

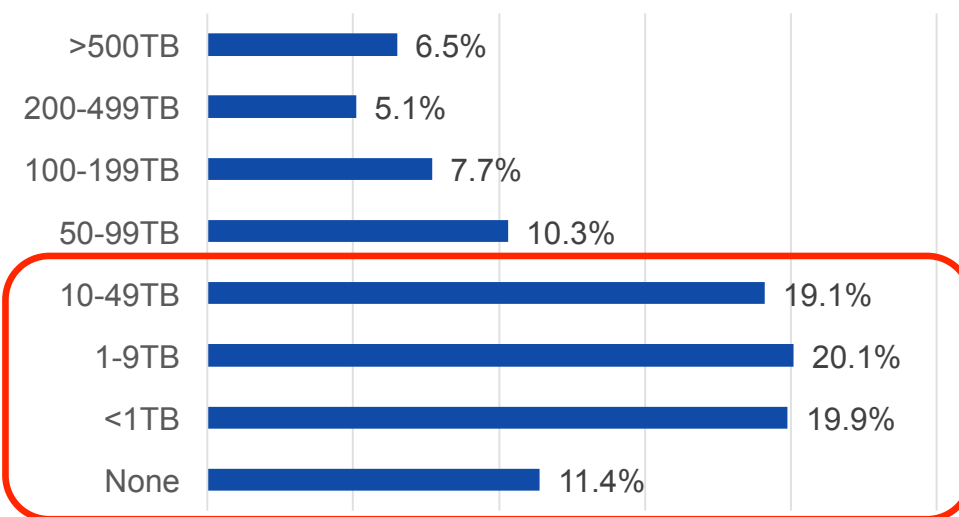
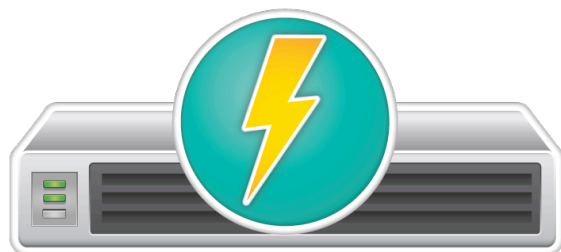


All-Flash Data Centers

Emerging Use Cases

Mark Adams, Hitachi Data Systems

Enterprise Flash Deployment Sizes



70%

Source: 451 Research, Voice of the Enterprise: Storage, Q1 2016



What Will Drive the Next Trends?

**CONTINUED
FLASH PRICE
REDUCTIONS**



**ACCELERATED
FLASH
PERFORMANCE**



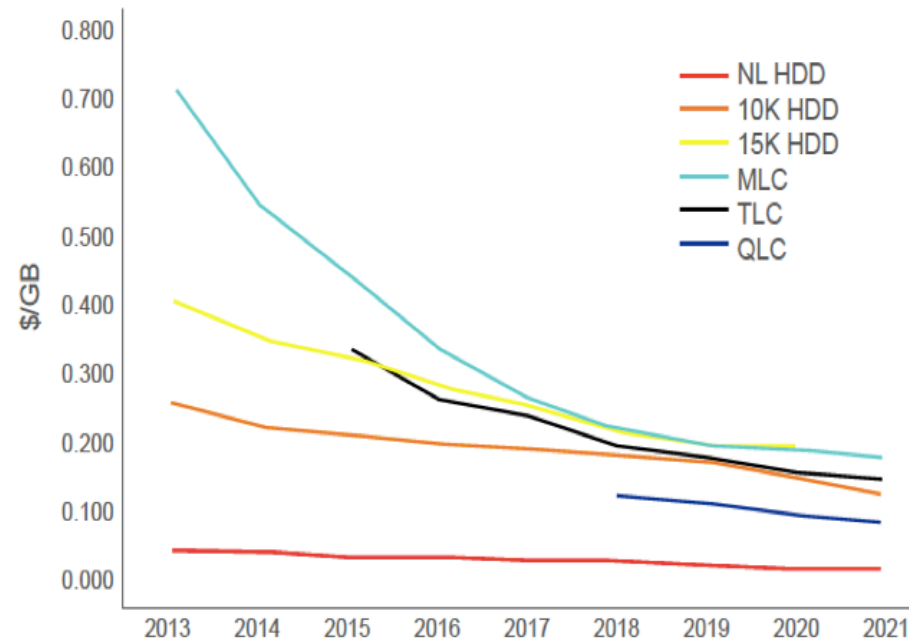
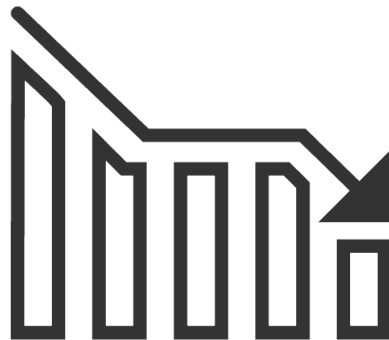
**ADVANCED
ANALYTICS**





What Will Drive the Next Trends?

**CONTINUING
FLASH PRICE
REDUCTIONS**

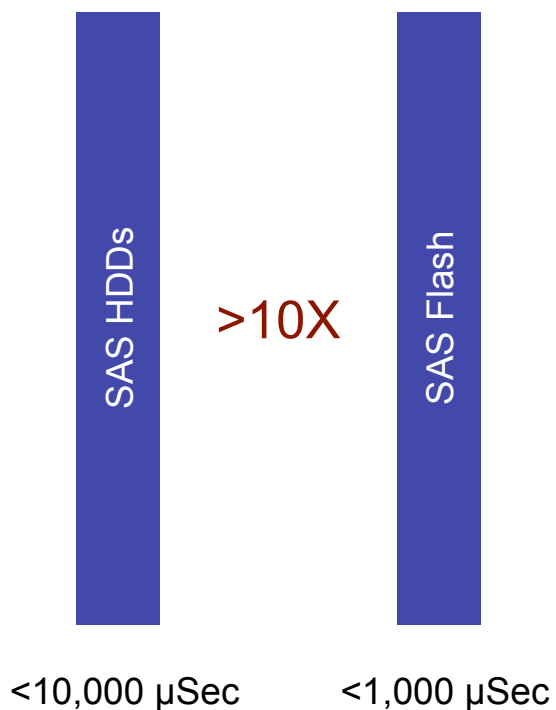
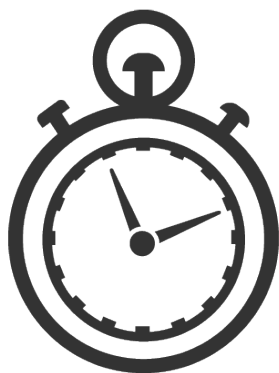


Source: Consolidated Industry Analyst Data (Trendfocus, IDC, Gartner)



What Will Drive the Next Trends?

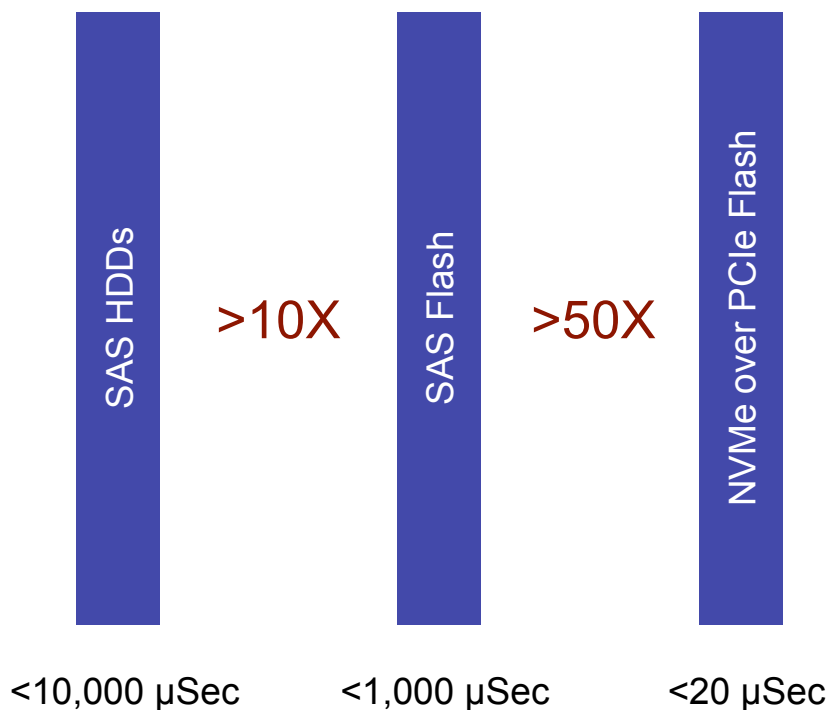
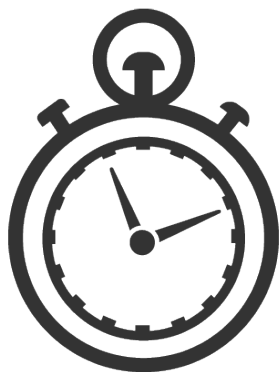
**ACCELERATING
FLASH
PERFORMANCE**





What Will Drive the Next Trends?

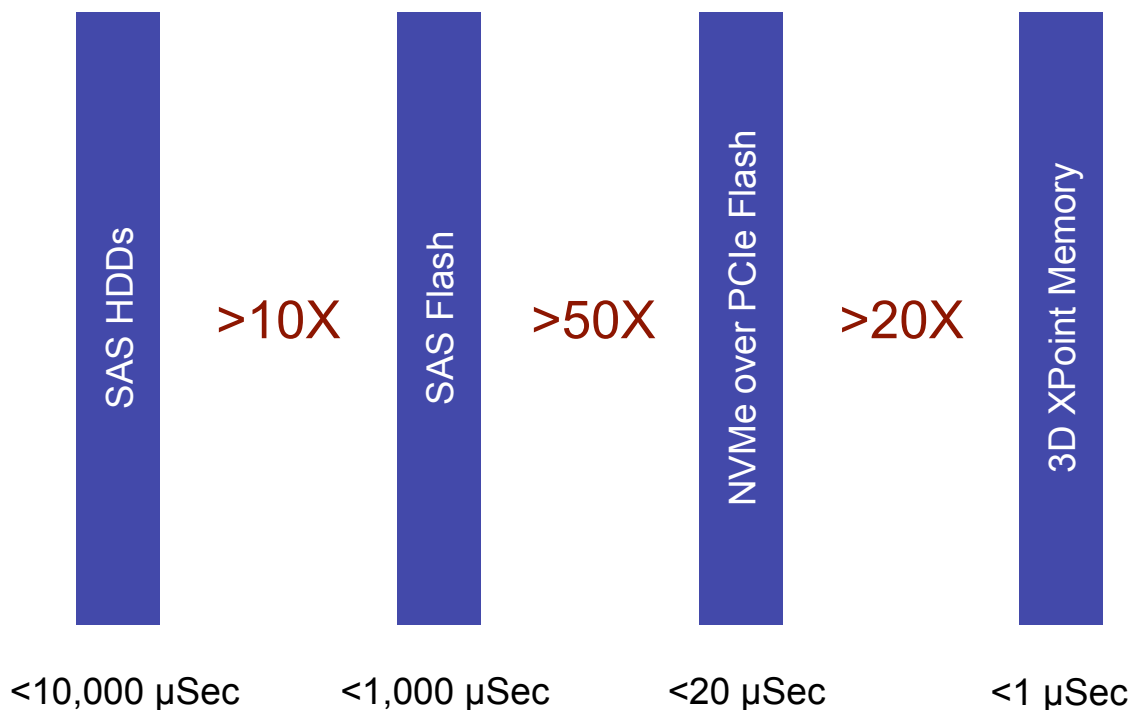
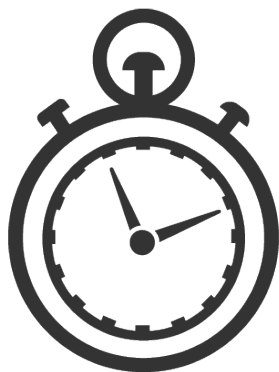
**ACCELERATING
FLASH
PERFORMANCE**





What Will Drive the Next Trends?

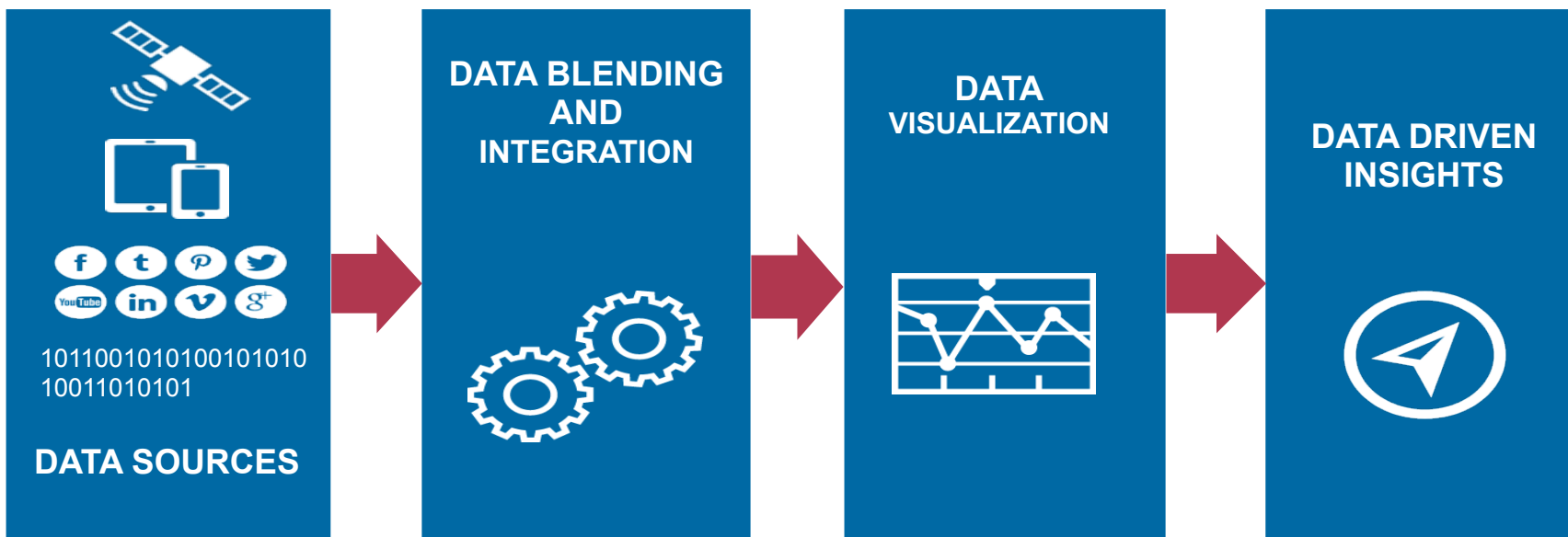
ACCELERATING FLASH PERFORMANCE





What Will Drive the Next Trends?

ADVANCING ANALYTICS





Emerging BiModal IT

Systems Of Record

Typically “Mode 1” IT

**Traditional IT
Operations**

Systems Of Innovation

Typically “Mode 2” IT

**Solving New
Problems or
Providing New
Values**



Faster Transactions

- Online retailer installed >20PB of flash
- Doubled core payment transaction rates in Oracle database systems to 1000 Payments per Second (PpS)
- Improved customer satisfaction by reducing their time-to-order
- Reduced data center footprint by 80%





Faster Business Analytics

- Swiss retailer has installed >1.6PB of flash to date
- 10X improvement in response times with flash
- Able to run faster analytics and make better business decisions
- Real-time inventory planning led to reduced stock charges





Smart Energy Grids

- Real-time analytics run on flash using historical patterns combined with ingested data from edge sensors
- Optimizes output by matching power production with demand
- Enables rapid diagnosis of grid disruptions





Smart Superhighways

- Lanes or even highways dedicated to autonomous vehicles
- Geo spatial positioning of vehicles controlled by centralized data collection and analysis run on flash





Smart Agriculture

- Precise automation of farming equipment
- Ensures the perfect amount of inputs are applied to maximize yields
- Amount of data analyzed in real-time across entire farming industry requires flash





Smart Surgery

- Data collected from Operating Room sensors and Clinical Repositories
- Surgical procedures guided by machine learning and analyzed at the speed of flash





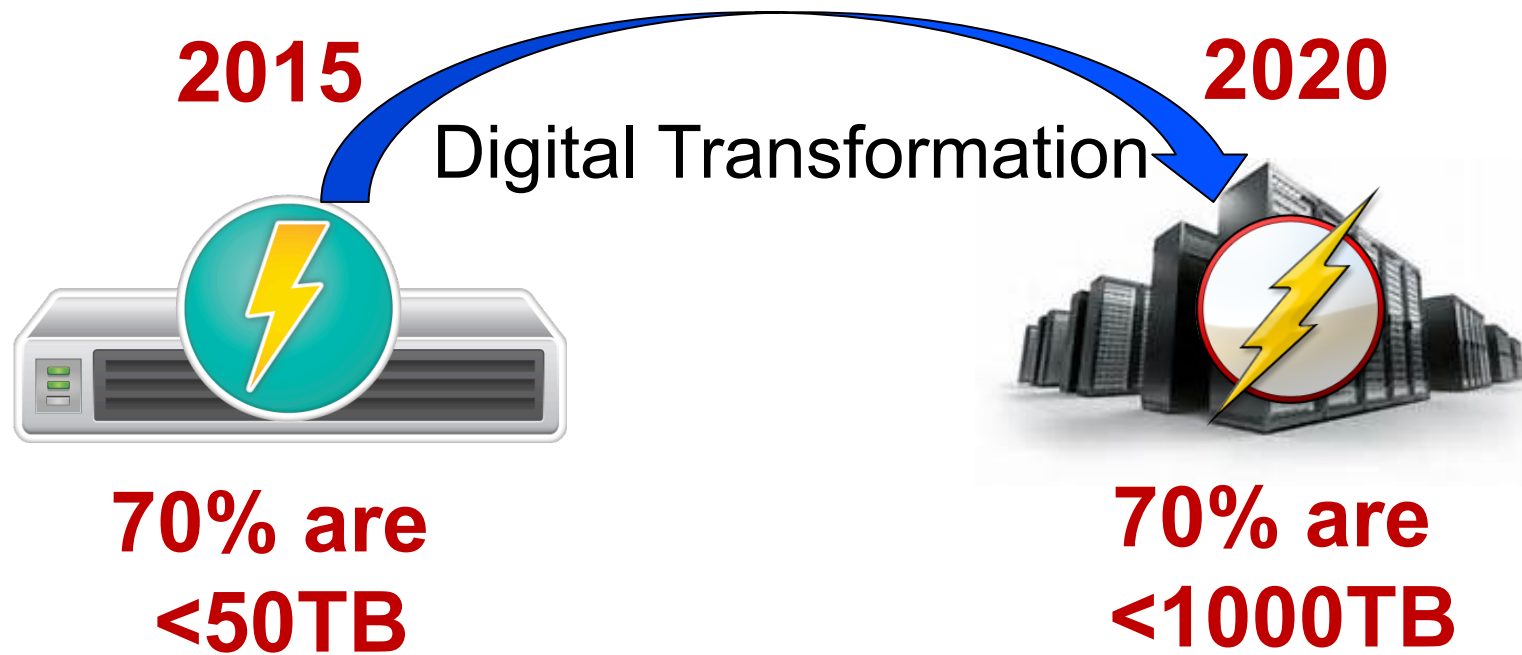
Enterprise Flash Deployment Growth

2015



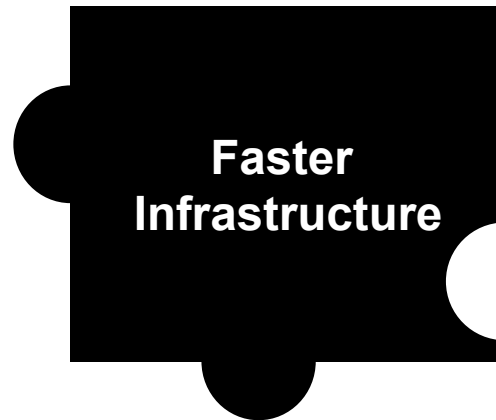
**70% are
<50TB**

Enterprise Flash Deployment Growth





All-Flash Data Center Building Blocks



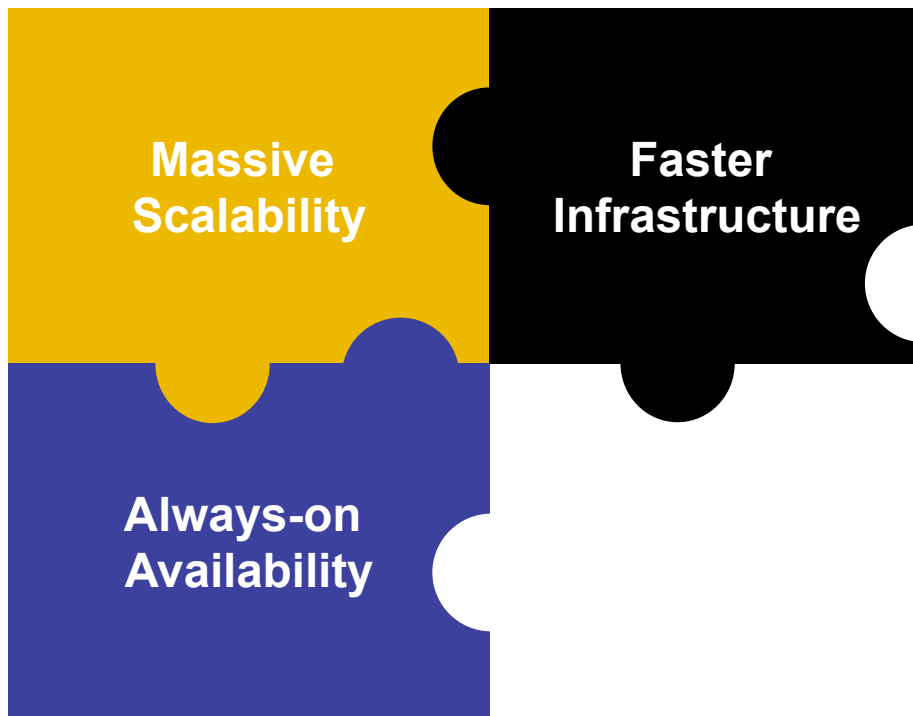


All-Flash Data Center Building Blocks





All-Flash Data Center Building Blocks



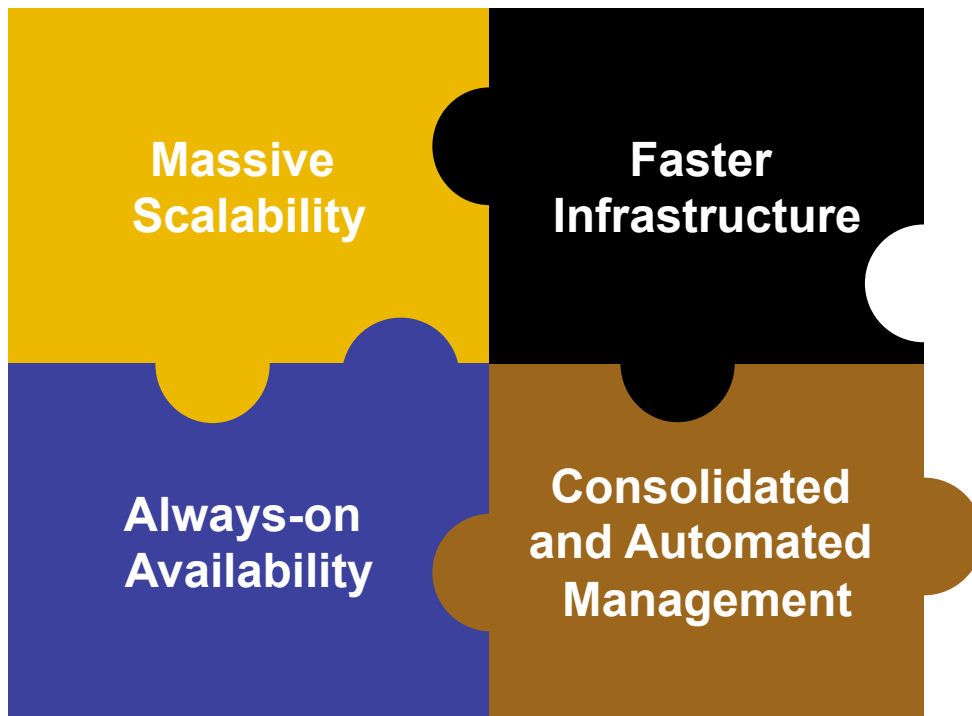
**Massive
Scalability**

**Faster
Infrastructure**

**Always-on
Availability**

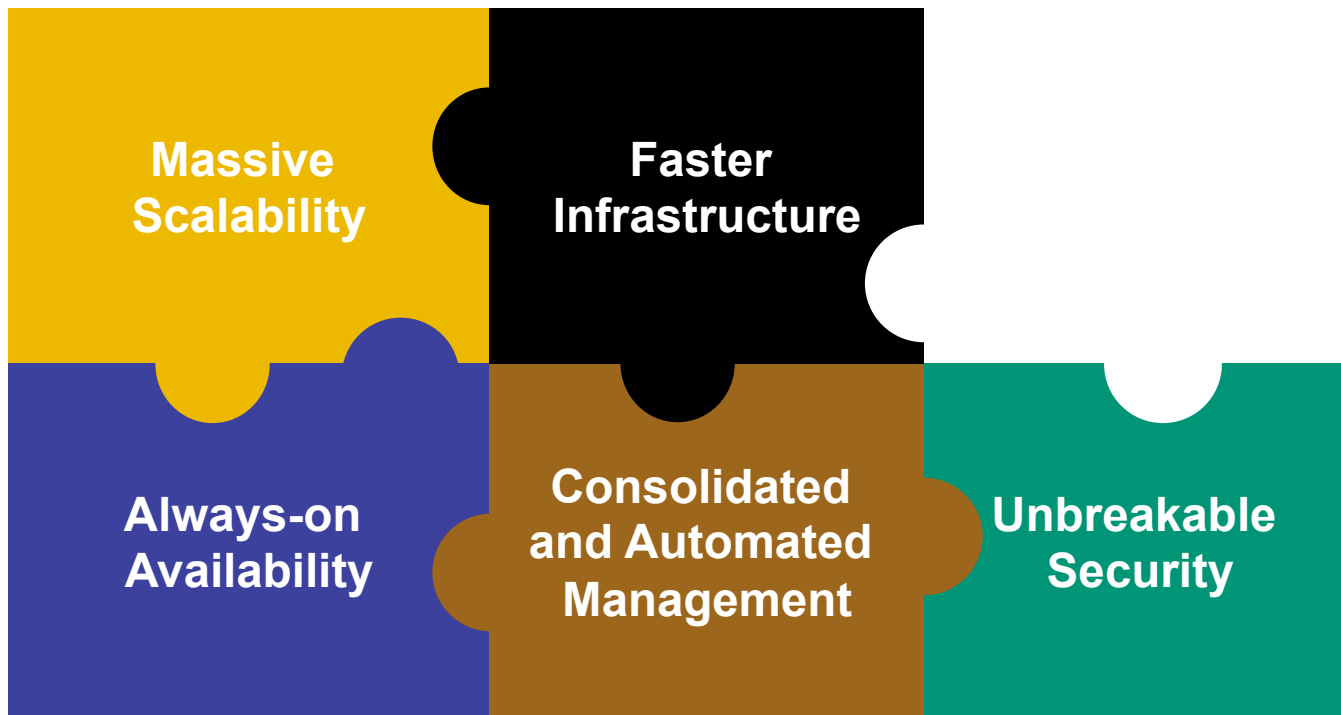


All-Flash Data Center Building Blocks



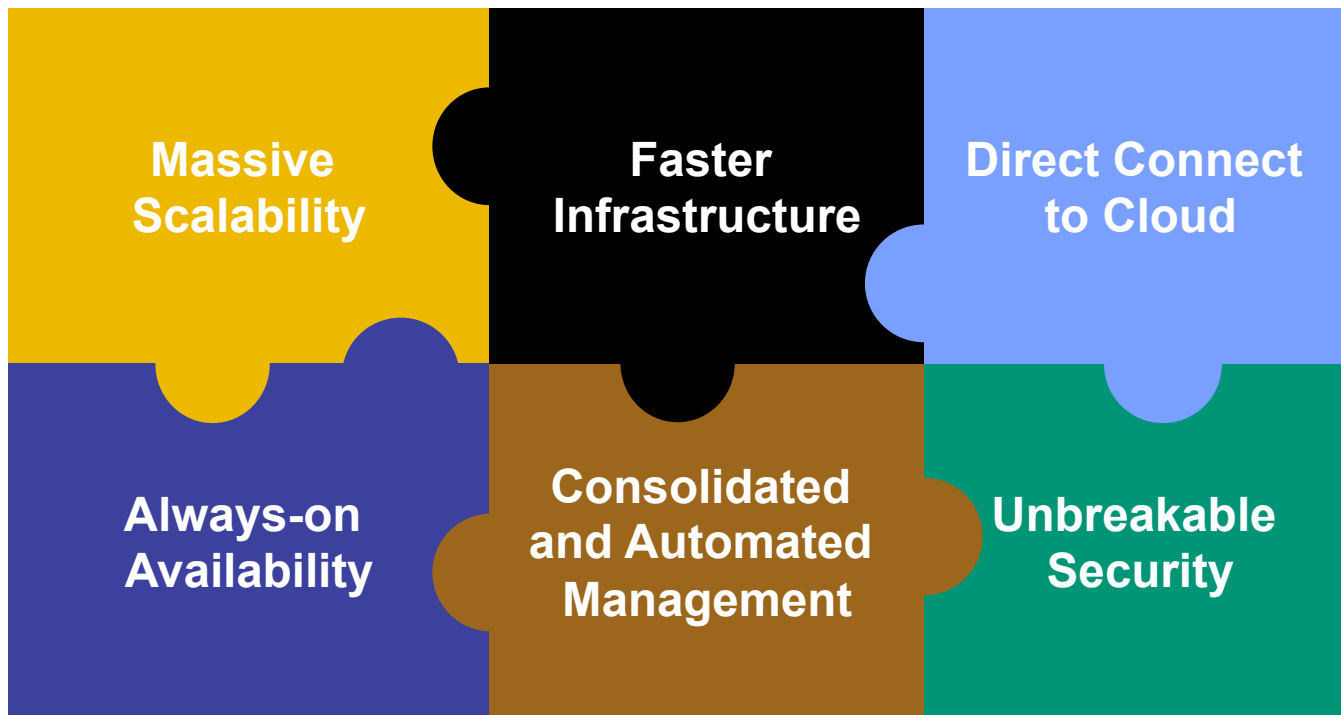


All-Flash Data Center Building Blocks



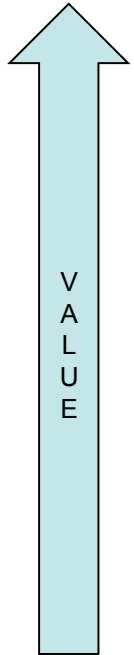


All-Flash Data Center Building Blocks





We've Seen This Before





We've Seen This Before



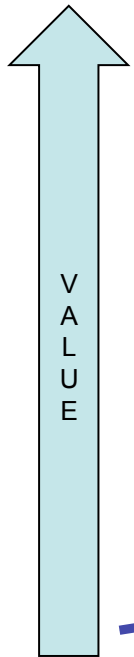


We've Seen This Before





We've Seen This Before





Keep the Conversation Going

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Twitter: @mister_modular

email: mark.adams@hds.com



THANK YOU