

# SSD Buyer Behavior

Flash Memory Summit

August 21, 2012

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# Content

## SSD Brand Leaders

August 2012 IT Brand Leader Survey



## SSD Buying Behavior

Q3 Data Center Technology Survey



# SSD Brand Leaders

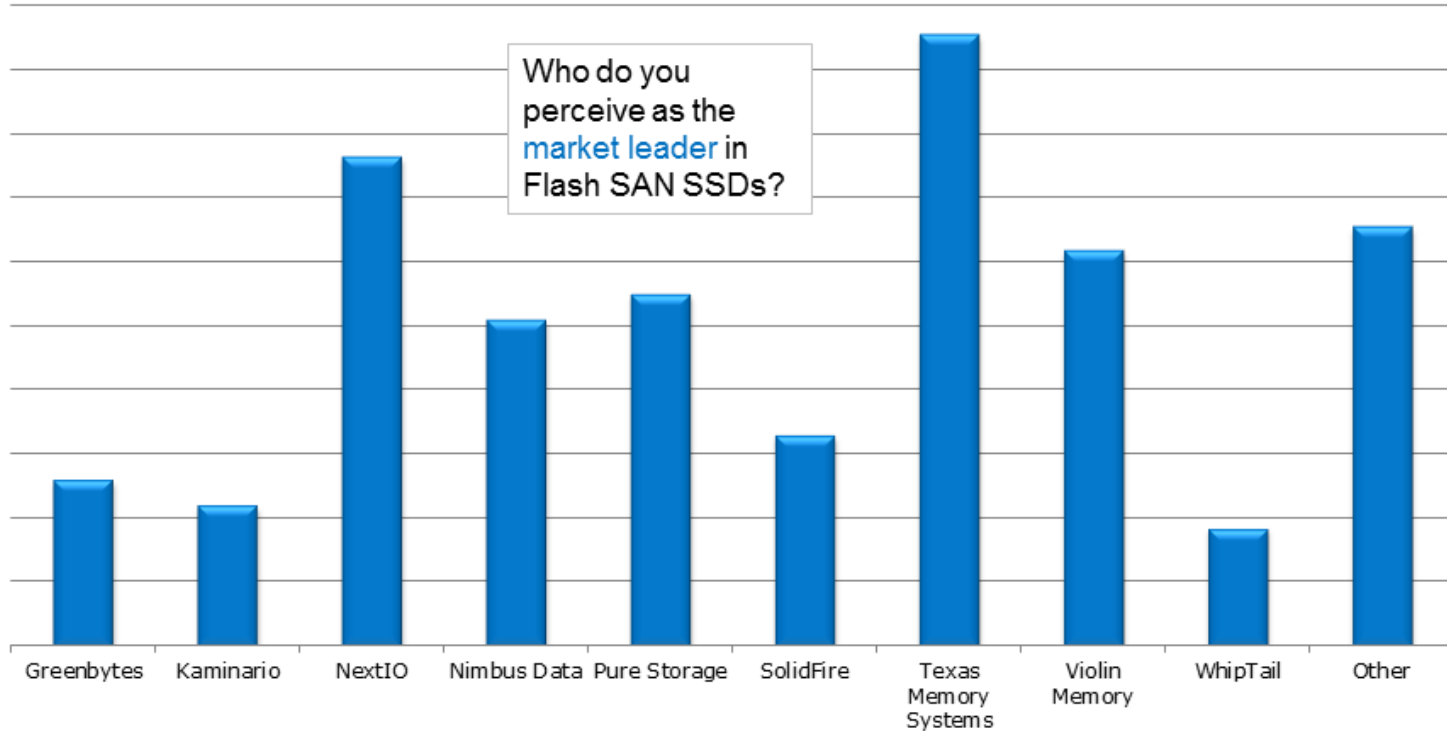
August 2012 IT Brand Leader Survey

## 2012 SSD Brand Leaders

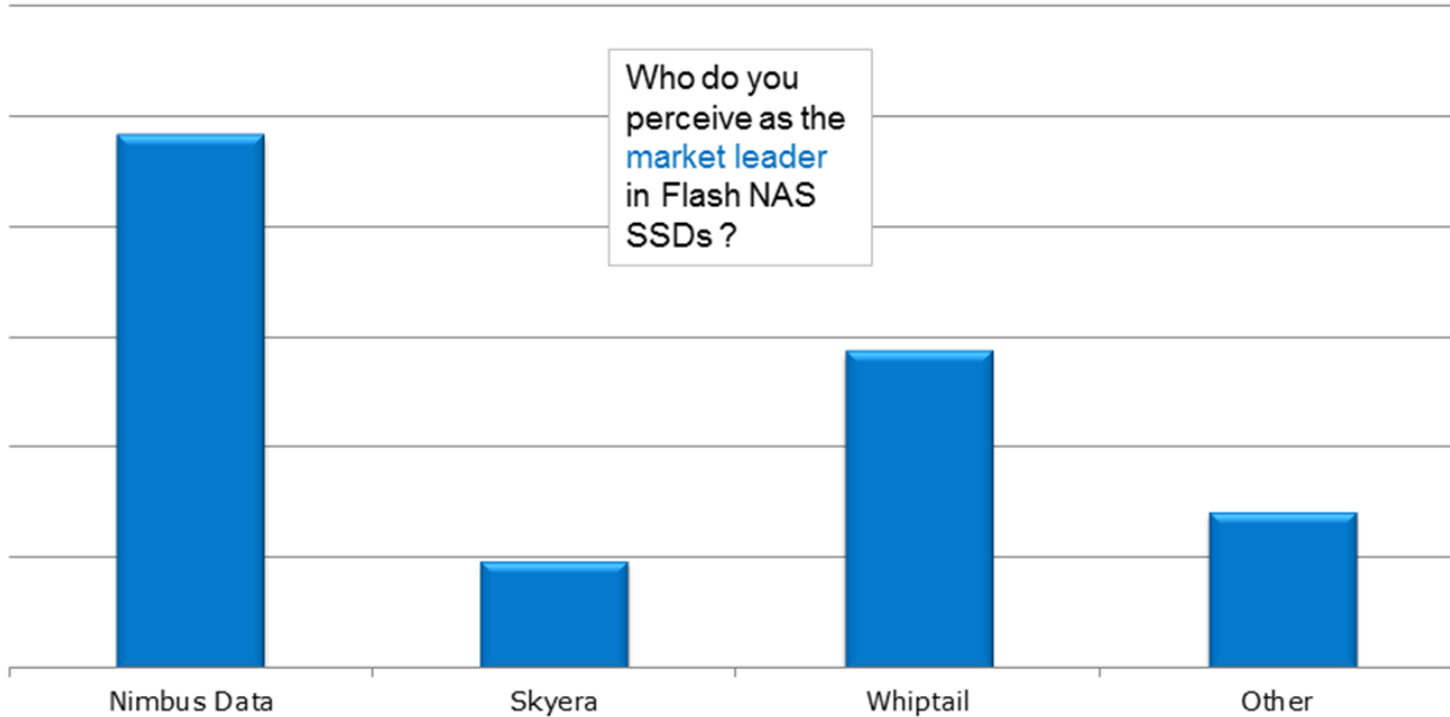


All Flash SAN SSDs	TMS	TMS & NextIO	TMS	TMS	TMS	Pure Storage, Violin Memory & TMS
All Flash NAS SSDs	Nimbus	Nimbus	Nimbus	Nimbus	Nimbus	Nimbus
All DRAM SAN SSDs	TMS	TMS	TMS	TMS	TMS	TMS
All Flash Unified SSDs	Nimbus	Nimbus	Nimbus	Nimbus	Nimbus	Nimbus
PCIe Adapter SSDs	Fusion-io	Intel	Fusion-io	Intel	Intel	Fusion-io
SAS/SATA SSDs	Intel	Intel	Intel	Intel	Intel	Intel
Cache SSDs	EMC	EMC	EMC	EMC	EMC	Fusion-io
NAS Cache Appliances	Cache IQ	Cache IQ	Violin Memory	Cache IQ	Cache IQ	Violin Memory
SSD Controller Chips	LSI	LSI	Intel	Intel	Intel	LSI
Hybrid HDD/SSD Systems	EMC	EMC	EMC	EMC	IBM	IBM

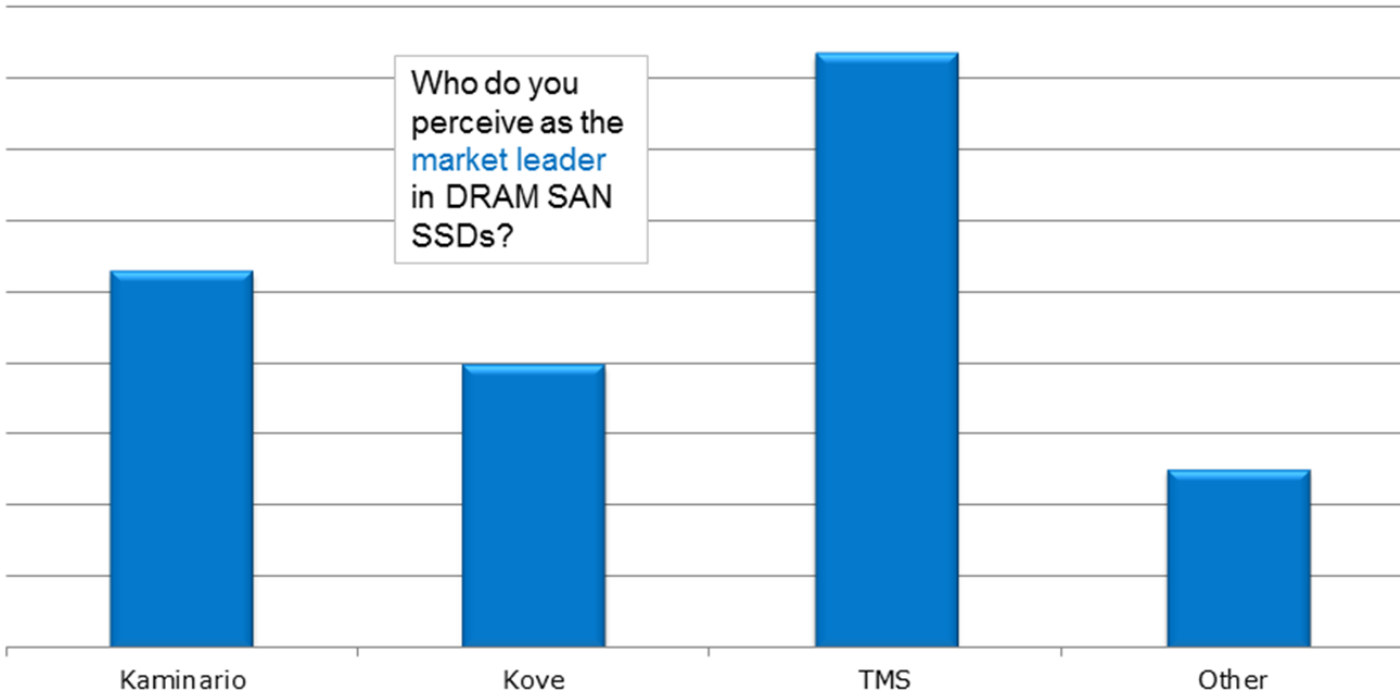
# All Flash SAN SSD



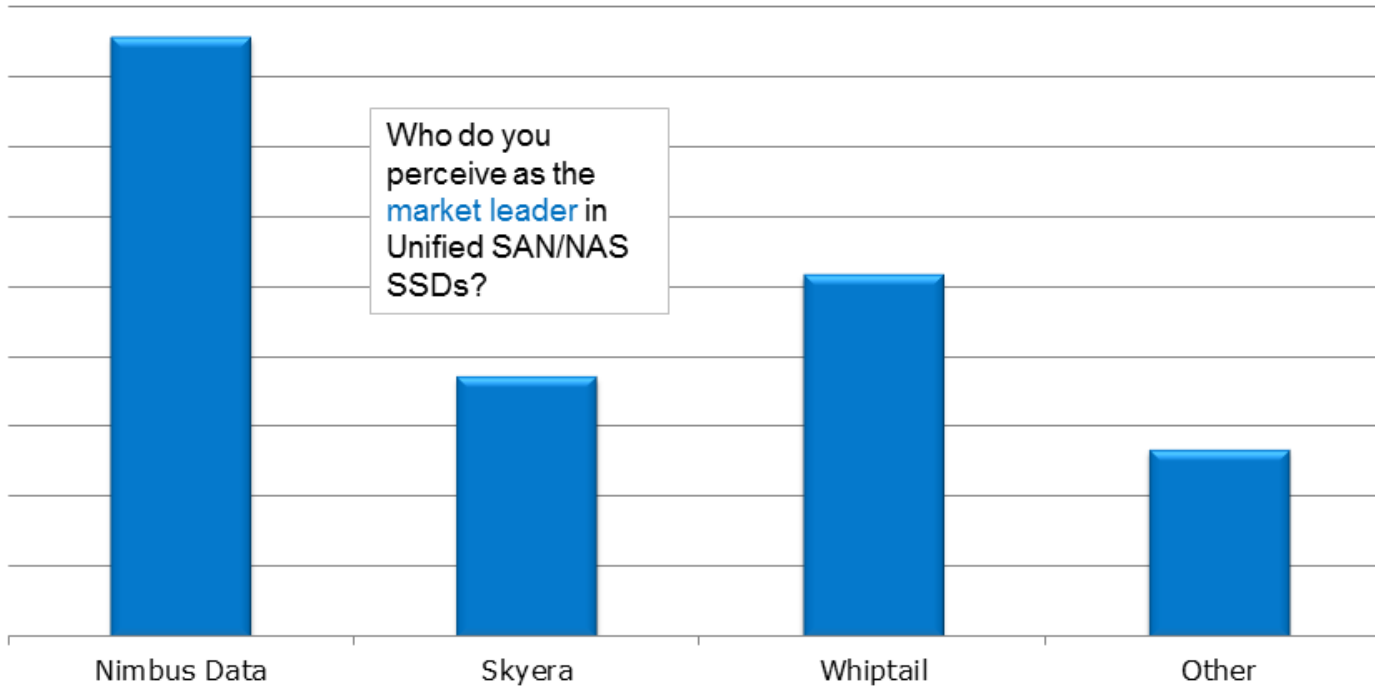
# All Flash NAS SSD



# All DRAM SAN SSD

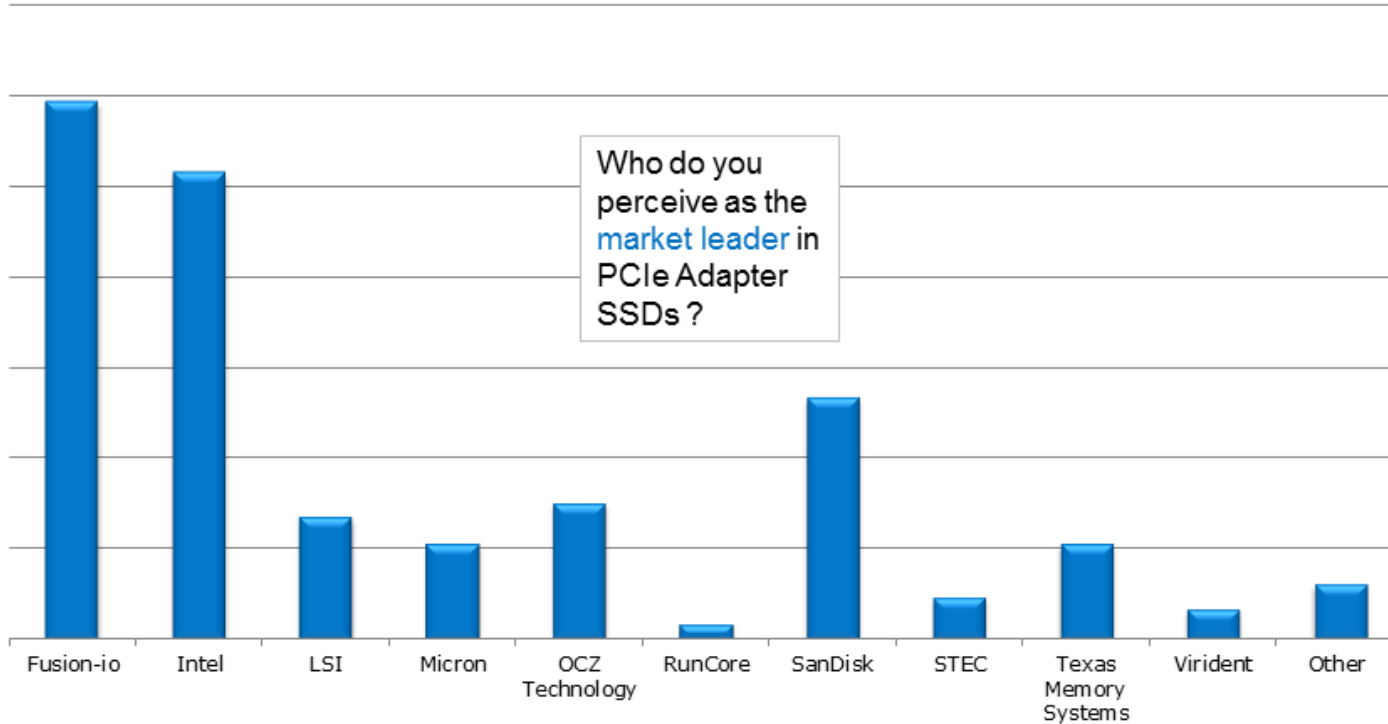


# All Flash Unified SAN/NAS SSD

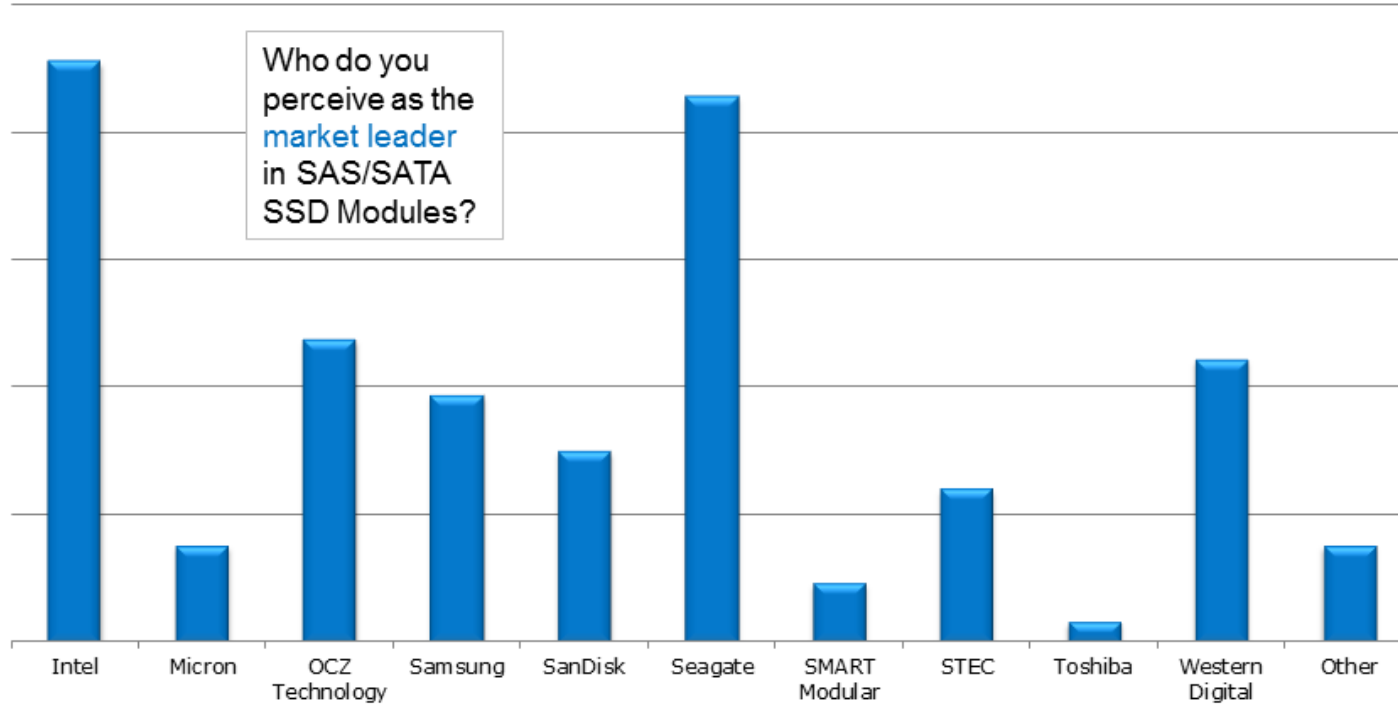




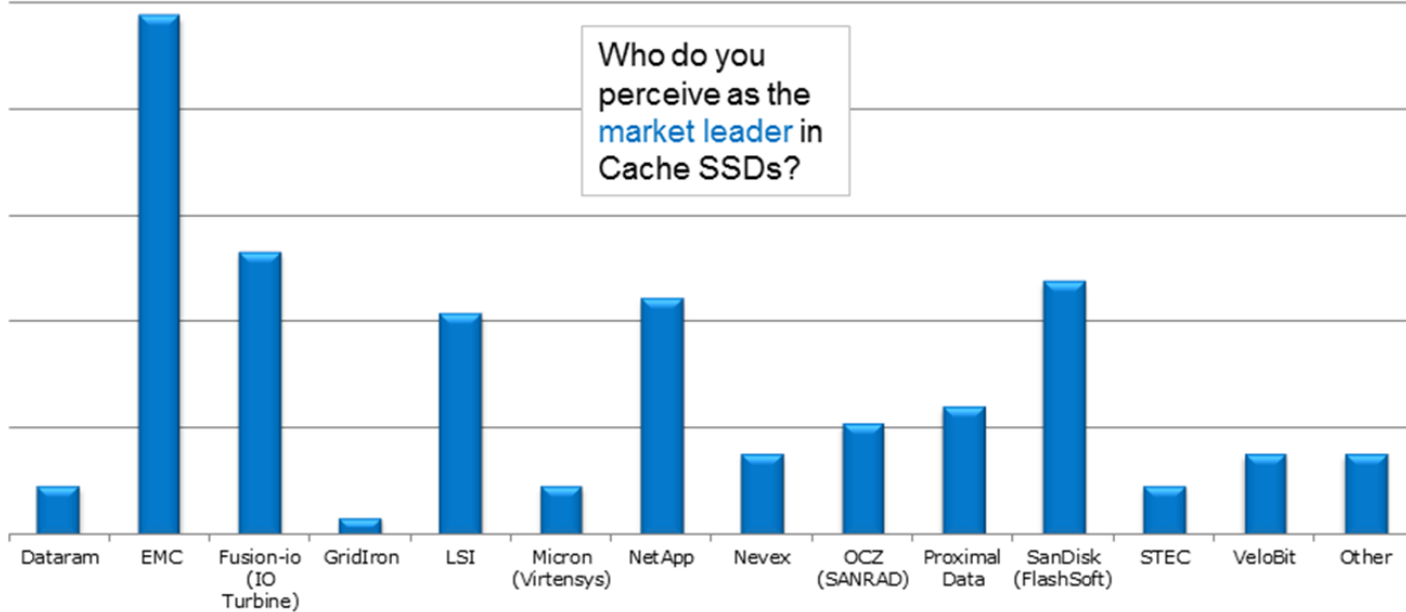
# PCIe Adapter SSD



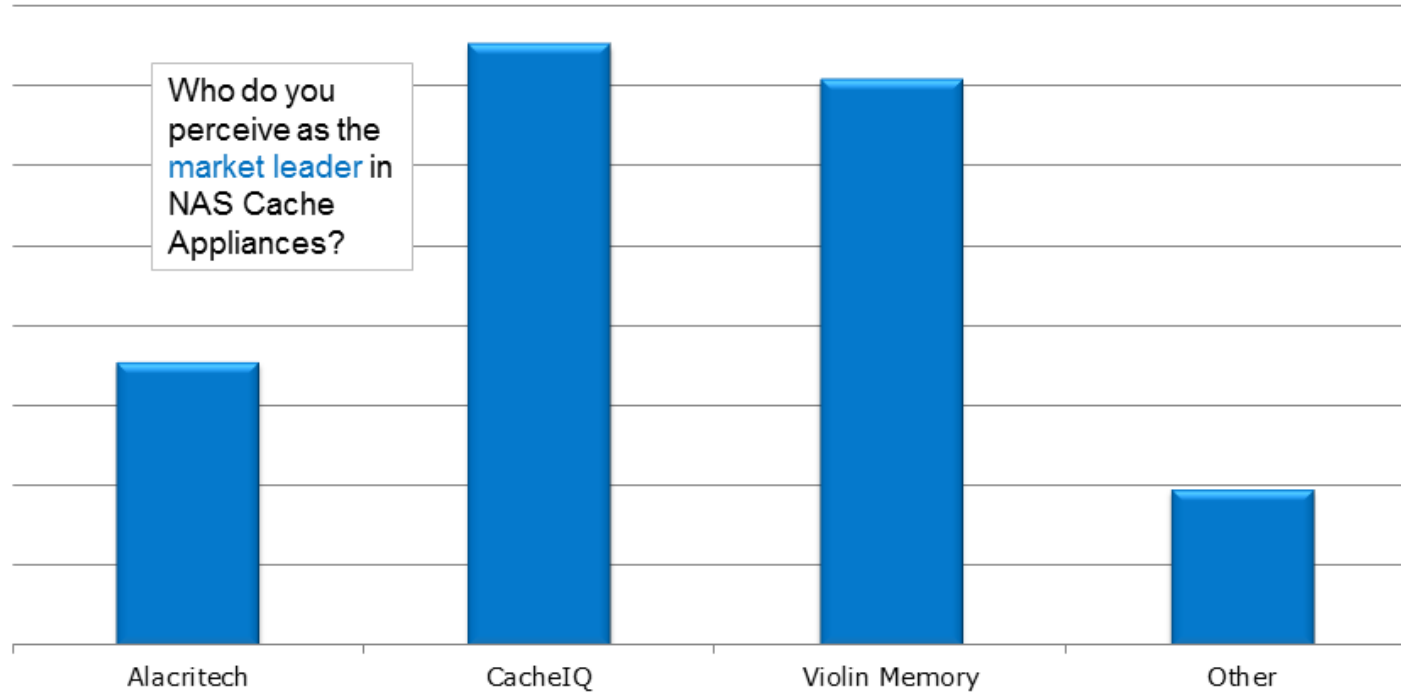
# SAS/SATA SSD Modules



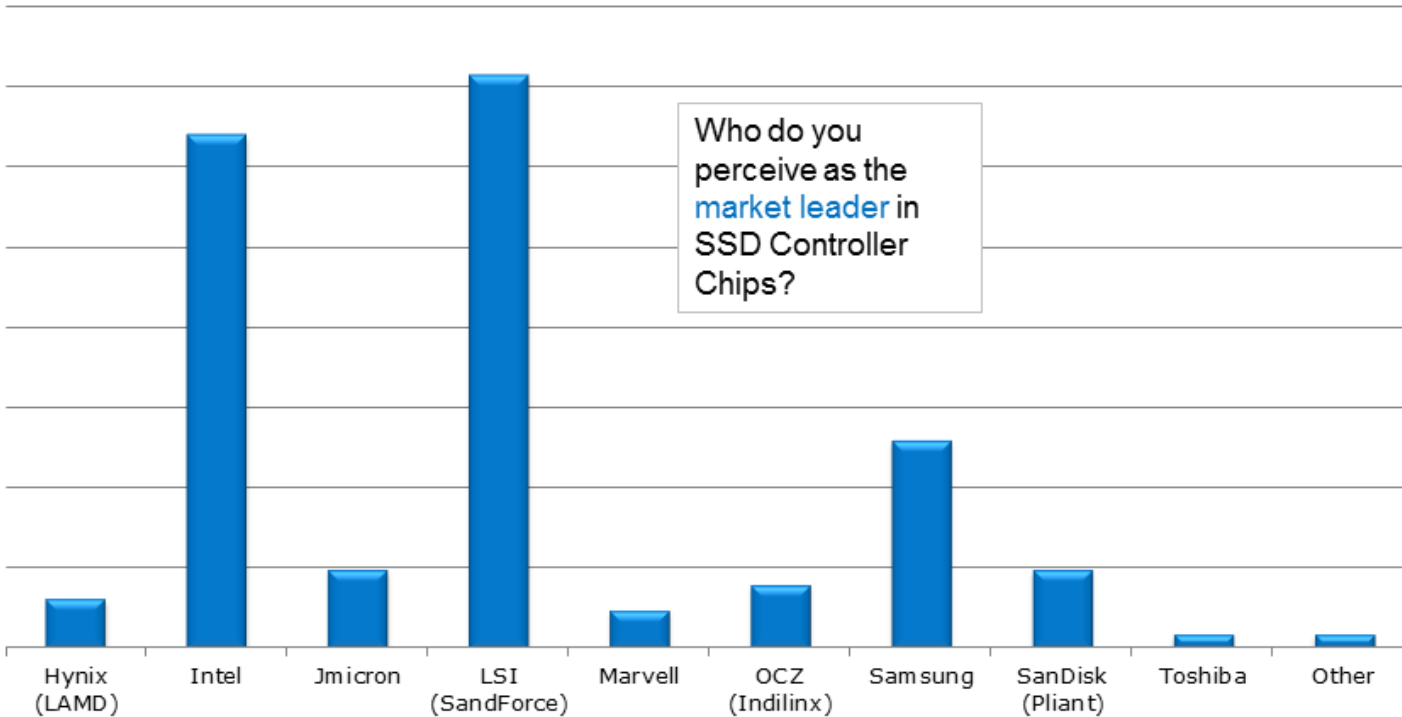
# Cache SSD (System, Adapter or SW)



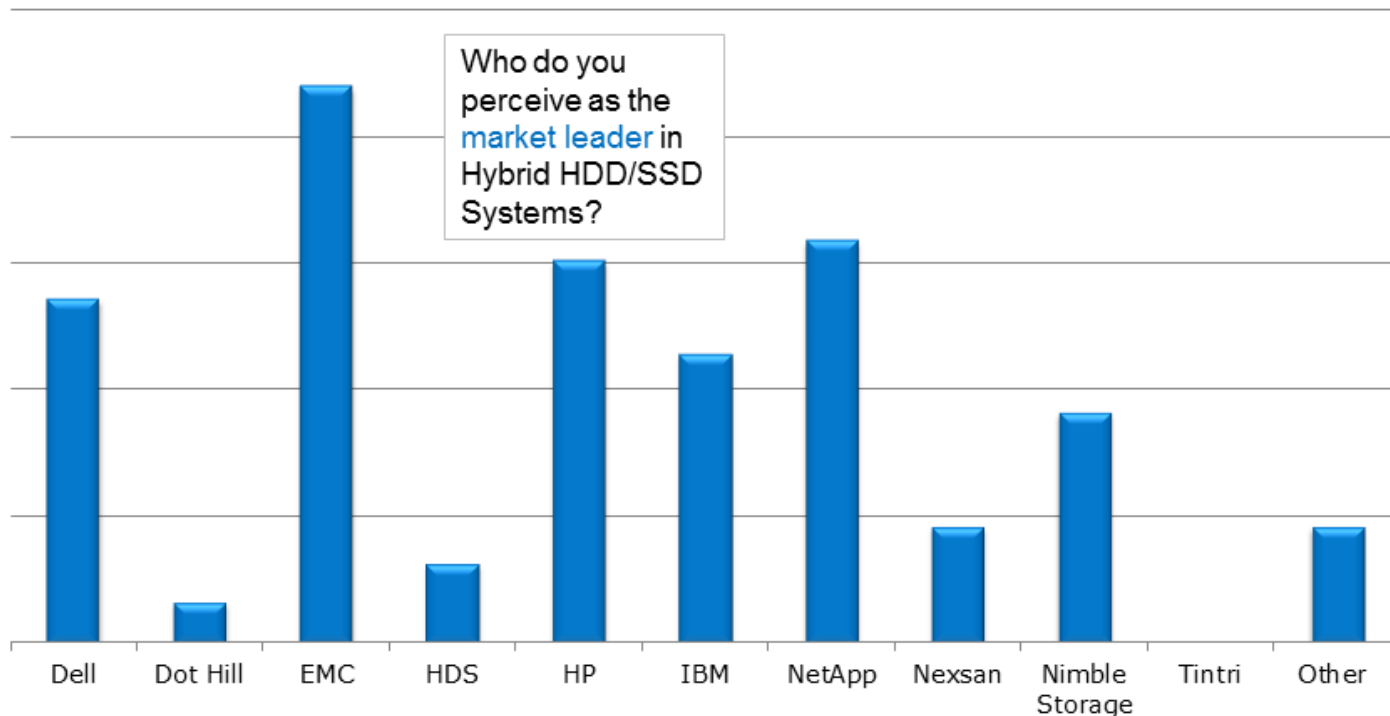
# NAS Cache Appliances



# SSD Controller Chips



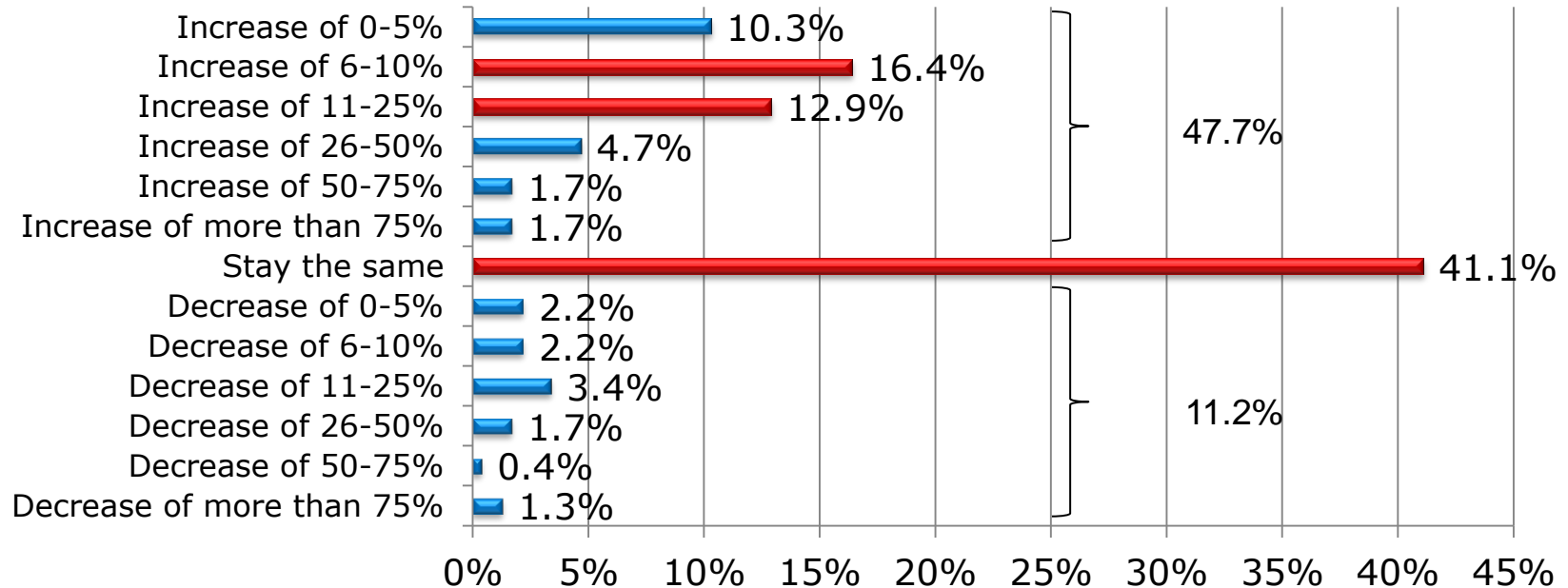
# Hybrid HDD/SSD Systems



# SSD Buyer Behavior

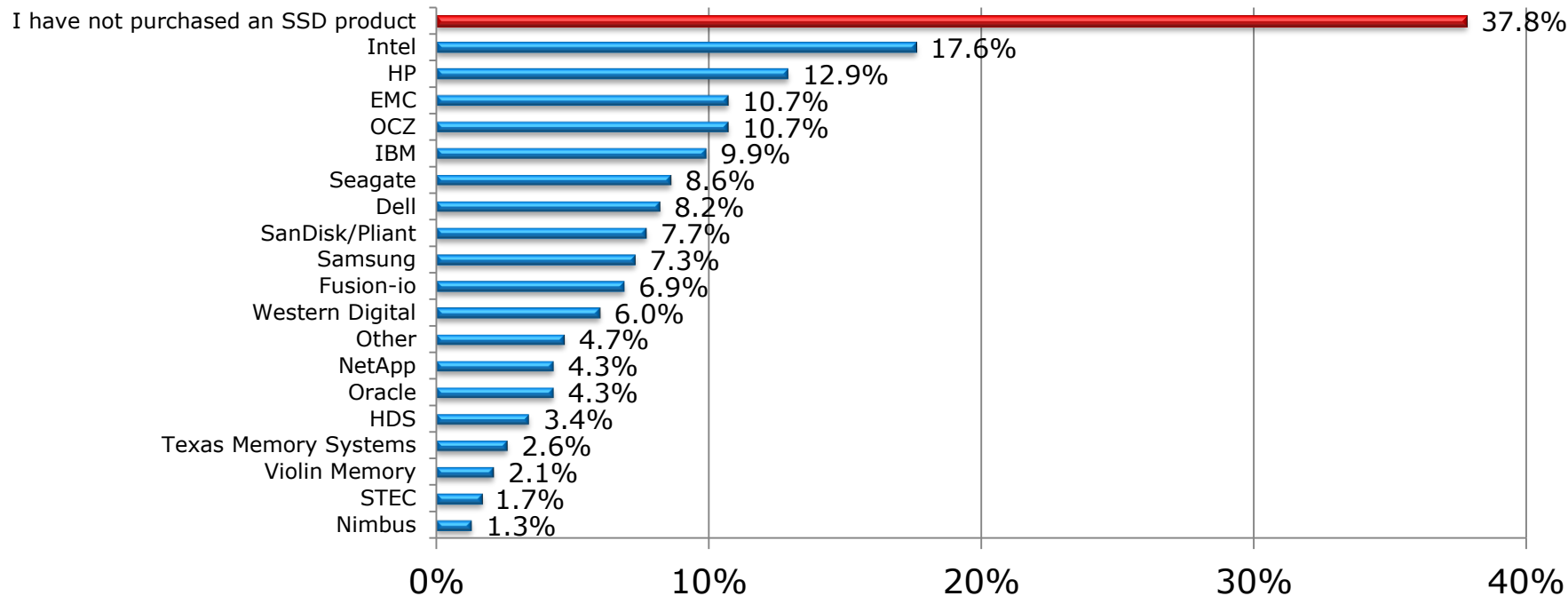
Q3 2012 Data Center Technology Survey

# My organization's spending for storage in the next 12 months will:

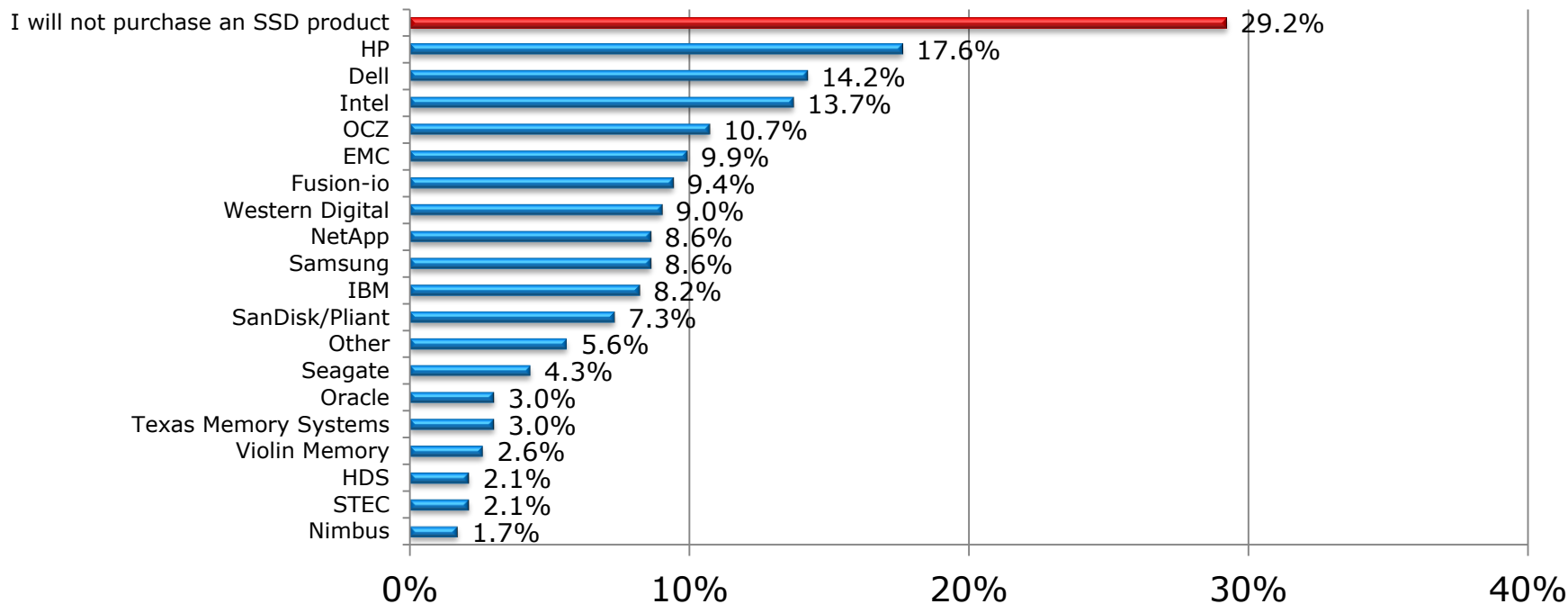




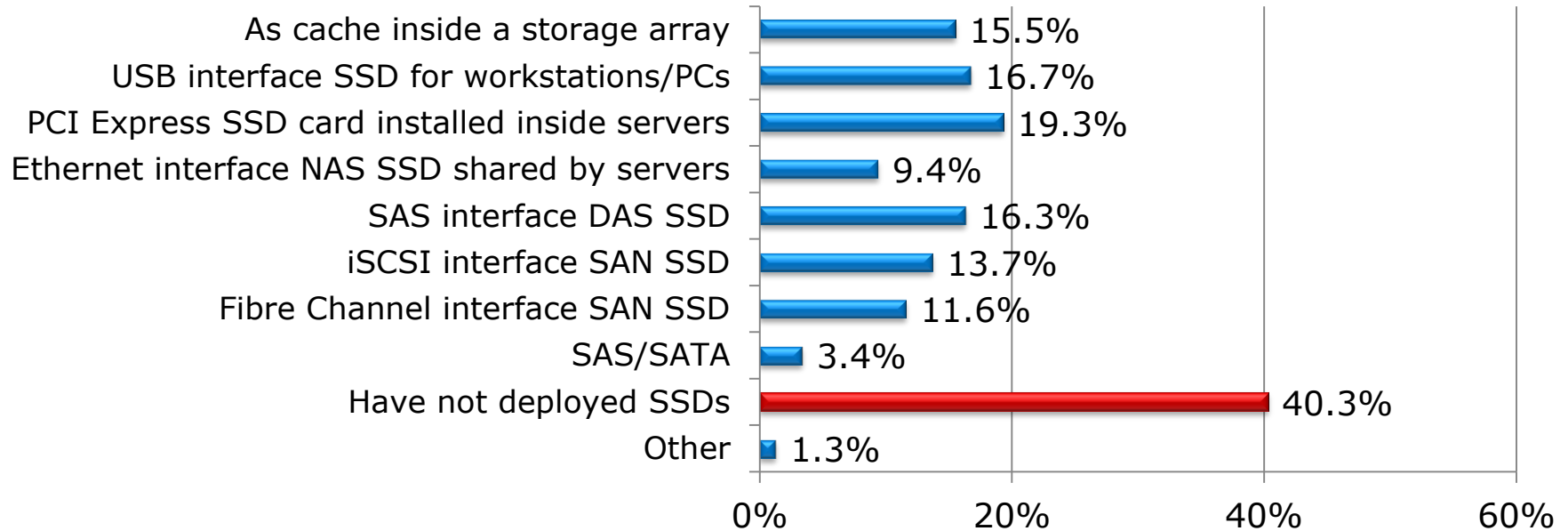
# I have already purchased the following brands of SSD (select all that apply):



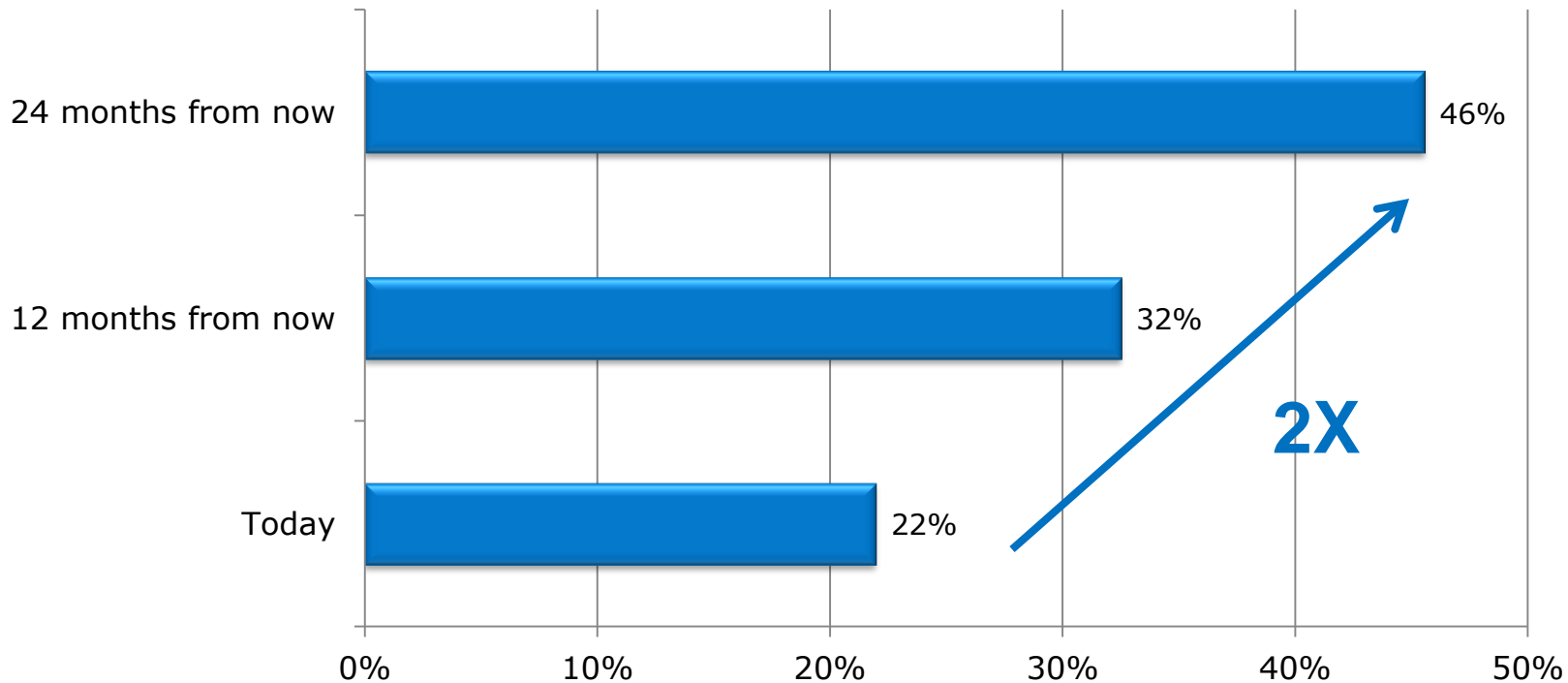
# I will purchase the following brands of SSD in the next 12 months (select all that apply):



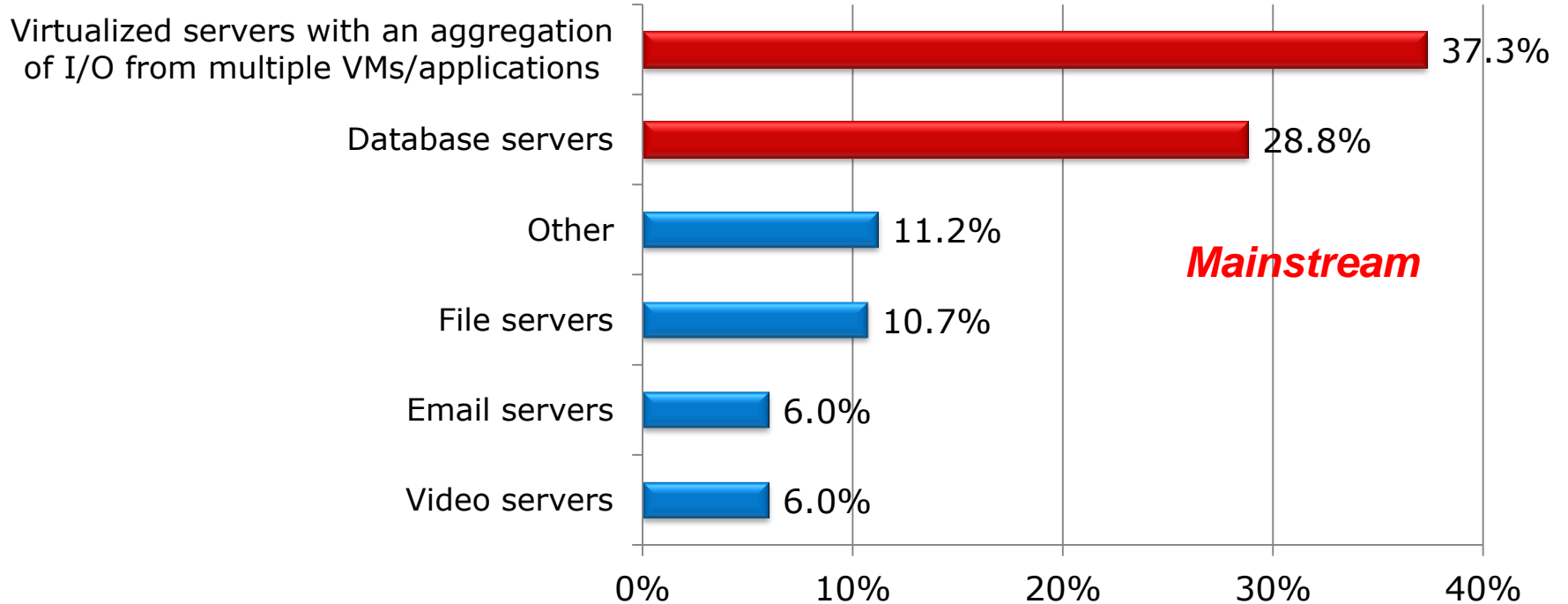
# My organization has deployed the following types of SSD products (select all that apply):



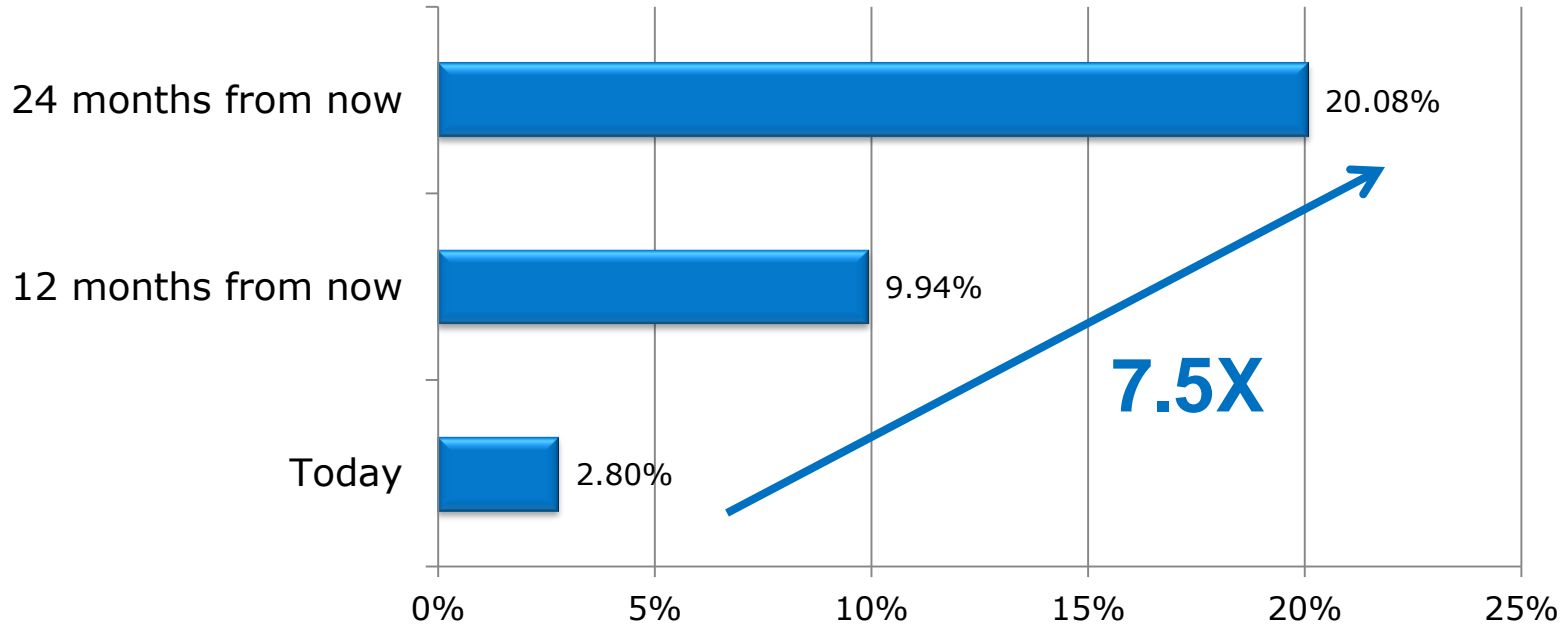
# Percent of servers in my environment accessing some type of SSD storage:



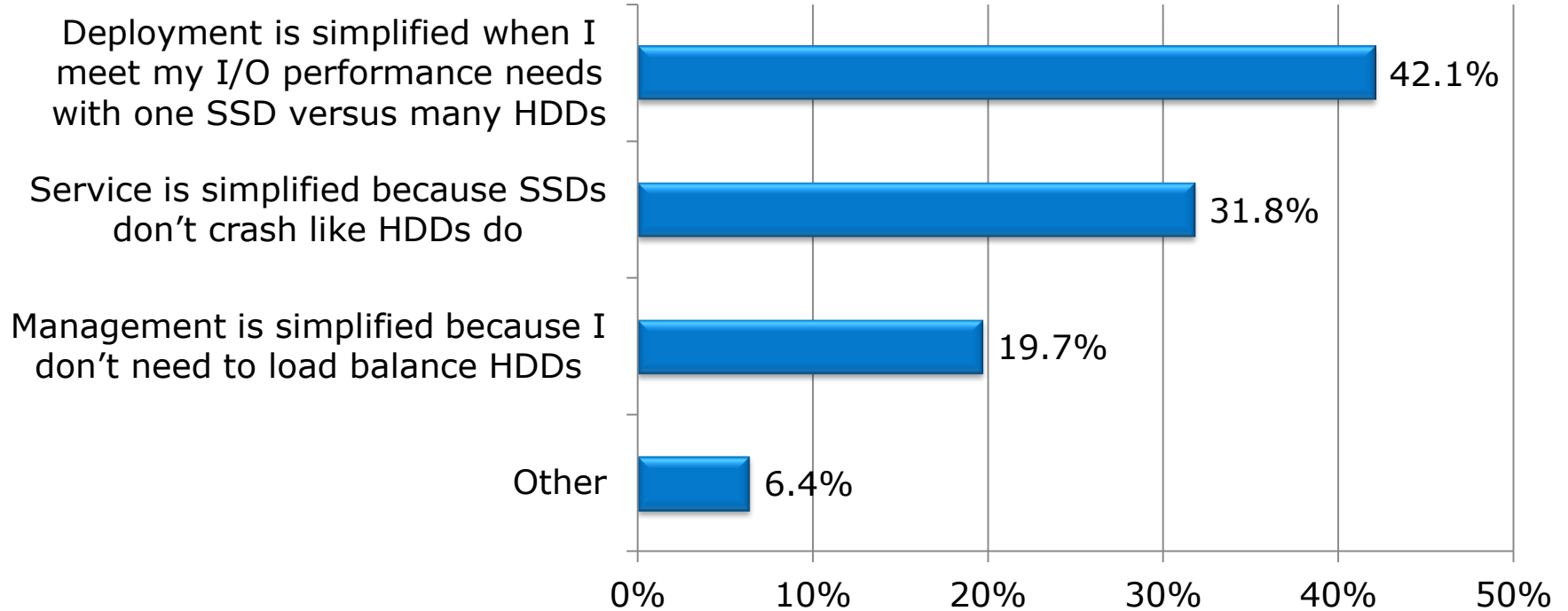
# The following type of server most driving the adoption of SSD in my environment is:



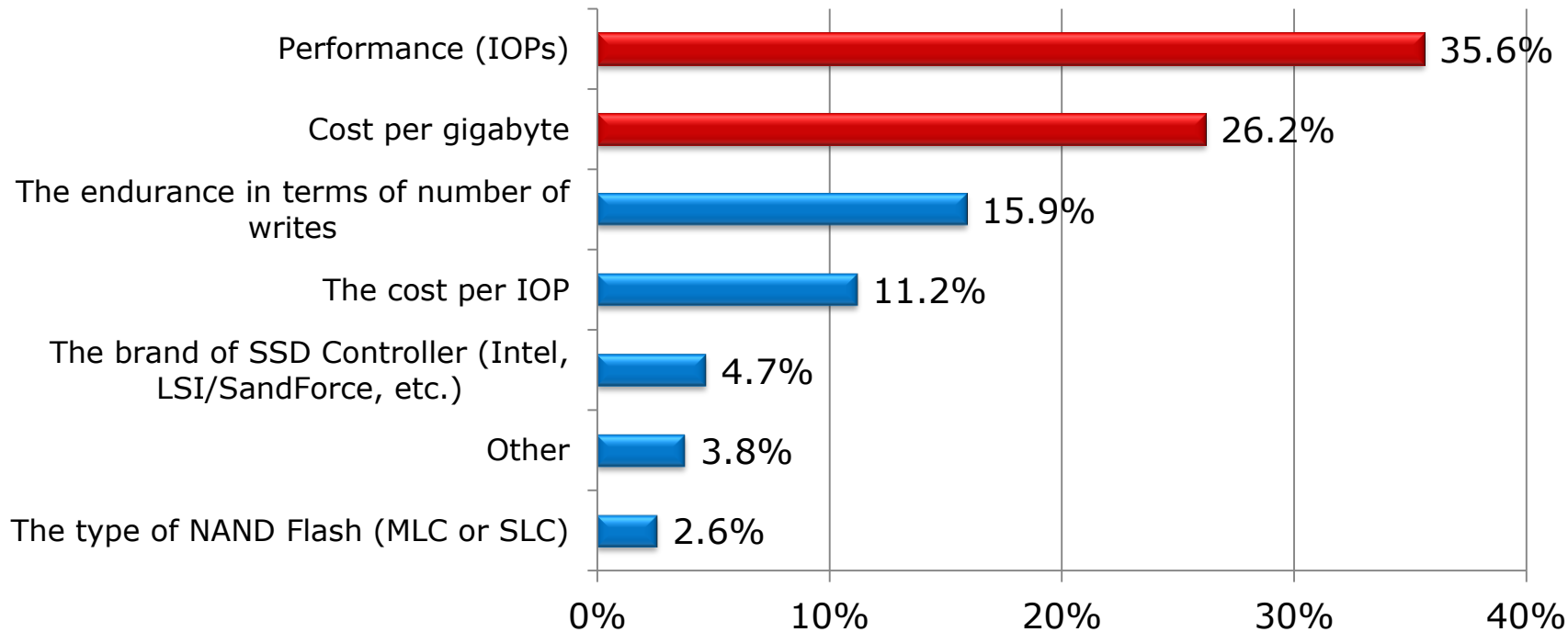
# SSD will comprise approximately this percentage of my organization's combined SSD and HDD disk capacity:



## What I value most from SSDs is:

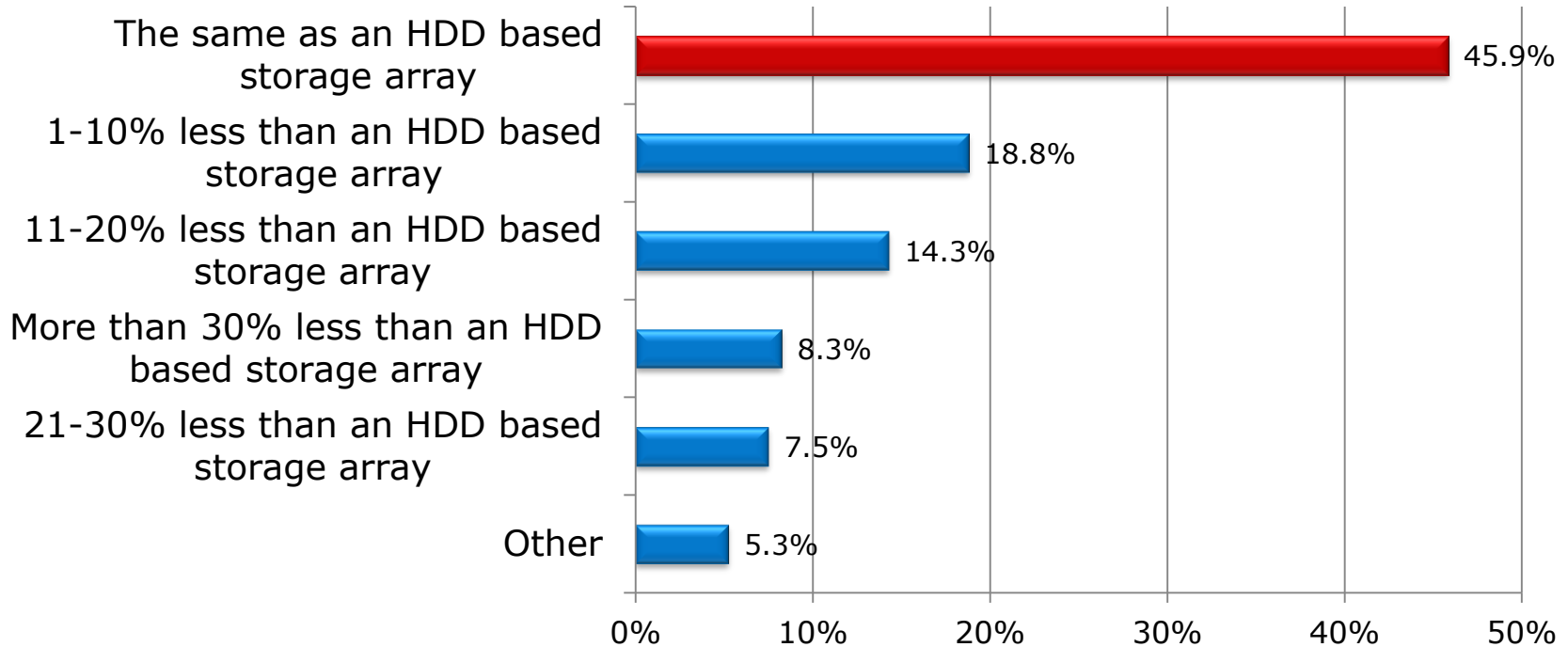


# The most important feature of an SSD for my environment is:

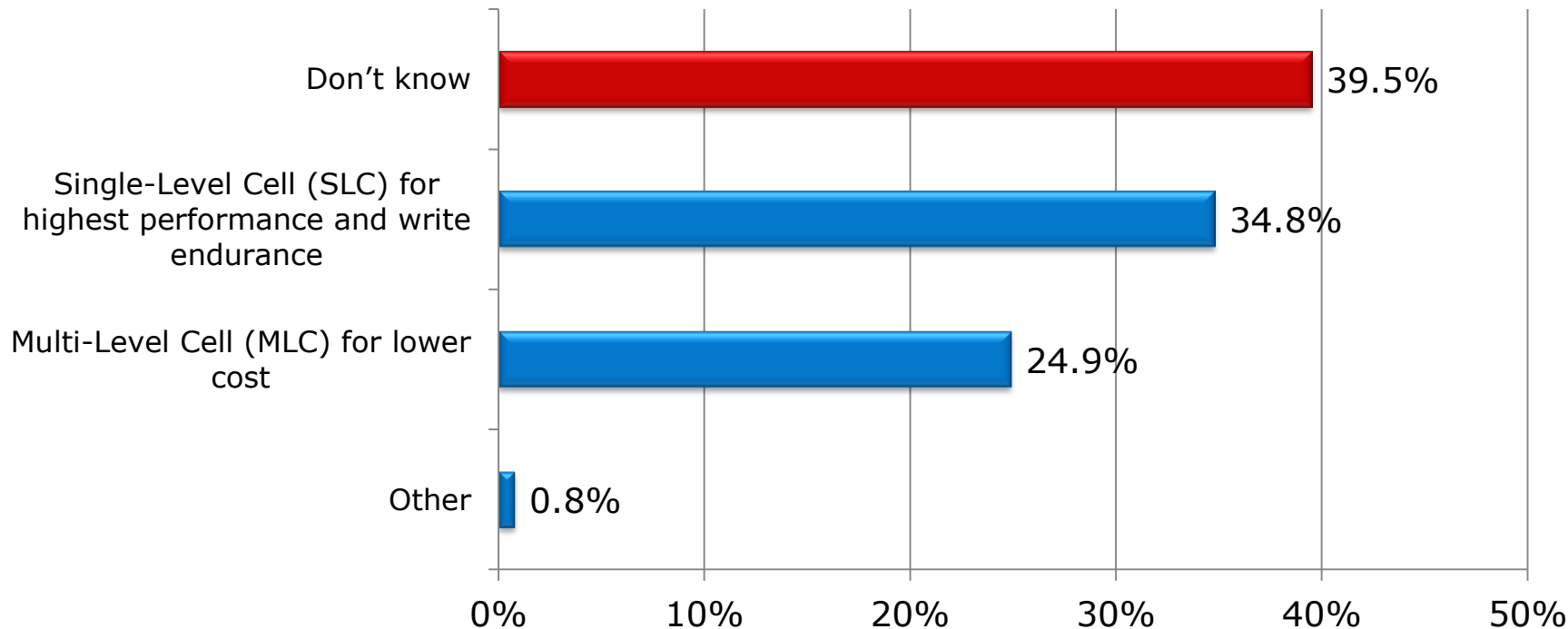




# By eliminating HDD crashes, I expect the operating costs of SSD based storage arrays to be:



## SSDs with the following type of NAND Flash are best suited for my environment:



# My organization plans to completely replace HDDs and deploy SSD as primary storage:

Never. It will always be more expensive than HDD and be used only for applications which can justify the added cost

When SSDs are the same \$/GB of HDDs

When SSDs are within 20% of the \$/GB of HDDs

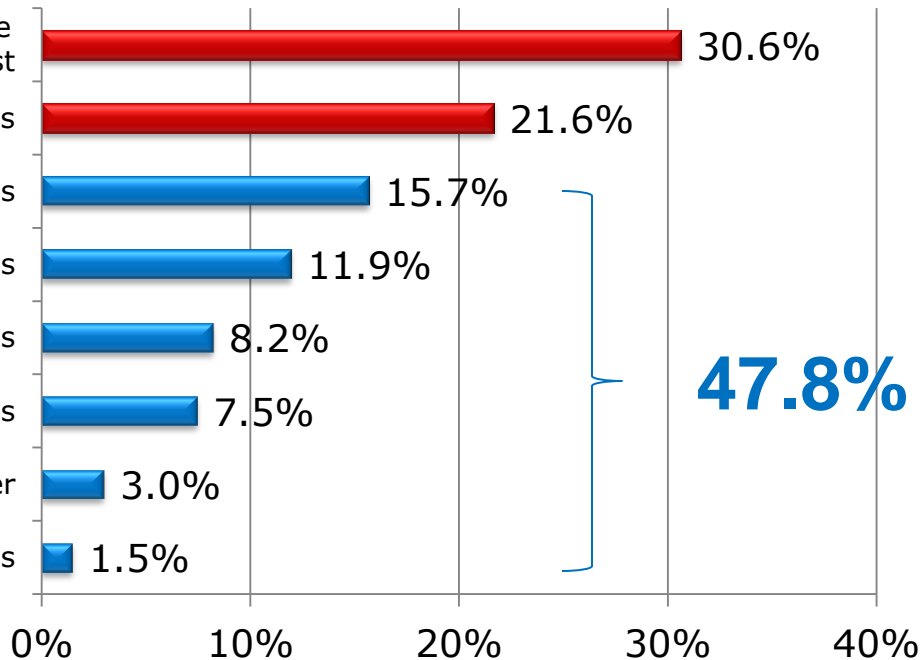
When SSDs are within 10% of the \$/GB of HDDs

When SSDs are within 30% of the \$/GB of HDDs

When SSDs are within 50% of the \$/GB of HDDs

Other

When SSDs are within 40% of the \$/GB of HDDs



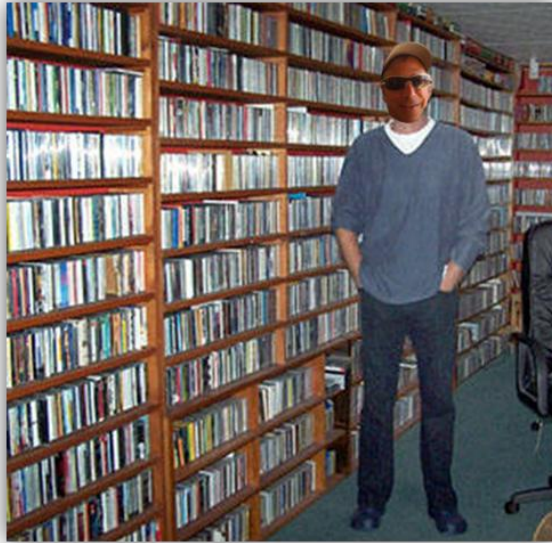
# We loved CDs and HDDs

They were breakthrough technologies which brought high quality music and random access storage to the masses



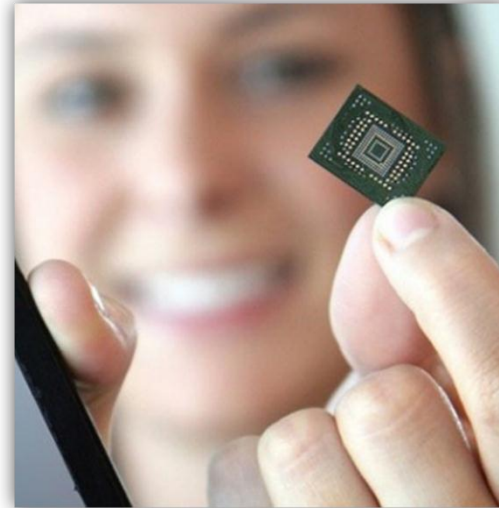
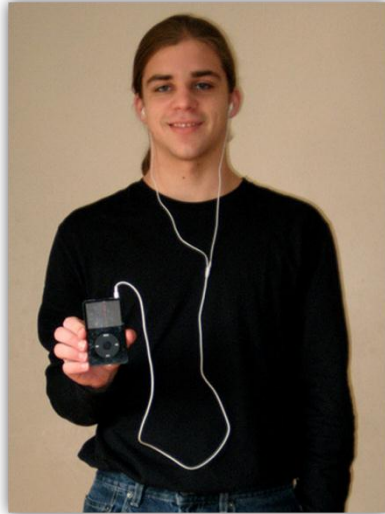
# We loved CDs and HDDs

Even though they often fell apart, and consumed a lot of space and power, we were proud of our vast collections.



# Why we don't anymore

Flash memory is an innovation which gave us solid-state media players and storage.



# Why we don't anymore

No moving parts, lightning-fast, high-fidelity, and vast amounts of data fit in the palm of our hand or a single array





# Where we're at today

Media player customers recognize the added value of solid-state and pay a premium up to 10x (1,000%)

CD Player  
(~\$40)



Sony DEJ011 CD Walkman« Portable CD Player by Sony

~~\$39.95~~ **\$38.94**

Order in the next **30 hours** and get it by Tuesday, Aug 21.

More Buying Choices

**\$38.94** new (3 offers)

**\$19.95** used (11 offers)

★★★★☆ (131)

Eligible for FREE Super Saver Shipping.

**Electronics:** See all 17,594 items

Solid State  
Media Player  
(~\$400)



iPod shuffle  
\$49



iPod nano  
From \$129-\$149



iPod classic  
\$249



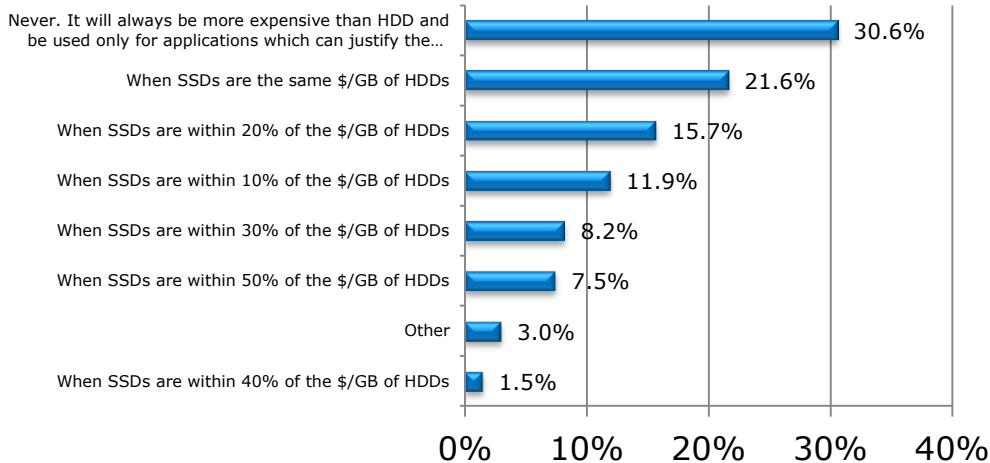
iPod touch  
From \$199-\$399



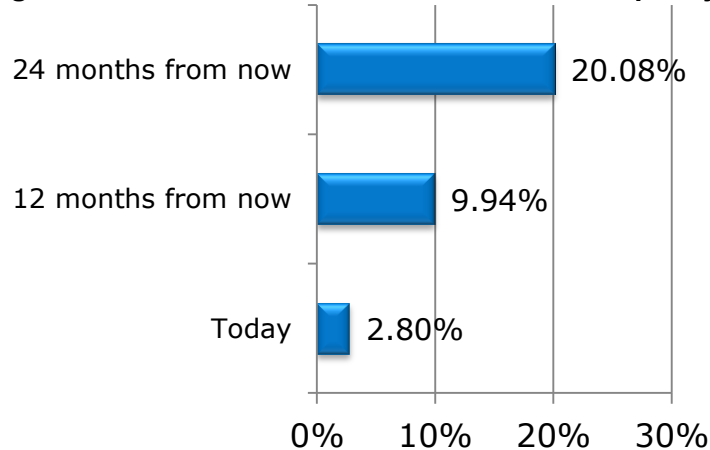
# Where we're at today

The IT pro community is conflicted. Not planning to replace HDDs, but forecasting growth which would impact Tier-1

My organization plans to completely replace HDDs and deploy SSD as primary storage:

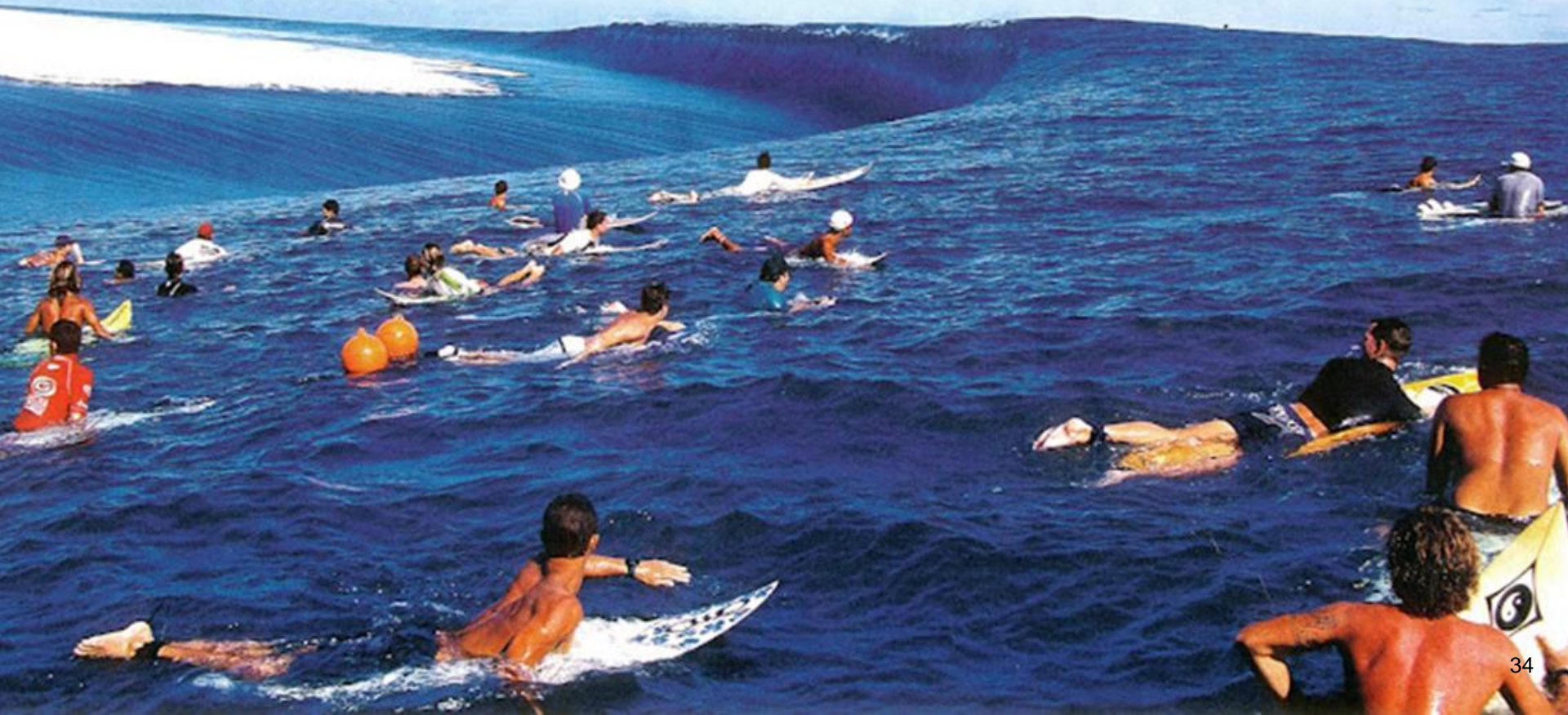


SSD will comprise approximately this percentage of my organization's combined SSD and HDD disk capacity:



# Where we're at today

## OEMs lining up to ride the massive SSD wave



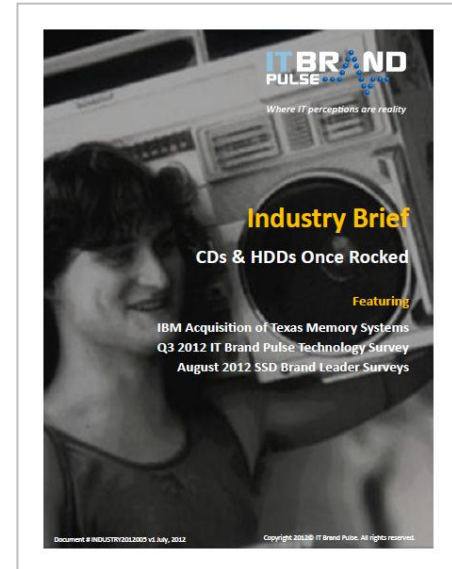
# IBM is ready to drop in front.

## **IBM / Texas Memory Systems Analyst Call Q&A**

**Question from IT Brand Pulse** "Do you see IT buying behavior changing and SSD penetrating Tier-1 storage?"

**Answer from IBM** "You bring up a great point, and that's one of the major objectives we've got around this acquisition, and being ahead of that curve as that happens. Certainly it hasn't taken off to that level yet, but we're trying to be prepared to skate to where the puck's going to be in the future--no doubt about it. We do see that with the improvements made within the technology of sold-state, the improvements in the IP and core development talent that Holley and the team have here with TMS, and what they've been able to bring to the market. We're going to see a more pervasive use, a more widespread use of flash technology, beyond what application support it's provided in the past. The costs are going to continue to come down. The performance is going to continue to be high, much higher than any disk-based-only offering. The resiliency, the endurance, the capabilities of the product have still got some runway ahead of them. I fully anticipate that it will become a much bigger percentage of the tier-1, tier-0 capacity will be stored on flash. **To be honest with you, that is the major reason for our partnership and our interest in the partnership.**"

If you want this presentation or the report,  
contact [frank.berry@itbrandpulse.com](mailto:frank.berry@itbrandpulse.com)



**IT BRAND**  
**PULSE™**

The logo features the text "IT BRAND" in a large, bold, sans-serif font. The "IT" is light blue, while "BRAND" is white. Below it, "PULSE™" is in a smaller, white, bold, sans-serif font. A series of grey, semi-transparent spheres are arranged in a path that starts from the right side of the "PULSE" text and curves upwards and to the right, ending near the "ND" of "BRAND". The background is a dark blue gradient with abstract, lighter blue curved shapes. There are orange bars at the top and left edges of the image.