.
[2] Source: ESG Complete Survey Results, *2022 Technology Spending Intentions Survey*, November 2021.
[3] Ibid.

shortage is in the realm of IT architecture and planning.[4] It's also worth noting that hiring budgets are not infinite, even if all the right people were easy to find, and then recruit, and then retain.

Figure 1. Problematic Skills Shortages in IT

In which of the following areas do you believe your IT organization currently has a problematic shortage of existing skills? (Percent of respondents, N=694, multiple responses accepted)

Area	Percent
Cybersecurity	48%
IT architecture/planning	39%
IT orchestration and automation	37%
Artificial intelligence/machine learning	36%
Cloud architecture/planning	35%
Data analytics/data science	31%
Data protection	29%
Application development/DevOps	27%
Database administration	27%
Network administration	23%
Compliance management, monitoring and reporting	22%
Enterprise mobility management	21%
Mobile application development	20%
Storage administration	18%
We do not have any IT skills shortages	8%

Source: ESG, a division of TechTarget, Inc.

The skills-shortage situation is forcing businesses to ask their current IT staff to do more. A significant majority of IT decision makers—76%—tell ESG that they and their teams have been taking on new and/or additional responsibilities to support their organization's digital transformation goals/initiatives.

IT Modernization Objectives—Accelerate Operations and Free-up Resources

Altogether, 99% of surveyed IT decision makers believe that application infrastructure modernization is important to their organization's digital transformation strategy, with 75% of them calling it either very or extremely important.[5]

The goal of modernization is to leverage advanced technology to support the digital growth of a business and *simultaneously* free up resources and accelerate operations. In other words, modernization is not about scaling endlessly to keep pace; it is about transforming to do more, faster and freeing up the burden on IT resources. When done well, IT

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[4] Source: ESG Research Report, *2022 Technology Spending Intentions Survey*, November 2021.
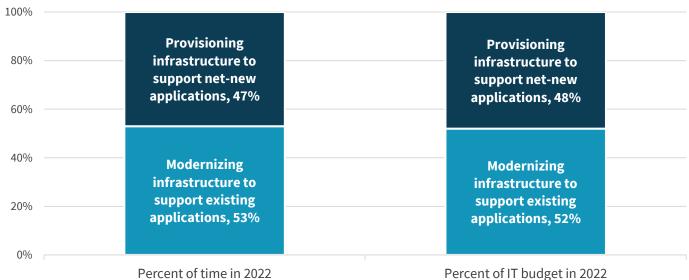[5] Source: ESG Research, *Application Infrastructure Modernization Trends across Distributed Cloud Environments*, December 2021.

modernization shifts the balance, enabling more personnel and IT assets to be allocated to supporting net-new innovation, rather than to keeping the lights on. But as Figure 2 shows, we still have room to improve.[6]

Figure 2. Average Percentage of Time and Budget Allocated to Net-new Versus Existing Apps

Approximately what percent of your organization's time and budget will be spent on modernizing infrastructure for existing applications versus provisioning infrastructure for net-new applications in 2022? (Mean, N=372)

Source: ESG, a division of TechTarget, Inc.

What to Prioritize During a Modernization Effort

Although incorporating the latest technology into an environment is a good step to take (higher-scaling/higher-performing infrastructure obviously offers an advantage), adding technology has always been a part of traditional IT operations—it's necessary, but it is often not enough. As mentioned, modernization efforts need to prioritize freeing up personnel and accelerating operations simultaneously.

To help IT organizations accomplish that feat, ESG has established high-level guidance on what to prioritize when seeking to achieve digital modernization in the data era:

- **Deploy tested and validated architectures by a trusted partner.** For many organizations, modernization begins on-premises within the data center. The process is often time consuming and, unless documented, prone to error. It starts with planning for current demand and anticipating future scalability needs. Then comes designing, architecting, and integrating the components. If all that goes well, next comes testing, analyzing, and tuning for best results—all while trying to meet time-to-market objectives. Organizations should be looking for vendors with tested, proven, and repeatable solutions designed to help them stand up infrastructures in less time, yet still be capable of delivering the flexibility, scalability, and responsiveness that the business needs as it grows.

- **Reallocate planning and operations to an expert third party.** When considering IT modernization, you also have to consider if it is an efficient use of people, resources, and budget to manage all the data on-premises. Organizations can turn strictly to automation for help, but that can further burden internal resources. That approach takes highly

[6] Ibid.

skilled personal away from focusing on innovation, instead forcing them to dedicate a larger amount of their time to monitoring/maintaining automation software. Partnering with an expert third party to leverage validated solutions to design, build, and test can deliver gains when internal staff resources are strained or in-house expertise is lacking.

- **Consider as-a-service solutions to benefit multi-cloud.** To build up a competitive advantage, many organizations engaged in digital transformation have embraced cloud capabilities and are redesigning their IT environments to meet diverse needs. As a result, organizations are utilizing a multi-cloud strategy—operating workloads across multiple public clouds, their on-premises environments, as well as off-premises private clouds in colocation facilities. On-site infrastructure continues to represent a key part of the IT environment. It offers complete control, ease of access, and known security. In addition, utilizing private clouds in colocation facilities provides reduced latency, improved bandwidth, and more scalability.

> **Fifty-four percent of organizations currently prefer to consume data center infrastructure in a pay-per-use model.**

However, no matter where IT organizations decide to operate workloads and store data, leveraging a pay-per-use model can simplify operations and put organizations in a position to move expenses from CapEx to OpEx and focus more on net-new initiatives. Over half of organizations (54%) surveyed by ESG would agree and prefer to consume their data center infrastructure in a pay-per-use model.[7]

When IT decision makers were asked by ESG to identify which benefits their organizations had received from leveraging a pay-per-use model, 51% identified that they accelerated IT initiatives by moving costs into future quarters, and 47% identified that they accelerated IT initiatives by freeing up personnel from more routine planning activities.[8] Those benefits become even more pronounced when the solution is offered as a managed service.

Dell Technologies Validated Designs

Organizations looking to modernize should be leveraging this vendor's expertise. After all, this might be the first time you embark on a particular modernization project, but it won't be the first time for Dell Technologies. Committed to driving the technology revolution forward, Dell Technologies has been delivering innovative solutions and technology to help businesses achieve their digital transformation goals for years.

> **This might be the first time you embark on a particular modernization project. It won't be the first time for Dell Technologies.**

Included in the offerings are Dell Technologies Validated Designs. Validated Designs help businesses drive faster time to value in the most efficient way possible. With an eye on performance and scalability, these pre-tested solutions are architected to help accelerate the deployment of modern infrastructures and applications while reducing burdens on internal IT teams.

They include design principles, guidelines, and configuration information that have been stringently tested and verified by Dell Technologies Engineering, in conjunction with its solution partners, to dynamically fit the needs of specific use cases. By utilizing Validated Designs, IT organizations can reduce the time it takes to design, test, and integrate components— ultimately helping to deliver services and applications to market faster.

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[7] Source: ESG Research Report, *2022 Technology Spending Intentions Survey*, November 2021.
[8] Ibid.

Validated Designs span a variety of use cases and workloads, including:

- Analytics.
- Artificial intelligence.
- High-performance computing.
- Microsoft data platform environments (including SQL Server & Azure hybrid cloud modernization).
- Oracle environments.
- SAP environments.
- Virtual desktop infrastructures.

Flexibility is a key requirement for any IT modernization strategy. However, flexibility is more than just how the infrastructure is deployed (i.e., 3-tier, converged, or hyperconverged). It is about having data-centric solutions flexible enough to support current and future strategic initiatives. This is where Dell Technologies Validated Designs can help IT organizations take their business to the next level and support data where it lives—at the edge, in the data center, and in a colocation or hybrid cloud environment. These designs are tested to support technologies such as containerization (Kubernetes, VMware Tanzu Kubernetes Grid, Azure Kubernetes Services, Red Hat OpenShift, etc.) and the latest GPUs and NVMe storage. Dell Technologies also offers flexible consumption and deployment choices for Validated Designs, including as-a-service offerings with Dell Technologies APEX to better align with application, IT, and business strategies.

Businesses can further improve upon the efficiency benefits outlined above by deploying the solutions through APEX Cloud Services and/or Custom Solutions. The managed as-a-service option supports on-premises, multi-cloud, multi-edge, and multi-data center environments. Validated Designs can be built on top of APEX to provide additional value. This approach establishes more efficient, effective, and streamlined IT operations while freeing up valuable IT personnel to focus on more strategic initiatives. A managed service approach also helps IT organizations save on hardware and training costs, as well as the additional expenses associated with operating a data center.

Some organizations may not be ready yet to adopt this operating model but are still looking for ways to modernize their environments while controlling costs. Dell Technologies offers flexible pay-per-use consumption options for businesses, whether they host their data on-premises or in a colocation site (e.g., Equinix). This pay-per-use model is APEX Flex on Demand, where customers pay for Dell's technology as they use it. It also provides immediate access to buffer capacity that supports unexpected peaks in demand or resource needs. Buffer capacity is immediate and does not require a hardware deployment, and businesses are able to control costs by paying for elastic resources only as they are consumed.

> "We're as flexible and cost effective as any cloud solution, but without the concerns over data residency."
>
> —*Jordan Reinhardt, Director of Information Services, RelateCare*

The Bigger Truth

These Validated Designs solve the modernization dilemma and support the ambitious modernization objectives that so many of today's businesses wish to reach. It's vital to prioritize modernization, utilize solutions tested and proven by a trusted partner, and, where you can, leverage the as-a-service paradigm for data-centric infrastructures. This approach will reduce IT complexity-related headaches and free up personnel to work on initiatives to drive innovation.

With Validated Designs from Dell Technologies, any business can achieve faster time to value for stakeholders such as application owners, workload owners, and line-of-business teams. Additionally, Validated Designs should help senior business leaders feel more confidence—these designs take the guesswork out of what would otherwise be a complicated,

time-consuming process. The organization will be able to deploy components/solutions faster (driving faster time to value) and then scale them easily as needed. When consumed as-a-service or using APEX Flex on Demand, with payments that scale to match actual usage, the cost and efficiency benefits only continue to expand. Validated Designs represent one of the best ways available right now to foster IT transformation, which in turn will enable business without boundaries and accelerate innovation.

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