

## Pure Storage Evergreen Portfolio: Storage for the Digital Era

Sponsored by: Pure Storage

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### IDC OPINION

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Digital transformation (DX) is upon us. Having realized the potential for a technology-led business strategy to bring about competitive differentiation, businesses have been quietly undertaking DX initiatives for a few years now. DX initiatives rely on data-driven insights to deliver competitive differentiation, increased customer engagement, streamlined business operations, increased staff productivity, and growth in revenue and profitability. IT infrastructure is one of the crucial pillars of DX. In fact, DX cannot be successful without IT transformation, aligned with business strategy to meet or exceed service-level objectives for data-driven insights. A recent IDC study conducted in 2022 found that almost 70% of enterprises plan to refresh their information technology (IT) infrastructure within the next two years (source: IDC's *Enterprise IT Survey, 2022*). Storage – a key aspect of IT infrastructure – often does not get due attention in IT transformation initiatives. *Worldwide IDC Global DataSphere Forecast, 2023-2027: It's a Distributed, Diverse, and Dynamic (3D) DataSphere* (IDC #US50554523, April 2023) finds that enterprise data generated is estimated to grow at a five-year CAGR of 28.2% for 2022-2027. Nearly a third of the 106ZB of this data generated in 2022 was generated in datacenters.

Traditional storage systems rely on antiquated systems architecture and/or brittle technologies, which in turn leads to capital- and resource-intensive procurement cycles and ongoing operations. Such systems are often inelastic leading to poor utilization and high management overhead and carry a higher risk of unplanned downtime. The legacy model for how enterprise storage vendors interact with their customers during product acquisition, deployment, ongoing management, and technology refresh is giving way to a much better as-a-service model that is strongly preferred by businesses worldwide. In a June 2022 IDC survey, 77% of IDC respondents agreed that shifting to purchasing digital infrastructure as a service is a critical element of their future strategy.

Enterprise storage vendors like Pure Storage start with a systems architecture that includes design principles such as deploy once and upgrade in-place, multigenerational life span, software-centric modernization, simplified operations, and eliminating the need for data migration. This enables them to address typical storage challenges such as vendor or technology lock-ins, arduous and time-consuming data migration, and downtime associated with upgrades. An SLA-driven as-a-service model addresses challenges of management overhead, lack of agility, and capital-intensive procurement and/or upgrades. Such storage vendors are more successful in delivering value to their customers via a pay-as-you-go consumption service, especially in times when IT budgets are being constrained even more. The service is pre-integrated with the AIOps management control plane and offers business continuity and operational agility capabilities out of the box. It carries low resource overhead during procurement and upgrades.

## SITUATION OVERVIEW

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### **Data Strategy and Digital Transformation**

An important pillar of digital transformation is an organization's data strategy, which rests entirely on the storage infrastructure that is being deployed. This data strategy assumes that the data is not homogeneous or static in nature. In fact, most data strategies focus on dealing with the velocity, veracity, and volume of structured and unstructured data sets. The requirements to analyze them in a timely manner mean appropriate fit-for-purpose compute that gets low-latency and high-bandwidth access to storage. The system needs to function without any operational disruption and support robust data availability, protection, and resiliency, and planned outages must be minimal and contained.

### **Storage Infrastructure in Typical IT Transformation Scenarios**

A robust IT transformation strategy is multifaceted and touches both revenue-generating and new generation applications. With the appropriate storage infrastructure in place, organizations can embrace the approaches discussed in the sections that follow.

#### ***Datacenter Consolidation***

Datacenter consolidation seeks to improve utilization and resiliency, better address ongoing business demands, and significantly reduce operational expenses.

#### ***Technology Refresh***

Technology refresh initiatives are necessary to maintain the currency of the IT infrastructure. They support the requirements of a growing business over time.

#### ***Multicloud/Hybrid Cloud Environments***

Hybrid cloud approaches enable enterprises to take advantage of the benefits of traditional datacenters and public and private cloud services delivered as a common pool of software-defined resources accessible via APIs.

#### ***Enhanced Data Logistics and Protection***

While datacenter consolidation and multicloud/hybrid cloud deployments appear divergent, what binds them together is a common data compliance strategy that focuses on stringent security and backup protocols to protect and recover data in the case of a cyberattack.

#### ***Application Modernization***

App modernization initiatives – as part of digital transformation strategies – fall under two categories: modernization of current-generation applications, which typically support revenue-generating operations, and development of new-generation applications, which are meant to create new or replace existing revenue streams in the future.

#### ***Analytics and AI***

Artificial intelligence and analytics enable enterprises to incorporate deep and actionable insights into every business process and workflow.

## *Sustainability*

From a storage infrastructure perspective, sustainability means making efficient use of storage resources for data at rest. This creates efficiencies in both power and space use.

## **Legacy Storage Designs Hinder Digital Transformation**

Not all modern storage systems are the same. Most IT administrators are familiar with the challenges posed by legacy storage systems.

An organization purchases a new storage array, which includes a given storage capacity that may be expanded over the life of the product, but the maximum storage performance achievable by the system is fixed based on the capabilities of the controllers and the internal array bandwidth at the time the product is shipped. Regardless of how much capacity may be added over time, the maximum performance potential in terms of storage latency, throughput, and bandwidth does not increase.

The reality is legacy storage systems based on older designs are simply not suited to cost effectively meet the objectives of an IT organization's transformation strategy. Such legacy storage systems cannot cost effectively meet the performance, availability, scalability, and sustainability requirements of modern workloads being deployed as part of digital transformation. Getting storage upgrades right is therefore an important objective for IT organizations. The sections that follow discuss the three key areas where obsolete design can hinder the ability of an organization to modernize its IT environment.

## *Brittle Technology*

Several storage solutions in the industry are based on decades old systems architecture. Vendors have been making incremental updates to their products, retrofitting them with newer media types and fabric connectivity. However, the controller software could be based on obsolete development languages and stacks, making major configuration changes and upgrades disruptive. In most cases, it also manifests itself in performance and efficiency of the system deteriorating with utilization. Exceeding the operational envelope can increase the risk of unplanned downtime.

## *Capital Intensive*

The use of brittle and obsolete technology in these systems makes the process of provisioning and management very inefficient. Most of these systems cannot maintain efficiency and performance at scale leading to overprovisioning and reduced power efficiency. Forklift upgrades are not just disruptive, but they also generate ewaste. In short, the return on investments in these systems reduce over time, making them expensive in the long term.

## *Complex Operations*

Many storage systems in the market today are based on decades old design principles when many IT organizations had dedicated and highly skilled storage management teams who spent days and weeks provisioning, deploying, and managing them. Further, disruptive data migrations were thought to be necessary. These systems are labor intensive to manage, require constant oversight to ensure optimal operations, and thus have limited self-healing or proactive downtime avoidance capabilities.

## **THE PURE STORAGE VALUE PROPOSITION**

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Pure Storage – a \$2+ billion enterprise all-flash array vendor – offers a broad portfolio of storage offerings that support primary and secondary storage requirements as well as structured and

unstructured data workloads. Over the past 10 years, Pure Storage has introduced many features and programs that have differentiated its offerings from those of the legacy enterprise storage providers and driven real changes in the industry.

## Pure Storage Portfolio

Pure Storage features two principal platforms in its all-flash enterprise storage portfolio: FlashArray and FlashBlade. FlashArray uses a scale-up design, where performance and modernization occur via controller upgrades. Pure's FlashArray design allows for upgrades to both next-model and latest-generation controllers over the life of the array, extending useful life up to a decade or more.

FlashBlade uses a scale-out design, where "blades" are added to scale both performance and capacity. Starting with the FlashBlade//S model, customers can nondisruptively upgrade storage processor and/or storage capacity resources independently, giving them the ability to either scale them within a technology generation or upgrade them to newer generations. The FlashBlade//S offers more configuration options than the prior platform and enables more efficient resource allocation, a factor that can save significant budget as configurations scale.

Foundational to Pure's success in helping organizations transform to new operating models and reducing the challenges of dealing with legacy infrastructure is its focus on product innovation and its Pure Evergreen Subscriptions portfolio. Pure Storage has two key approaches to deliver industry leading storage solutions.

First approach is industry-leading design approaches that are meant to service the needs of IT organizations seeking to usher hybrid cloud operating strategies in support of digital and business transformation. The FlashArray//X and FlashArray//XL lines cover structured, primary (block or structured) storage; the FlashArray//C addresses tier 2 and other structured, secondary (block) workloads; and FlashBlade//S covers unstructured (file and object) workloads. The recently introduced Pure//E family, with FlashBlade//E and FlashArray//E, is appropriate for bulk data and hard disk-based storage replacement.

Second approach is a differentiated flexible consumption offering via its Evergreen subscriptions. Evergreen has changed customer expectations around not only technology refresh but also enterprise storage life-cycle management. Evergreen is a key part of the vendor's ability to deliver enterprise-class storage capabilities with the "cloud experience" consistently across hybrid cloud environments that include on-premises, colocation, and public cloud environments.

## Pure Storage Evergreen Subscription Portfolio

Evergreen subscriptions is a comprehensive storage platform life-cycle program that impacts customers positively with a subscription that covers data services and hardware modernization as well as services and guarantees focusing on customer experience. Pure Storage offers three variations of its Evergreen subscriptions: Evergreen//Forever, Evergreen//Flex, and Evergreen//One. Since Pure Storage shipped its first AFAs in 2012, the company has supported multigenerational technology refresh over 10,000 times via Evergreen subscriptions, each of which avoided what for many other vendors would have been a forklift upgrade. The vendor has over 10,000 systems in its installed base, but the newer systems have not had to be upgraded yet.

Evergreen subscriptions take the place of a standard warranty, maintenance, and support contract while delivering many additional features and values. Because Pure Storage customers can nondisruptively upgrade to newer technologies at any point in the ownership life cycle with trade-in

credits that are guaranteed, the Evergreen Portfolio helps customers efficiently adapt to changing storage needs in several ways including:

- All-inclusive software subscription for storage operating system software, which enables customers to adopt future product features without paying additional fees
- Anytime, full-value controller trade-ins across model types and/or technology generations, putting customers in the driver's seat when it comes to upgrade timing
- Fleetwide capacity optimization that makes it simpler for organizations to improve the installed density of their systems
- Right-size guarantee that goes beyond just a "data reduction" or "storage efficiency" guarantee with its ability to keep customers focused on the storage outcome they need over time even as workloads and workload mixes evolve

### ***Evergreen//One***

Evergreen//One combines the agility and flexibility of cloud operating model and consumption economics with the security and performance of an all-flash infrastructure. This SLA-driven storage service improves how data is stored, mobilized, and protected. Evergreen//One is designed to meet the needs of customers that want a managed operational consumption-based approach for on-premises storage infrastructure at a colocation facility, and in the public cloud with Cloud Block Store, all offered as a unified subscription service.

For Evergreen//One, Pure guarantees performance, uptime, buffer capacity, zero planned downtime, and energy efficiency. Recently, Pure announced a new Ransomware Recovery SLA, as an add-on service that guarantees shipment of clean arrays with included professional services, in case of a ransomware attack. If the guaranteed SLAs are not met, customers get service credits and Pure takes remediation actions to fix the issue at no cost to the customer. Customers can also monitor their subscription with Pure1, in addition to using Pure1 for monitoring, self-service expansions and upgrades, VM analytics, and AI-predictive support.

### ***Evergreen//Flex***

Evergreen//Flex combines storage ownership with a flexible subscription based on actual consumption and can apply to either FlashArray or FlashBlade. With Evergreen//Flex, customers purchase, own, and manage their storage but utilize a consumption subscription based on utilization of purchased storage capacity. The Evergreen//Flex subscription is useful where maintaining ownership of storage infrastructure is either preferred or required for regulatory compliance, but customers can still benefit from consumption-based pricing.

### ***Evergreen//Forever***

Evergreen//Forever ensures that customers can acquire and maintain their storage via a set of subscription features that keep storage modern, protect investments, and increase the usable life of storage for up to 10+ years. Customers get periodic hardware and software upgrades to keep their storage modern and have access to the latest innovations.

## **PURE STORAGE EVERGREEN CUSTOMER EXPERIENCES**

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In 4Q22, IDC spoke with two Pure Storage customers to understand their experience with Pure Storage and Evergreen subscription programs. The common theme about their experience with Pure

was ease of use. Both clients shared stories about the entire experience that covered the ease of the initial deployment and seamless upgrades that significantly reduced IT staff time maintaining their storage environment.

## Capital City Bank

Capital City Bank has been working with Pure Storage since 2015. The Tallahassee, Florida-based financial institution has more than 70 office locations, a main datacenter, and a disaster recovery site. Its seven-member IT team supports 449TB of Pure storage and uses an Evergreen//Forever subscription for its storage environment with arrays owned by Capital City Bank. The storage needs of the company grow annually at a rate that ranges from 10% to 20% and can increase with new projects or acquisitions. This level of unpredictable growth was one of the drivers for Capital City Bank to engage with Pure.

Pure's ability to scale and deliver capacity quickly and easily has been key to a successful engagement. The lead network and storage architect for Capital City Bank called the partnership "a game changer," sharing that when the team needs additional storage capacity, Pure provisions it quickly, without long lead times or disruptive planned outages. Where previous engagements with other storage vendors involved scheduled outages for upgrades and a constant sales cycle of three-year upgrades that were disruptive and costly, Pure's seamless upgrade experience eliminates the need for planned outages. In addition, because Pure constantly monitors the environment, issues are noticed and remediated quickly.

Capital City Bank reports partnering with Pure has reduced demand for its IT staff and keeps its environment operating smoothly. The bank also emphasizes the benefit of working with a team of Pure engineers who seeks to understand its environment and identify ways to simplify the storage infrastructure. The bank also notes that Pure's flexibility and willingness to work with other partners within its datacenter to ensure a seamless integration with other tools added additional value. Overall, the team at Capital City Bank believes that the partnership with Pure has significantly simplified its storage operations, reduced IT workloads, and delivered a robust storage environment.

## Private Cloud Service Provider

IDC spoke with the lead cloud architect at a private cloud services provider based in the UAE with offices in India, Saudi Arabia, Qatar, and Malaysia. The cloud services provider offers hosting services and requires a robust infrastructure platform to support its growing business. This team has been working with Pure since 2020.

As a cloud services provider, the ability to scale storage capacity quickly is paramount and working with Pure has enabled that objective. The team has been impressed with the 24-hour timeline to install additional storage and is very satisfied with the performance of the Pure flash arrays. With over 284TB of Pure storage and annual capacity growth of 10%, it needed a solution that would reduce capex expenditures and provide robust performance that was easy to use.

By switching to the Pure Evergreen//One model, the cloud services provider has switched to monthly payments and monitors the monthly usage to align with its budget. In addition, the reliable performance of the Pure arrays relieved a lot of the stress from the IT team because of the dramatic reduction in outages and downtime. As a newer client of Pure Storage, the organization is still evaluating its usage metrics, but so far, the team is very happy with the Evergreen//One experience.

## OPPORTUNITIES AND CHALLENGES FOR PURE STORAGE

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Since introducing its all-flash storage in 2015 and via iterative additions such as Evergreen//One and Evergreen//Flex, Pure Storage has changed customer expectations around enterprise storage solutions, including acquisition, deployment ease, ongoing management, and technology refresh. IDC expects Pure Storage to continue to drive differentiation in the industry with both its technology and consumption model. Two such areas that IDC expects Pure Storage to build on are:

- **AIOps-driven innovations:** Pure1 provides full-stack monitoring with predictive analysis and insights into capacity, performance, and energy consumption. It includes capabilities to model workloads, and Pure has recently added capabilities for customers to take self-service actions such as capacity expansions and Purity upgrades. It has also added assessments for sustainability and data protection.
- **Expanding or new SLAs for storage as a service (STaaS):** Pure recently added energy efficiency guarantees to its Evergreen//One offering, an industry first and only in STaaS market. This is in addition to performance, buffer capacity, and uptime SLAs.

To new customers, Pure Storage must articulate the predictability that Evergreen services provide to IT organizations in terms of procurement, management, and upgrades. Pure's own customers bring the most credibility and are the company's biggest advocates.

## CONCLUSION

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With its all-flash storage portfolio, data management software, and Evergreen subscription services, Pure Storage has addressed key issues that IT organizations face with storage systems based on legacy architecture. With many of these organizations thrust into playing a strategic role in the digital transformation initiatives of their business, they can no longer procure and manage storage the old way. They seek agility, predictable and scalable performance, and costs over the life of a growing system and crucially deliver IT services with the economics of cloud.

With Evergreen, Pure Storage offers a differentiated flexible consumption service on top of the all-flash FlashArray and FlashBlade systems. Further, Pure1 enables AI-driven data management and self-driving storage. IT organizations can thus deliver a modern data experience to their business via a consistent storage environment regardless of the deployment (traditional on premises, private cloud, and public cloud) and operating strategy (hybrid cloud and multicloud).

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