



BY Developers FOR Developers

Storage Developer Conference
September 22-23, 2020

StorageNext: Disruption, Opportunities, and Funding Insights



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Agenda

StorageNxt

01

Industry Recap

The overall picture, growth segments, and VC funding analysis

02

Industry Fast Forward

Transformations in Storage Segments

03

COVID-19 Impact

Analysis and impact

04

What's Next?

Connecting the dots

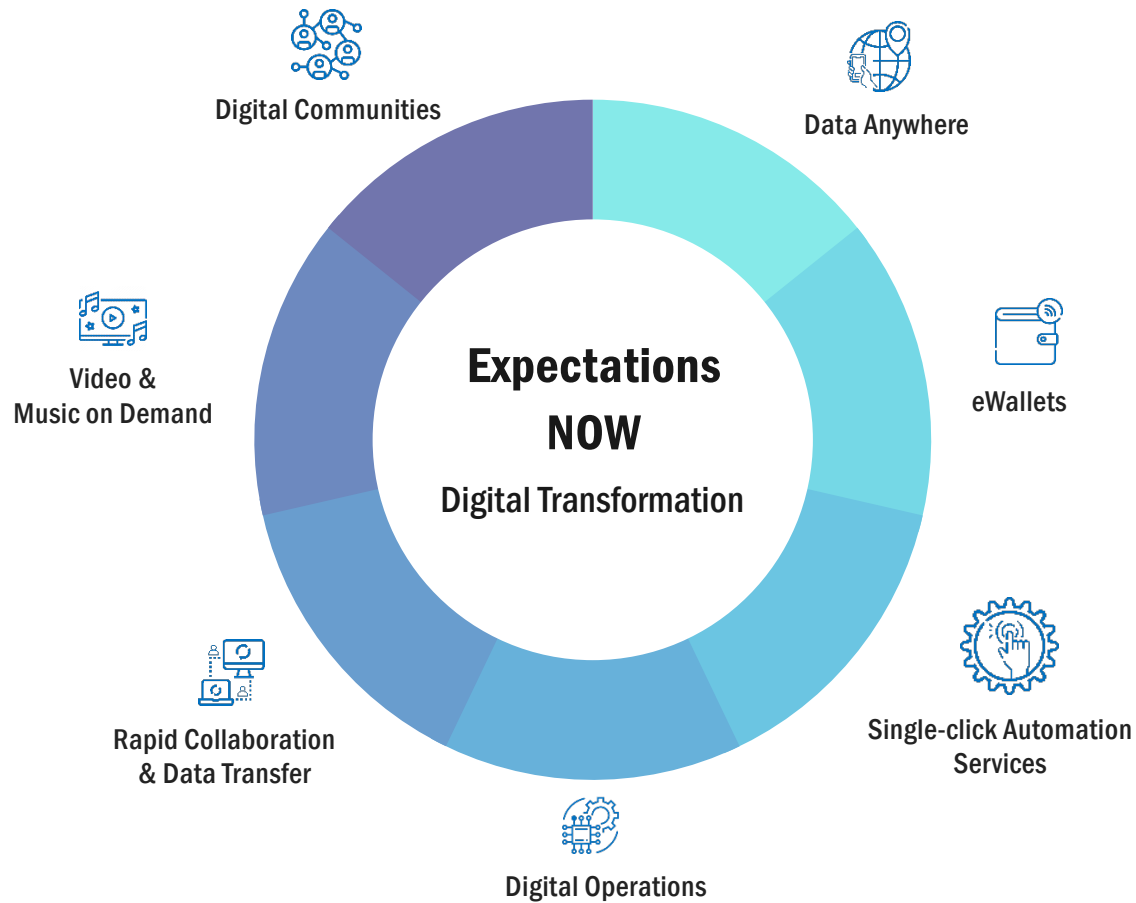


01

Industry Recap



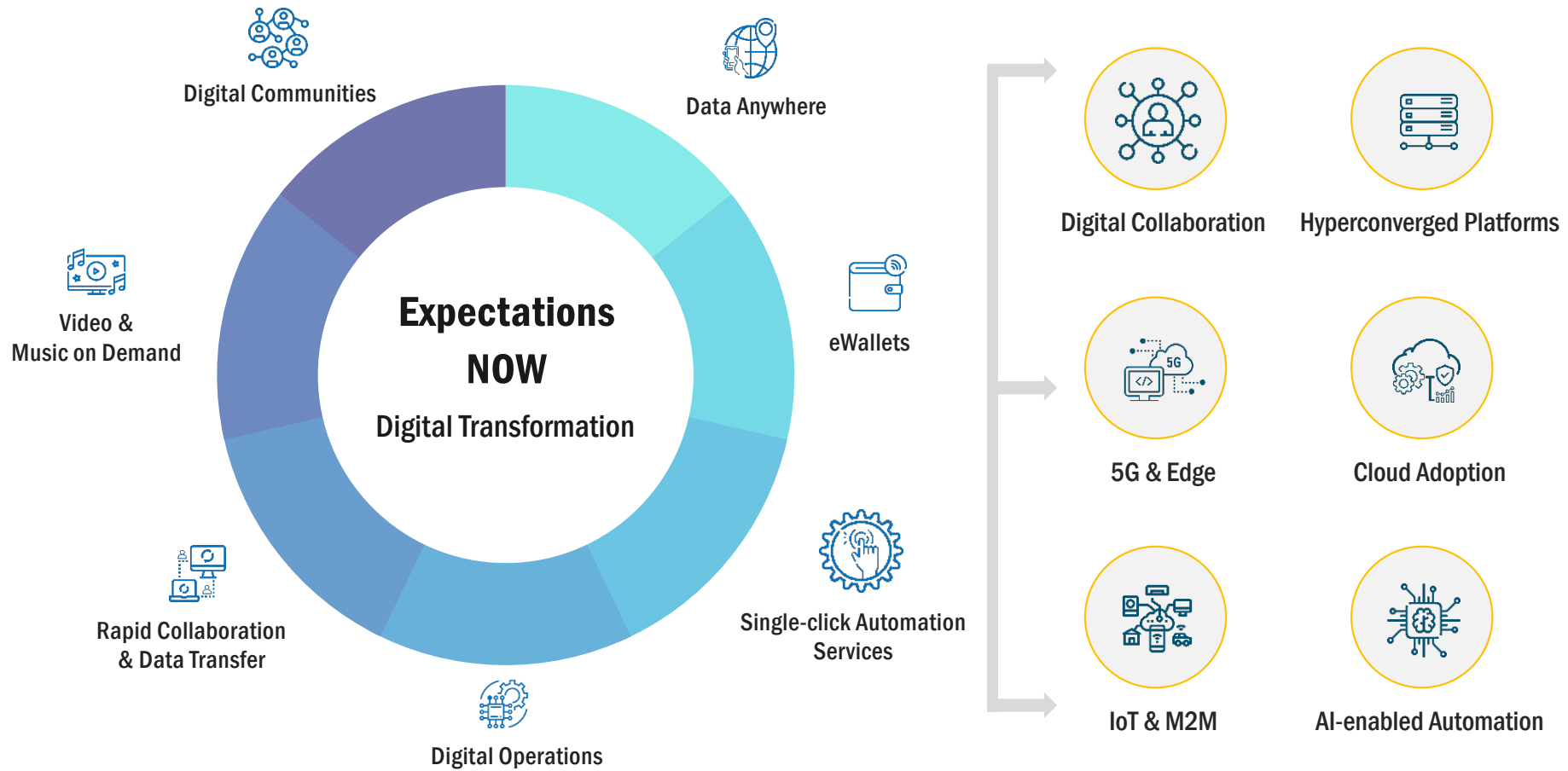
The Paradigm Shift in Customer Expectations



Expectations Then

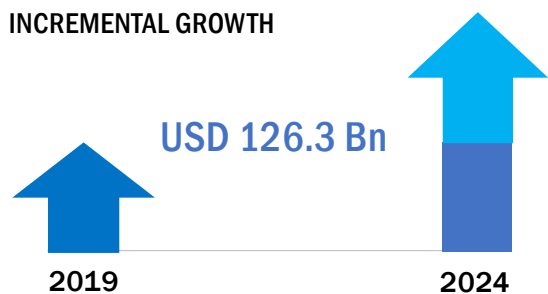
Traditional Media	
Call Center	
Traditional Sales	
VAS	
Word-of-Mouth	
Offline Data	

The resulting transformation.



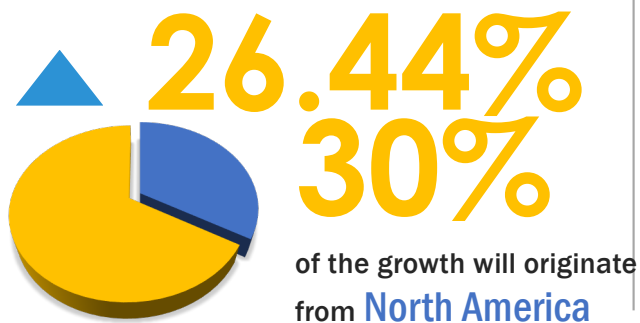
The State of industry

INCREMENTAL GROWTH



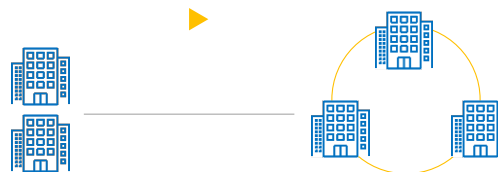
The data center storage market size has the potential to grow by **USD 126.3 Bn** during 2020-2024

The year-over-year growth rate for 2020 is estimated at



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The market is **CONCENTRATED** with several players occupying the market share



One of the **KEY DRIVERS** for this market will be the growing deployment of edge computing



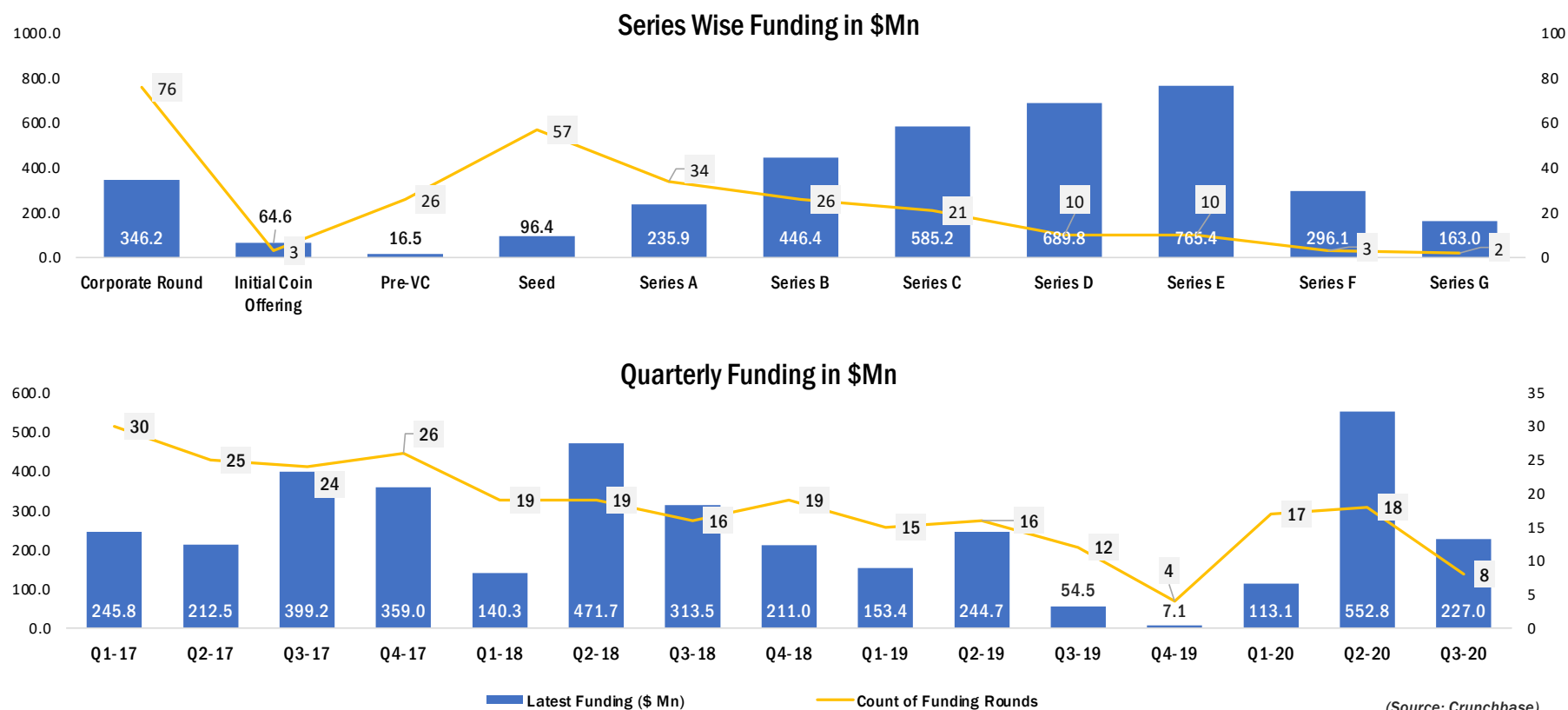
BIG PICTURE

A growing share of server/storage spend is now driven by workloads related to the deployment of emerging technologies (**Data Analytics, Artificial Intelligence, Machine Learning, Blockchain, Robotics, and IoT**) on the back end.

- IDC

(Source: IDC, Technavio)

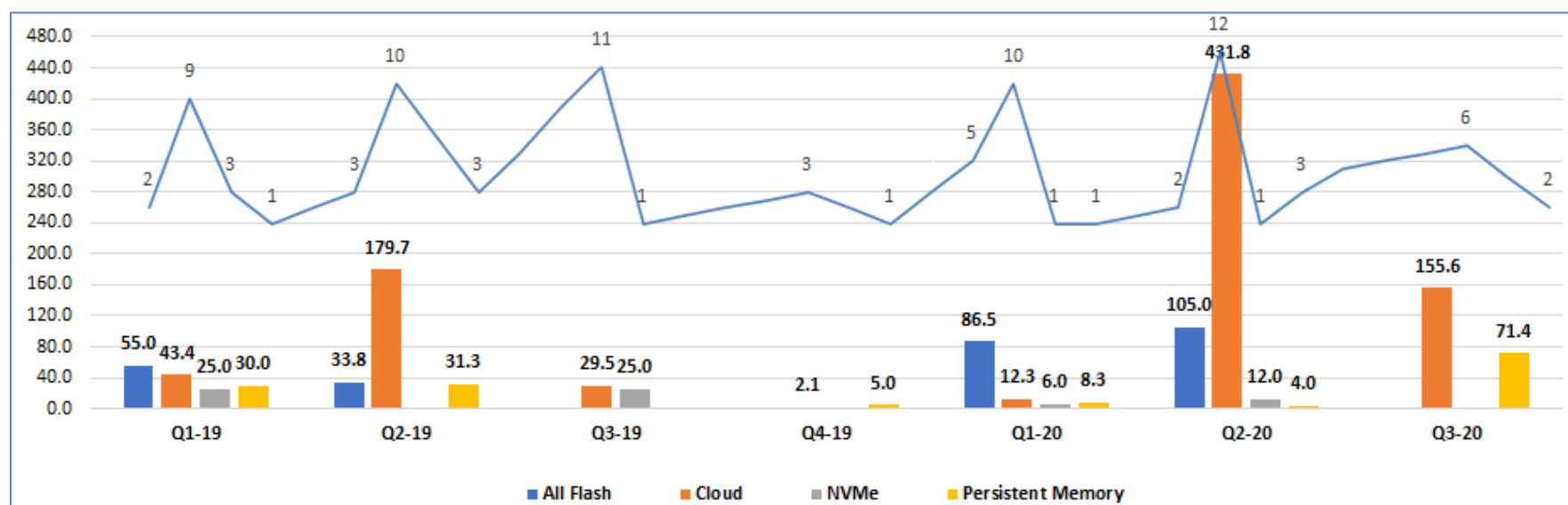
Storage Industry VC Trends 2017 – 2020



(Source: Crunchbase)



QoQ Funding last 6 Qtr (2019 – Aug 2020)



VC Funding Analysis

- **Q2-20 recorded the highest amount of funding, as compared to last 13 quarters**, in the areas of File & Object Storage, Data management, Backup and Recovery, All Flash Array/SSD.
- The amount of funding in **Series E recorded to be the highest in the last two Quarters; i.e. Q2 & Q3-20**. (Companies got funded - backup & Recovery and File Storage)

Top Use of Funds

- Acceleration of market trajectory
- Expand international business/scale across the globe
- Expand worldwide sales and marketing efforts
- Acceleration of commercialization activities
- Mass production, system integration, and migration of SSD controller products
- Large-scale global expansion
- Product development and customer support

Top Investors

- Intel Capital
- WRVI Capital
- Nexus Venture Partners
- Western Digital Capital
- Vertex Ventures
- Sequoia Capital



Storage Industry M&A Trends

All M&As in 2019 with Known Price

BUYER	BOUGHT	PRICE IN USD MN
Nvidia	Mellanox	6,190
Opentext	Carbonite	1,420
HPE	Cray	1,400
Carbonite	Webroot	618.5
Commvault	Hedvig	225
Amazon	CloudEndure	200
Toshiba Memory	Lite-On SSD business	165
SMART Global Holdings	Artesyn	80
NetApp	Cognigo	70
Amazon	E8 Storage	50-60

(Source: StorageNewsletter)

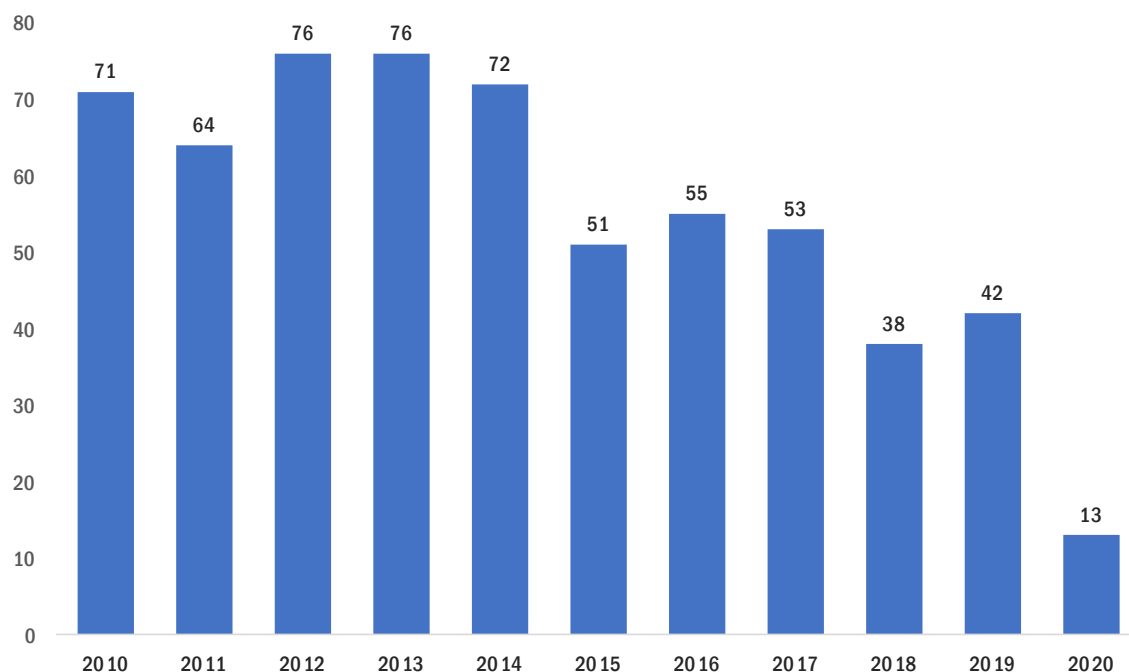
Companies Acquired in 2020

BUYER	BOUGHT
NetApp	Spot by NetApp
Tectrade	APSU
NetApp	CloudJumper
YEESTOR	EpoStar Electronics Corporation
NetApp	Talon Storage
StorMagic	Keynexus
Lightspeed POS	GASTROFIX
Storone	Storage Switzerland
OVHcloud	OpenIO
NVIDIA	SwiftStack
Quantum	StorNext (Atavium)
StorMagic	Keynexus
Storone	Storage Switzerland

(Source: StorageNewsletter and Crunchbase)

Storage Industry M&A Trends

M&A YoY Comparison



(Source: Crunchbase)

What happened in 2019?

Big Deals (more than \$1 Bn)

3 deals surpasses \$1 billion in 2019

- Mellanox by Nvidia for \$6.190 billion
- OpenText by Nvidia \$1.4 billion
- Cray by HPE \$1.4 billion

Top acquisition areas in 2020

- Object Storage on-prem
- Cloud-hosted
- Software-driven data storage
- Management platform
- vDC
- VDI
- Virtual SAN
- Disaster Recovery as a Service



02

Industry Fast Forward



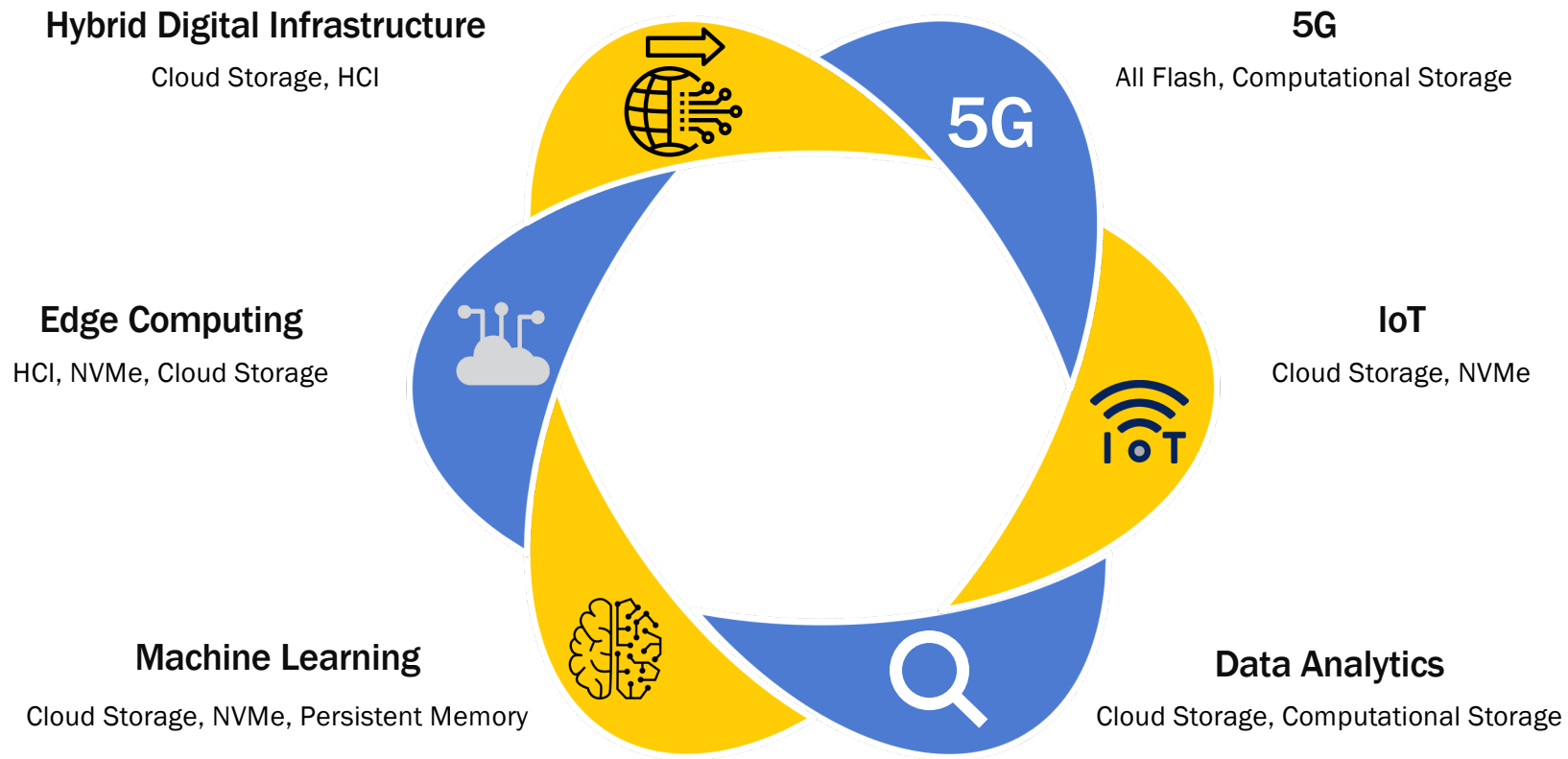
Cloud – The giver of Disruption.

01	Kubernetes	Kubernetes has broken the cloud barriers.
02	Private Cloud	Private Cloud Repatriation is now real.
03	SaaSOps	SaaSOps will soon become mainstream.
04	Applications	It's all about Application Delivery now.

Cloud is not disruptive by itself,
but it proliferates disruptive
IT delivery models.



Business Opportunities Aligned to Storage Segments



Transformation - 1

All Flash

Pull Factors

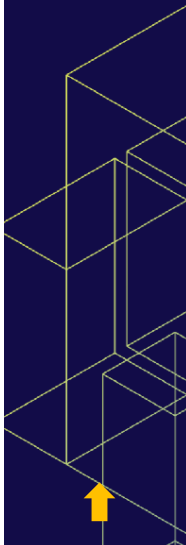
- Low latency
- Near real-time digital experiences
- Need for extracting more value from the data growing exponentially due to AI & Analytics

Opportunity Areas

AI, Real-Time Analytics, Digital Collaboration, 5G

Use cases

- Big Data Analytics applications
- Autonomous vehicles - Service providers that invest heavily in a solid-state infrastructure



Transformation - 2

Cloud Storage

Pull Factors

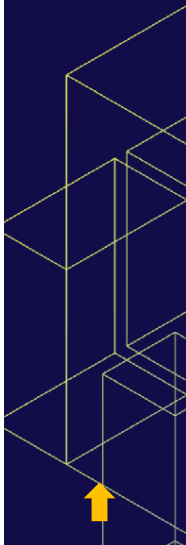
- Digital business
- Infrastructure readiness goals
- IoT
- 5G networks

Opportunity Areas

Enterprise applications, IoT, Video Conferencing Solutions, Smart Cities

Use cases

- Regular enterprise applications
- IIoT, Healthcare IoT,
- Location tracking, video surveillance
- Smart Cities
- AR/VR
- Machine-to-Machine (M2M) Connected Devices



Transformation - 3

HCI

Pull Factors

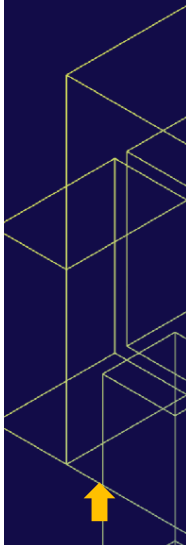
- Increasing number of Edge & Micro Data Centers
- Increasing workload at the edges
- HA/DR requirements at Edge

Opportunity Areas

Edge Computing, Data Center Modernization

Use cases

- Video surveillance
- Manufacturing companies monitoring and controlling equipment in factories.



Transformation - 4

NVMe

Pull Factors

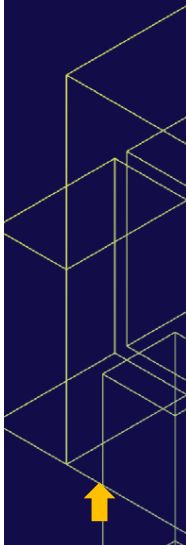
- Storage across the AIoT data pipeline
- Composable Disaggregated Infrastructure

Opportunity Areas

Smart Networks, Edge Computing, AIoT

Use cases

- Enabling cloud architectures that power Big Data Analytics
- Real-time data processing in the data center, cloud and edge environments.
- NVMe-oF for AIoT to be used to enable vRANs, CPUs, GPUs, FGPAs & SmartNICs in Edge infrastructure



Transformation - 5

Persistent Memory

Pull Factors

- Need for embedded NVM in designing IoT devices
- Web-scale personalization
- Need for targeted online experiences by returning relevant content
- Memory-centric requirements for self-driving cars & AI

Opportunity Areas

IoT, AI-enabled Retail and Real-time analytics of financial data

Use cases

Well suited for high throughput demands

Can be used for accelerating applications.



Transformation - 6

Computational Storage

Pull Factors

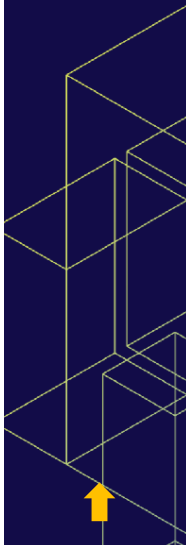
- Computational edge
- Machine Learning processing
- Real-time data analytics & HPC enabling Edge Intelligence for next-gen IoT

Opportunity Areas

Edge Intelligence, AI & ML, Data Science, 5G, Video Streaming

Use cases

- Real-time analytics: POS data in real time for fraud detection
- Intelligent Edge
- Hyperscale Data Centers
- Better 5G connectivity (enablers)
- Enhanced CDN experiences




03


COVID-19 Impact





Impact of COVID 19 on the Storage Industry – the Positives

Growth ++ Cloud data center spending will grow and cloud service providers will drive server business growth.

Cloud Adoption ++ Spending on servers will account for 47% of data center capex this year.

Digital ++ Enterprises will seek to conserve capital, and resort to the cloud to satisfy near-term demand for digital services.
CSPs will expand their infrastructure at a measured pace to capture this incremental demand.

5G ++ The need for ever-faster access to data and automation will enhance the focus on network equipment and communications, speeding up 5G network deployments and adoption of 5G equipment.

Security ++ IT spending on security software will increase.



Impact of COVID 19 on the Storage Industry – the Positives (Contd.)

HCI



The rise of hyper-converged technology will have a positive impact on the market and contribute to its growth significantly over the forecast period.

Cloud Adoption



To tackle the enterprise challenges.

SDS



A Gartner survey predicts that by 2024 as much as 50% of global storage capacity will be deployed as SDS.

Connected Tech



Bolstering connectivity and the data infrastructure.



04

What's Next?



What's Next : Painting the Big Picture

02

Where should data reside and how much in any of these?

- NVM, Edge, Cloud.
- Cross-vendor storage tracking with ML-based analysis

01

A hybrid model brings a lot of fluidity of data movement needed for lot of modern applications but requires effective management.

Seamless Management
Who is using what, from where, and why.

- Cloud gateways integrated into enterprise storage arrays
- Applications directly accessing both on-prem and cloud storage

03

More exposure comes with more security challenges thereby increasing lines of defense

Security

- Access management – Internal users, customers
- Consistent policies across the continuum
- Data loss



About Calsoft

- Product and Software Engineering
- Digital Services
- Cloud and Security Services
- Sustenance and Support Services
- DevOps and UI/UX Services
- IoT, AI, and ML Platform Solutions



- Storage Expertise SSD/Flash
- Cloud Storage
- Software Defined Storage
- HCI
- Data Protection
- Data Deduplication
- Storage Accelerators Windows CBT
- iSCSI Test Suite
- Office 365 Backup Solution
- Generic Cloud Solution
- Emulators



Digital Services via Engineering Excellence

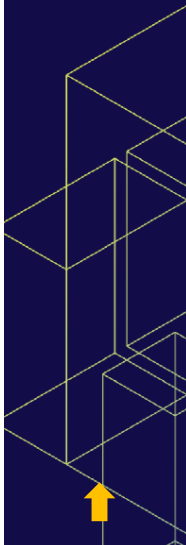
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Questions?



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