

VAST DATA SET TO BECOME THE FOUNDATION OF AN AI-POWERED WORLD

FOUNDED TO DISRUPT TRADITIONAL ENTERPRISE INFRASTRUCTURE

VAST Data was founded only five years ago by a group of storage veterans who realized that the rapidly evolving world of storage technology wasn't utilized to its fullest potential. The group believed that they could do better and, as a result, defined VAST's mission "to bring an end to decades of complexity and application bottlenecks."¹ That's an audacious mission statement, but it's one that VAST has demonstrated it can live up to.

VAST is led by Renen Hallak, who, before founding VAST Data, led the architecture and development of XtremIO's all-flash storage array. Under his leadership, the company has delivered a stunning set of business milestones.¹ As of the end of January 2022:

- VAST more than doubled its customer roster YoY expanding across industries including autonomous driving, life sciences, media and entertainment, financial trading and government institutions with increasing demand in new market segments.
- VAST grew 3.8x YoY in just its third year of selling, closing out the year at a nearly \$300 million software bookings run rate.
- Since the last funding round, the company is cash-flow positive, powered by a \$1.2 million average selling price.
- Customers continue to demonstrate their confidence in Universal Storage, exemplified by a Net Revenue Retention (NRR) of over 300%.

Let's look at how VAST achieved these milestones, and how the industry views the company and its technology.

¹ Source: [VAST Data](#)

DATA DRIVES THE BUSINESS

Data is the foundation underlying the decision-making process of every modern enterprise. The efficiency and competitiveness of any business are governed by the speed and quality of its decisions. Effective decisions require reliable data. This places the systems and organizations that manage and analyze that data directly in the path of enterprise success.

Data today is almost entirely digital. It transits into an enterprise's IT infrastructure with a volume and velocity never experienced before. Data is fed into an array of databases and business analytics systems designed to deliver insights in near real-time. An enterprise indeed runs at the speed of its data.

THE NEED FOR A NEW UNDERLYING DATA ARCHITECTURE

The increasing reliance on data for business success elevates the importance of the architectures that protect and serve that data. It's no wonder that a recent survey of CIOs revealed that the top two areas for IT investment for the coming year are data protection and data/business analytics². Data must be secure, enabling timely and effective business decisions.

Challenging modern data architectures is the rise of artificial intelligence and deep learning as part of an enterprise's analytics arsenal. Deep learning relies on high-throughput, low-latency data that even the best storage systems struggle to keep up with.

To meet these demands, storage systems must serve data with unprecedented performance, reliability, and scalability. At the same time, the complexity of managing data across an enterprise calls for a more straightforward approach to storage than has been traditionally seen in legacy storage systems.

Traditional legacy architectures struggle to deliver the best of what today's technology can support: enabling a platform that provides the right balance of simplicity, affordability, and the performance-driven attributes needed to enable time-critical insights from data. In addition, the past decade has seen an explosion of new technologies that can accelerate the data pipeline. Still, the traditional storage providers aren't delivering the fullest potential of what these advancements can provide.

² IDG Inc, "[2022 State of the CIO Study](#)", January 2022

Legacy storage vendors treat many modern advancements in storage technology as a functional drop-in replacement for older elements within their architectures. Flash storage, for example, has replaced mechanical hard drives in nearly all of today's top-tier storage solutions. Likewise, storage-class memory (SCM) has emerged to replace older non-volatile technologies for write-caching. NVMe-over-fabric, a storage interconnect that teases the idea of high-speed distributed storage, is used most often as a virtual point-to-point connection between a storage array and a server. This list goes on and on.

Recent advances in storage technology, coupled with modern thinking in systems design centered around software-defined infrastructure, open the door to new storage architectures. These new architectures promise to deliver unprecedented capabilities for managing data than a traditional storage architecture can fully realize.

VAST was founded on the realization that recent innovations in storage technology are much more than drop-in replacements within a traditional storage architecture. The potential stretches much further. The founders of VAST believed that they could rearrange the building blocks, combining them in a new way that would deliver a storage solution that would break through the limitations of traditional architectures to better service the needs of the modern data-driven enterprise. The solution that VAST ultimately delivered, based on its Universal Storage architecture, seems to do just that.

VAST'S UNIVERSAL STORAGE

Universal Storage is focused on removing trade-offs and operational complexity forced by legacy storage tiering, enabling all workloads to reap the benefits of flash-based storage. The company is executing on its vision, laid down more than six years ago, to disrupt the status quo of storage architectures.

VAST designed and built a solution based on a unique disaggregated and shared-everything (DASE) storage architecture. DASE exploits the capabilities promised by NVMe-attached flash, SCM, new interconnects, and modern software-defined architecture to deliver a solution that exceeds what's possible with legacy storage architectures (even those that are flash-enabled).³

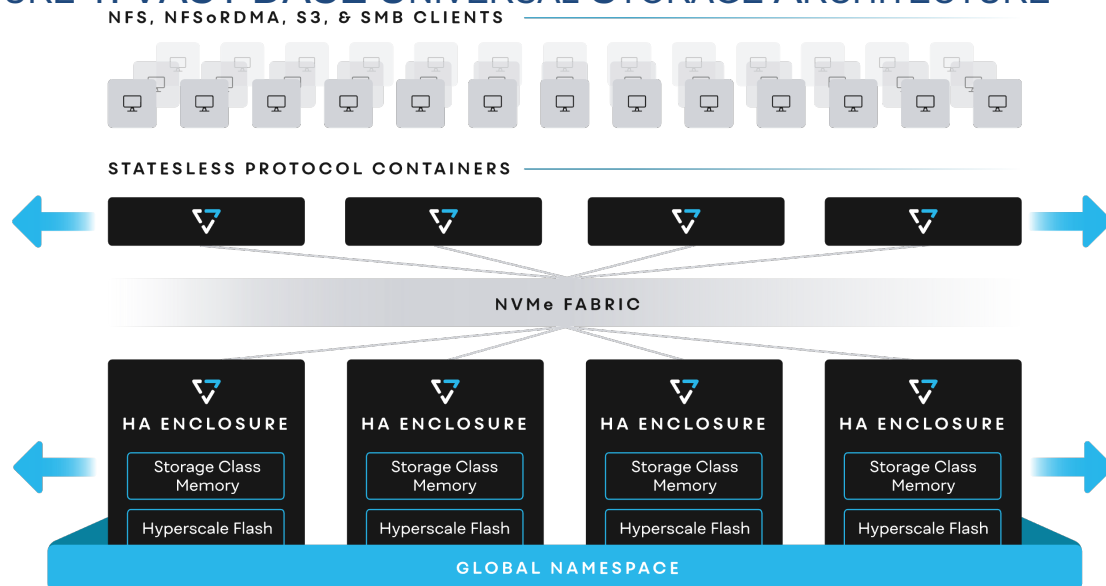
VAST employs three new technologies to deliver on this vision:

³ VAST Data, "[Universal Storage Explained](#)"

- Hyperscale flash memory SSDs that bring down the cost of using flash storage.
- SCM, which provides high-performance, high-endurance memory.
- NVMe-over-fabric connects stateless VAST servers to the QLC flash and SCM with just a few microseconds of latency.

These elements work together to enable an offering that delivers the best of what contemporary architectures offer in one complete system: linear performance scaling, composability, resiliency, cyber-protection, flexible scaling, among other attributes. As a result, VAST delivers one Universal Storage system.

FIGURE 1: VAST DASE UNIVERSAL STORAGE ARCHITECTURE



Source VAST Data

The resulting solution delivers a range of business-level benefits:

- The economics of a hard disk drive solution with the performance characteristics of all-flash, leading to a solution affordable enough to eliminate the economic benefit of storage tiering or archiving.
- Storage served fast enough to meet the needs of the most demanding legacy and modern applications.

- Storage that can dynamically scale to exabytes, simultaneously meeting the needs of many applications.
- Lower infrastructure impact, with distributed flash storage leading to lower power and cooling requirements in the data center while also increasing storage density.

The business-level benefits enable greater flexibility at a lower overall cost to alternative storage architectures. The VAST approach provides an insurance policy against evolving application demands. This leads to a faster and more economical time-to-insight for the data stored and managed by the system.

VAST'S UNPRECEDENTED SUCCESS AND MOMENTUM

The vision of VAST's founders resonates with nearly everyone who hears it. As a result, the company has successfully raised funds to launch and expand its operations. It has also been unusually successful in bringing its solution to market, becoming one of the "fastest-selling" companies in the history of the storage industry.

BUILDING A SUCCESSFUL BUSINESS

VAST, founded in 2016, has raised over \$263 million across four funding rounds from some of the top-tier venture capital firms in the industry. Its list of investors includes NVIDIA, Dell Technologies Capital, Mellanox Capital, Norwest Venture Partners, and eight other prestige firms. Its most recent round, in May 2021, VAST's post-money valuation was \$3.7 billion. That is a tripling of its valuation across the previous 12 months.

The funds that VAST has raised are secondary to its success in its business. It took VAST about two years to bring its first product to market, achieving its first sale in 2018. Since it shipped that first product, VAST has attained a range of successes that would be the envy of nearly any business.

BEYOND TECHNOLOGY

Success in enterprise storage requires more than just good technology. It requires a high degree of customer care. It requires a flexible business model. Finally, it demands a vision of the future of storage and data shared by the company's demanding and innovative customers. VAST is executing well along each of these axes.

VAST has reinvented its business model with its Gemini offering. Gemini enables a customer to (as VAST describes it) “buy like a hyperscaler, deploy like an enterprise.” Gemini adds a level of flexibility to deploying a storage appliance by allowing customers to purchase and refresh hardware as frequently as needed without paying additionally for the software stack. Decoupling its hardware and software, VAST delivers a powerful enabler for a level of flexibility that exceeds that offering by most of the storage market.

A critical element of VAST’s approach is providing its customers an effortless, white-glove experience. With this in mind, VAST implemented Co-Pilot as part of its Gemini offering. Co-Pilot is a concierge-like experience that pairs a technical support specialist to guide each customer along their storage journey. A customer's Co-Pilot is responsible for enabling a seamless and easy onboarding experience and follows along with the customer to manage and coordinate services and support throughout the deployment lifecycle. VAST says that a customer's Co-Pilot is "responsible for your success."

A DEDICATED, GROWING CUSTOMER BASE

It's perhaps this "white-glove" treatment, coupled with VAST's disruptive storage technology, that leads to VAST's dedicated customer base. In the latest Gartner Peer Insights report, which tracks anonymous customer reviews, VAST achieved the highest customer recommendation, with 100% of reviews saying they would recommend Universal Storage.

The company’s customer base spans the gamut of enterprise IT organizations. Its customers include banking, healthcare, media, internet, manufacturing, automotive, and government enterprises. In addition, VAST enjoys marquee customers such as the United States government, Athinoula A. Martino Center for Biomedical Imaging, Agoda (a Booking Holdings subsidiary), and several of the world’s leading quantitative trading firms.

VAST’s success with quantitative trading firms is especially notable. There is no industry that is as disproportionately impacted by the speed of its data as a quantitative trading firm. The time-to-insight within that community is often the difference between a profit and a loss. It was in that market that VAST found much of its early success, and the sector continues to be a critical one for the company.

The ability of VAST’s Universal Storage to serve data economically, quickly, and at scale, have led many of VAST’s customers to choose Universal Storage as the system for accelerated compute and deep learning workloads.

This ability to deliver quick time-to-insight in AI-enabled applications has made the government market one of the most successful for VAST. The company's subsidiary for servicing the government sector, VAST Federal, has demonstrated impressive success.

In August 2021, VAST announced that the US Department of Defense (DoD) deployed more than \$10 million of VAST products and services.⁴ The systems deployed are used to support the US DoD's efforts to expand its computing capabilities, including introducing AI applications across a range of data-intensive workloads.

The list continues, with design wins and success in industries across the board.

The level of VAST's success, both in terms of business metrics and the breadth of the markets it services, speaks directly to a need for a new storage architecture. With its innovative use of modern technologies, VAST is disrupting the entire storage industry. But, at the same time, there's more to the story than just technology.

POISED FOR THE FUTURE

VAST isn't satisfied simply by disrupting the storage industry. It aspires to do far more. It's not an accident that VAST calls itself a "data" company and not a "storage" company. VAST is relentlessly focused on the idea that the ultimate value of data is really the insight that it uncovers. It's managing, accessing and interacting with this data that VAST is building its future around.

VAST founder and CEO Renen Hallak recently said that "it's not hyperbolic to say that data means everything. From groundbreaking medical research to award-winning cinematic experiences, VAST's customers are working to expand the boundaries of what's possible in various aspects of our daily lives. Our singular goal is to empower AI-driven innovation with accessible, infinitely scalable data intelligence. What we've accomplished in just a few years is incredible -- and we're just getting started."⁵

THE ANALYST'S PERSPECTIVE

Data is changing. It floods into organizations with a volume and velocity previously unseen in enterprise IT. However, transforming that data into business-impacting insights stresses even the most sophisticated of today's storage systems – storage

⁴ Source: [VAST Data](#)

⁵ Source: [VAST Data](#)

systems based on an architecture that has remained relatively unchanged for more than two decades.

VAST emerged less than five years ago with the mission to fully exploit the potential of recent advances in storage technology to disrupt how the world thinks of storage architecture. The company executed that vision, delivering a product to market that has found broad success, and given VAST a set of business metrics that any company would envy.

Choosing a vendor to trust with your most critical data is challenging. The decision includes more than just selecting the fastest storage array or the most innovative system design. A storage vendor should be measured against the fit and quality of its products, its customer experience, the strength of its business, the quality of its leadership team, and its overall vision for the future. It is, and should be, a high bar.

Regardless of which metric you choose to look at, VAST demonstrates success. It has proven its technology across industries, becoming a critical element of some of the most demanding data environments in the world. It has demonstrated its business success. It has articulated a vision that resonates. VAST delivers all of this with a white-glove experience which places customer experience above all else.

Choosing a vendor to trust with your most critical data is challenging. VAST has proven that it can deliver on the innovative vision of its founders. Any enterprise evaluating a new file and object storage solution should include VAST. To do otherwise would limit your choices to a storage architecture that likely doesn't deliver the full potential of modern storage technology. That's a risky path to take with the data that defines your enterprise.

IMPORTANT INFORMATION ABOUT THIS PAPER

CONTRIBUTOR(S)

[Steve McDowell](#), Vice President and Principal Analyst, Storage

PUBLISHER

[Patrick Moorhead](#), CEO, Founder and Chief Analyst at [Moor Insights & Strategy](#)

INQUIRIES

[Contact us](#) if you would like to discuss this report, and Moor Insights & Strategy will respond promptly.

CITATIONS

This paper can be cited by accredited press and analysts but must be cited in-context, displaying author's name, author's title, and "Moor Insights & Strategy". Non-press and non-analysts must receive prior written permission by Moor Insights & Strategy for any citations.

LICENSING

This document, including any supporting materials, is owned by Moor Insights & Strategy. This publication may not be reproduced, distributed, or shared in any form without Moor Insights & Strategy's prior written permission.

DISCLOSURES

VAST Data commissioned this paper. Moor Insights & Strategy provides research, analysis, advising, and consulting to many high-tech companies mentioned in this paper. No employees at the firm hold any equity positions with any companies cited in this document.

DISCLAIMER

The information presented in this document is for informational purposes only and may contain technical inaccuracies, omissions, and typographical errors. Moor Insights & Strategy disclaims all warranties as to the accuracy, completeness, or adequacy of such information and shall have no liability for errors, omissions, or inadequacies in such information. This document consists of the opinions of Moor Insights & Strategy and should not be construed as statements of fact. The opinions expressed herein are subject to change without notice.

Moor Insights & Strategy provides forecasts and forward-looking statements as directional indicators and not as precise predictions of future events. While our forecasts and forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could cause actual results to differ materially. You are cautioned not to place undue reliance on these forecasts and forward-looking statements, which reflect our opinions only as of the date of publication for this document. Please keep in mind that we are not obligating ourselves to revise or publicly release the results of any revision to these forecasts and forward-looking statements in light of new information or future events.

©2022 Moor Insights & Strategy. Company and product names are used for informational purposes only and may be trademarks of their respective owners.