## Storwize thought leadership external August launch blog

Flash for every workload

The field of theoretical physics is engaged in developing an all-encompassing *theory of everything* (ToE) that would link together and explain all of the physical aspects of the universe.

While [IBM Storage and Software-Defined Infrastructure](http://www-03.ibm.com/systems/storage/) (SDI) is not trying to explain the entire universe, it *is* engaged in a broad effort to develop flash storage solutions to address active data application workloads.

**The benefits of flash storage**

Flash storage solutions have continued to fall in deployment cost while achieving better reliability and performance than disk. In the meantime, the operational costs associated with flash remain significantly lower than disk. The result is a total cost of ownership (TCO) for flash storage that is more competitive and attractive than it has ever been before. Furthermore flash has become a preferred option for a growing number of storage uses and is being utilized in almost every situation where data can be described as active.

Beyond the data center side of the story there is also a business angle. Line of business is now in sync with its IT counterparts in driving wide adoption of flash storage as a key asset in the management and accessibility of data that provides strategic value to the business.

At one time, native weavers high in the Andes only traded their alpaca wool products at their local market. Now they sell online to buyers worldwide. Search engines lead customers to these sellers’ virtual doorsteps. Commercial shippers track packages from Ecuador to Singapore. And IBM mainframes process credit card transactions across multiple continents, banks and languages.

This is just one example of why flash storage adoption continues to grow at double-digit rates[[1]](#footnote-1) – because information is more valuable to more businesses everywhere.

**The explosion of the data supernova**

Everything from cars to refrigerators are starting to “talk” to one other, contributing to the Internet of Things (IoT), which is causing exceptional data growth. Add to this the data from social media, online shopping and many other sources and it’s easy to see why data has gone supernova.

These innovations would struggle to exist, much less thrive, without high-performance underlying IT infrastructure which includes flash storage.

IBM has responded to these 21st century challenges with billions invested in research and development in flash and complementary software-defined storage solutions. The infrastructure that supports the accelerating volume, velocity and value of data must be fast and flexible enough to tackle all of the multiplying storage use cases and workloads.

Cloud service providers can lower costs and increase system performance to gain competitive advantage by deploying [IBM XIV](http://www.ibm.com/systems/storage/disk/xiv/) and [IBM FlashSystem](http://www.ibm.com/systems/storage/flash/) all-flash arrays. [IBM DS8880 family](http://www-03.ibm.com/systems/storage/disk/ds8000/) flash-powered data systems can easily keep pace with the IBM mainframes processing the world’s financial transactions. [IBM DeepFlash 150](https://www-356.ibm.com/partnerworld/wps/servlet/ContentHandler/pw_com_sys_announcement) arrays serve the information hyper-scale industries, with [VersaStack](http://www-03.ibm.com/systems/storage/disk/cisco-versastack.html) flash-based solutions filling in hyper-converged niches.

But small and medium-sized application workloads, no matter the size of the organization within which they perform, account for a hefty portion of all economic activity. They need the same speed, reliability and functionality as everyone else but with even greater cost savings. [IBM Storwize family](http://www-03.ibm.com/systems/storage/storwize/) flash solutions thrive here.

Flash for every workload isn’t a marketing slogan; it’s the IBM Storage and SDI business objective. No other technology firm offers such a broad portfolio of flash storage systems, covering almost every active data application workload and business use case. While physicists are tinkering with their equations to solve the mysteries of the universe, IBM is providing a few [solutions](http://www-03.ibm.com/systems/storage/) of its own.

1. External Enterprise Storage Forecast, IDC July 2016 - All-flash array CAGR 21.4% [↑](#footnote-ref-1)