WHITE PAPER

Rethink Your Digital Business

2020 was a reality check. Future success requires a forward-thinking, digital business strategy.

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Introduction

Prior to 2020, most organizations were actively engaged in some form of digital transformation initiative. These plans were aimed at enhancing customer engagement, cutting operational costs, improving efficiencies, and understanding trends. Yet, the urgency and potential of digital transformation were not fully realized until 2020 began to play out in real time.

Business reinvention became a necessity to not only sustain customer sales but also ensure continuance of business operations and avoid catastrophic revenue losses through widespread lockdowns. Organizations had to pivot from in-person sales and engagement methods to digital channels. Then, retool the underlying business processes like shipping, bill payment, and inventory management to support a digital-first go to market. They also had to restructure the way staff worked and collaborated, from development to sales to operations to IT, so that productivity did not fall off a cliff. Early adopters found themselves better prepared to handle the fast-moving changes. But those still in the planning stages were caught flat-footed and struggled to keep up.

Without question, 2020 was a reality check. While there are still plenty of uncertainties about what the future will look like, for customer engagement and staff productivity, success going forward certainly won't look like business as usual.

Success will mean embracing a forward-thinking, digital business strategy that's sustainable for the future. But what exactly does that mean?
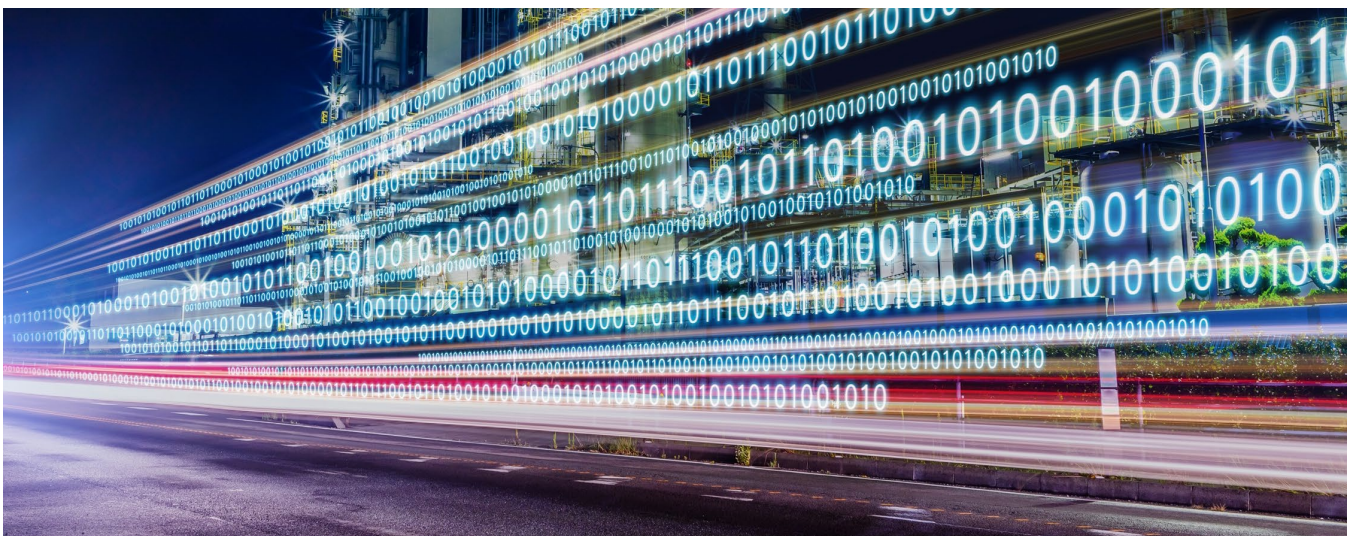
A Fast Pivot to Digital

Over the course of 2020, leaders rapidly reinvented their digital strategies. With face-to-face interactions grinding to a halt, organizations sought out low- and no-touch approaches to engage with customers, staff, suppliers, and partners. Full-scale shifts in business operations altered how products and services were delivered. Meanwhile, entire workforces moved to work-from-home models, requiring organization-wide virtual collaboration.

In a recent survey by Bredin, IT decision-makers shared how these massive shifts defined the 2020 experience for enterprise businesses.

Changes in Customer Engagement

- 84% increased use of virtual meeting platforms.
- 74% created more digital experiences.
- 63% deployed or increased use of customer-facing applications (e.g., web portal, client management apps, or support channels).

IT Changes to Support Remote Workforces

- 69% added security and performance to monitor remote access.
- 62% deployed remote desktop-as-a-service software for staff.
- 59% increased IT automation and orchestration investments for remote operations.

The Focus Turns to Data

With the pivot to digital, you can no longer count on looking someone in the eye to create engagement. You need to acquire data to target them and be found. You need to leverage data to be interesting and demonstrate your value. And, you need to acquire data to continue to nurture them to close.

The massive shift to digital resulted in exponential increases in data being generated and managed. Gathering, processing, and leveraging this information to create superior customer experiences—and improve remote staff productivity—can be a daunting task. One that requires a complex mix of applications built on edge computing, data centers, and hybrid cloud. This begs an important question: How can organizations take advantage of, manage, and protect all this data?

Embracing Digital Business Without Modern Data Infrastructure

63% 63% reported challenges as they implemented digital experiences, requiring stronger data security to protect customer and supplier data.

41% 41% said infrastructure wasn't prepared to scale with data growth.

28% 28% said data applications weren't designed to support the new data types required to create these experiences.

*2020 Bredin IT Research Report

Data is undeniably at the heart of digital transformation. It provides the fuel to generate a bounty of meaningful insights, informed decisions, and innovations. However, with the ongoing proliferation of new data types and sources, data growth and manageability must be governed effectively to ensure fast, always-on access to it, as well as security and cost containment.

We've reached a tipping point where it's no longer possible to successfully compete in a digital world using legacy data solutions and architectures.

The Top 6 Data-related Challenges for Digital Business

As organizations continue to advance their digital transformation journeys, a spectrum of data-related challenges must be addressed.

1. **Silos**
   The availability of data has become a critical concern as organizations go completely digital. Data locked in departments and independent silos hinder the very processes, insights, and innovation required to stay competitive. It also makes it harder for staff to be productive.

2. **Legacy Growth Models**
   New types and much greater volumes of data are being generated, stored, and consumed—with much of it unstructured, such as voice, video, and sensor data. This rapid accumulation of data presents strategy and architecture challenges that have become increasingly difficult to overcome with a legacy data storage solution that's not designed to scale or upgrade effortlessly. With this explosion of data, there isn't always time to wait for another shelf to arrive, much less a whole new system.

3. **Performance Issues**
   Slow or unavailable data is a problem. Users are pulling data from widely dispersed locations, impacting service capabilities, efficiencies, and decision-making. For digital business, the bulk of all interactions with customers and staff are remote. Customers, in particular, demand real-time engagement, or else they will move on. For them, slow is the same as offline. Remote staff may be slightly more tolerant but not much. If access to information is delayed, they will either file support tickets, which can overwhelm IT, or switch focus to something else. Both situations can easily disrupt productivity and delay outcomes.

4. **Delivering 24x7 Operations**
   Uptime is critical to ensure successful business operations. And it's more than customers being able to reach you. If a portion of data sources is offline, such as product images on a shopping site, the experience is disrupted and customers will move on. While this may be the primary area of concern for leaders, it's not the only one. Loss of access to critical systems by developers, sales, marketing, partners, and suppliers can also have significant impacts on productivity and time to market.

5. **Security and Compliance Concerns**
   Remote workers have required additional points of data access that weren't needed while in the office. This floods help desks and IT security departments with requests. In many cases, IT departments have been forced to reconsider IT monitoring processes—security and performance management—to keep business going at the very time that cybercriminals are stepping up attacks.

6. **Purchasing Uncertainties**
   As IT issues play out, many organizations are grappling with an inability to predict what and how much IT they should purchase. In other words, there's the need to crunch numbers, analyze trends, gain insights, and weigh options, often without sufficient time or information to make fully educated decisions.

What Will Define the Next Normal?

While crises may breed ingenuity, thoughtful planning is necessary for long-term success. Planning for the future must account for the customer experience, automated operating processes, and new, digital-first business models. In a post-pandemic world, this requires a digital strategy that takes into account emerging trends and evolving needs, including meeting the demands of modern data.

Where will IT decision makers make investments in 2021

74%
IT systems and software to support programs and initiatives.

60%
Data and organizational security to reduce risks to business.

50%
New business opportunities and/or revenue streams.

*2020 Bredin IT Research Report

- **Building New Customer Experiences**

  We're rapidly moving to an era where every user engagement occurs through marketplaces that are supported by AI assistants and leverage some form of virtual reality (VR) or augmented reality (AR) experience. This allows customers to quickly explore options and then gain a try-before-you-buy experience from home. These interactive experiences require tremendous amounts of data pulled together from multiple sources. Any slow-loading or lag in delivering the experience can frustrate and even disorient users.

  With rising adoption of marketplaces, AI assistants, and VR/AR, it will be critical to leverage a hybrid-cloud infrastructure which allows organizations to easily store and process multiple types of data (object, block, and file) at low latency, while giving them the flexibility to store data in the most appropriate location, based on compliance, speed of access, and competitive safeguard requirements

- **Embracing the Subscription Economy**

  As data demands continue to rise, organizations will need flexibility in the way they expand, upgrade and even consume IT resources. Spikes in data acquisition and adoption of new workloads may be difficult, if not impossible, to predict as customer demands change, developers design new offerings, or business models adjust to better align with a digital world. The old way of purchasing and replacing data storage every three to five years is no longer effective—especially when it comes to acquiring and deploying resources for use by different teams. Developers can't wait for more resources or performance to be available. Finance teams don't want to lay out large amounts of budget for technology that "might" be needed. And no one wants to be locked into a new system or software package that may be obsolete within a year. For these reasons, leaders are rapidly moving to subscription-based ownership programs (like Pure's Evergreen Storage) and storage as a service (STaaS) for their ability to deliver agility, simplicity, and flexibility.

  The City and County of Denver, a single government body, decided to embrace subscription-based storage after years of struggling to manage two on-premises data centers and multiple legacy storage platforms.

  "It required a lot of resources and expertise to manage," says Sean Greer, Denver's IT director of service delivery. "Enterprise storage replacements required the team to perform large forklift upgrades every three to five years due to substantial support and maintenance costs, as well as changes in technology. It wasn't a good use of our resources or finances and caused operational impacts to our customers."

  Greer says moving to a subscription-based storage model has removed the burdensome forklift upgrades, escalating maintenance costs and time-consuming procurement cycles every few years. It's also eliminated the need to guess what the city's storage needs could be in the future. The city's IT organization is faster and more flexible.

- **Expanding Availability and Security**

  Downtime has always been a concern for IT and business leaders. In a digital world, where customers and staff from across the world may need to engage at any time, it isn't an option. SLAs are becoming more stringent, and it's becoming increasingly critical that organizations have multiple levels of data protection in place to safeguard systems (e.g., snapshots, backup, and clustering). If an outage should happen, it's imperative that recovery occurs as quickly as possible.

  Added to this requirement is the increased need for data security and protection from cyberattacks. Data encryption is now being coupled with expanded requirements for security monitoring to keep intruders out and as ransomware safeguards to prevent destruction of data should attackers breach defenses.

  For IT leaders, meeting these expanded and more stringent requirements requires investment in IT resources that support multiple levels of recovery point objectives (RPOs) and deliver extremely fast data recovery. It also means investing in speed scalable storage to support security incident event management (SIEM) analytics and resources that include native protection against ransomware. In the future, we should also expect infrastructure that is "self-aware" of the current level of protection on data and can alert or recommend on upgrades to ensure data is properly safeguarded.

  For winemaker Concha Y Toro, the quality of their products hinges on uptime reliability. Using Pure Storage® FlashArray™ to support all the data in its on-premises systems, the company has been able to expand and adopt increasingly sophisticated technology to run its operations while having 100% availability for four years running, including during Evergreen Storage hardware upgrades.

  "To reach wine lovers worldwide, we need to get faster and more efficient while staying committed to quality," says CIO Daniel Duran. "Pure Storage provides a very powerful, simple solution to help us grow and deliver only the highest quality wine to consumers around the world."

- **Highly Scalable and Efficient Applications**

  Applications are rapidly evolving from the traditional formats we know. To support rapid scale up and down requirements, applications are being containerized. Container-based applications consume compute, network, and storage resources at a more granular level, giving them greater dynamic scalability in response to changing requirements. Running containerized applications requires changes to the underlying infrastructure and creates new requirements for resources, particularly storage, to provide business continuity and data persistence. This is an area of ongoing innovation, especially around fleet virtualization, as vendors work to make it easy for organizations to manage data over time and at scale.

- **Anywhere, AI Operations Management**

  The new normal isn't just about how organizations will provide experiences and how they will design the infrastructure to support continuous, secure delivery of those experiences. It's also about how IT teams will deploy, configure, service, and scale IT infrastructures. No longer can organizations count on IT teams to easily access data centers or be in an office to perform diagnostics. The way IT is managed must also change to support remote, AI-assisted operations. From automated resource deployment for increased responsiveness to predictive support and planning to prevent downtime or delays in resource availability, today's IT teams must be able to do any task from anywhere. And when they must be onsite, they need to know well in advance, so arrangements can be made to be local and accomplish batches of tasks (e.g., technology upgrades or installations) at a single time.

- **Shifting to More Sustainable Resources**

  With climate change becoming a growing issue, organizations are facing demands to adopt sustainable practices and reduce carbon footprints. Too often, business leaders overlook the production, storage, and use of data as a sustainability issue by not addressing inefficient data centers that consume large amounts of energy and require equipment refresh

every few years. Opting for technologies that last longer and consume fewer environmental resources, such as upgradable all-flash data storage, not only improves environmental responsibility but also yields valuable cost savings.

Veritas, a leader in enterprise data protection and software-designed storage, is a case in point. The company turned to Pure Storage to overcome the high costs and lagging performance of its data systems. Leveraging Pure Storage FlashBlade® technology, the company not only improved its system performance but also reduced the cost and carbon footprint of its data storage with 30% fewer servers.

Modern Data Experiences Require a New Design Strategy

To stay competitive, organizations should continue to embrace many of the behaviors and trends that have developed in crisis, particularly widespread digital adoption. A new design strategy should include:

- **Continuous Engagement**
  When engaging with customers and staff via modern data experiences, there's an expectation that experiences will always be available, and data will be secure. This has increased the importance of adhering to stringent data availability and security service level objectives.

  For data availability, this means considering how to safeguard against unexpected outages, as well as eliminate downtime during planned updates. It also requires an aggressive, proactive support strategy that enables you to be alerted and resolve issues remotely, so they don't become outages.

  From a security standpoint, it's important that data and systems are safeguarded against cyberattacks, including ransomware, so data remains safe and secure from theft, destruction, and illegal use. Data security is also essential because of the brand, legal, and financial impacts.

  For the Mercedes-AMG Petronas Formula One Team, Pure Storage Flash Array and FlashBlade have enabled them to gain uninterrupted insights both on and off the track. This includes a 90% improvement in query times for database applications and 66% faster access to trackside files. And even with growing volumes of data, only one storage administrator is needed to manage the entire environment.

- **Application Agility**
  Successful digital business leaders understand that modern data experiences are dependent on a new set of front-end (engagement) and back-end (analytics) applications that can easily scale to survive outages. This is driving a rapid shift to containerized applications that can run anywhere for more agility. These new applications will live alongside more traditional bare metal and virtualized applications. To gain maximum ROI and be future-ready, it's essential to have an infrastructure that supports any application delivery model, including Kubernetes, VMs, bare metal, and OS based.

  It's equally important that the platform that these applications run on can support a broad range of protocols so that new resources don't have to be deployed if the applications evolve to need a new interface (e.g., object vs. file).

2021:
A 100% Digital Business Mindset

As in-person experiences continue to become 'secondary,' a new approach to IT is required:

- Focus on the needs of people.
- Build the right foundation and infrastructure.
- Focus on security for users and the organization.
- Focus on IT operations being no-touch, available instantly to support new growth initiatives.
- Rethink consumption flexibility.

- **Orchestrated Operations**

  On-premises systems need to be managed almost exclusively via remote management, just like resources at MSPs and public-cloud sites. This transition to "lights-out" operations requires a mature strategy that looks across automation (e.g., configuration and deployment of resources), monitoring (observing for issues), and service management (including ITSM for logging of what changes are made).

  In addition to the day-to-day management and deployment tasks, orchestrated operations also require more advanced "what-if" planning. Digital business is prone to spikes in needs, and it's important that vendors provide the tools to help forecast ongoing needs like capacity and performance additions or workload (re)distribution for better ROI and consistent user experience.

- **Elastic Infrastructure**

  Having secure, always-on engagement, orchestrated operations, and agile applications is only part of a bigger picture. IT and business leaders must also consider how their storage—traditionally one of the least agile segments of the data center—can scale to meet demand.

  "Data accumulated by the user companies has increased year by year, and we have been adding the storage capacity based on the prediction, says Yoshitaka Tozaki, member of the IT Infrastructure Development Office, DENSO IT Solutions. "The level of expectation for our operations is very high in terms of stability and reliability, and it is important that we can build, operate, and manage our systems while maintaining disruption-free services."

  Legacy storage architecture that requires a forklift upgrade for expansion and upgrade just won't cut it in a digital business world. An agile storage architecture that scales and stays modern without downtime is table stakes. If appropriate, organizations can purchase resources so that they can be leveraged for a longer period of time vs. paid for on a utility fee (e.g., sweating assets for more "stable" processes). This purchase is best combined with a subscription-based based ownership model, so that the organization can respond quickly and within budget to rapidly add application resources (front- and/or back-end) and data storage capacity as needed.

  DENSO chose the Pure Evergreen Storage solution for its upgradeable architecture and subscription-based upgrade model to stay modern and gain the benefits of disruption-free upgrades.

  "Pure Evergreen Storage enabled us to avoid a tremendous amount of risk associated with forklift upgrades to replace outdated storage," says Yashuhiro Ishida, Deputy Director, IT Services Department, DENSO IT Solutions.

An agile storage architecture that scales and stays modern without downtime is table stakes.
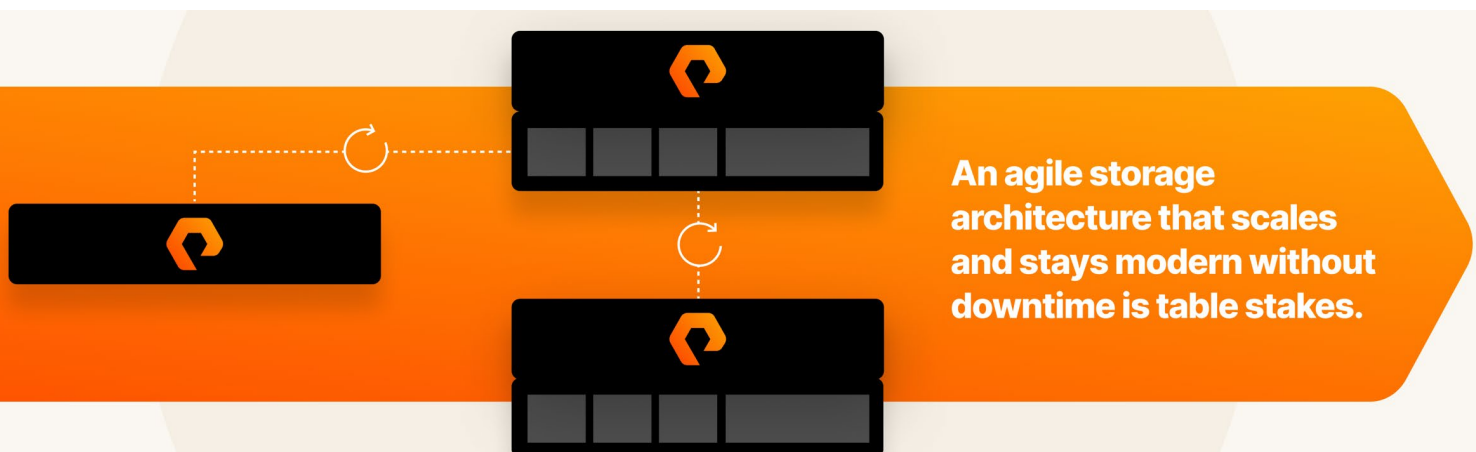
Pure Storage Enables Digital Business Breakthroughs

The next stage of digital transformation requires a modern approach to data storage. Pure Storage technologies are designed to address the challenges that today's IT leaders are facing with a portfolio of solutions that can support any application and any workflow, in any location.

It's time to rethink your approach to digital business and partner with a vendor that delivers always-on, high-speed digital engagement, no-touch IT operations, and elastic acquisition. Providing the scale, performance, and flexibility of deployment for modern workflows and business operations, Pure Storage enables you to turn bottlenecks into breakthroughs with a Modern Data Experience™ that will drive your digital business success.

Are you ready to turn this digital transformation reality check into your digital business success?

Contact Us Today