



Quantum®

Seismic Shifts in Archive Architecture

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11TH ANNUAL GLOBAL IT EXECUTIVE SUMMIT

PREPARING FOR SEISMIC SHIFTS
IN THE STORAGE LANDSCAPE

CREATE. INNOVATE. PROTECT.
ON QUANTUM.

Quantum Overview – Who We Are

36+

Years storing and protecting data

20+

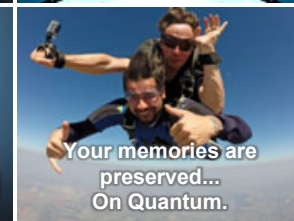
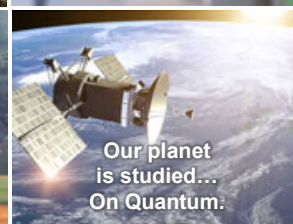
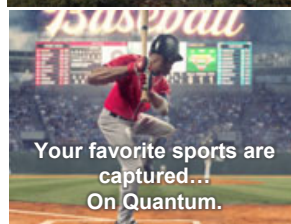
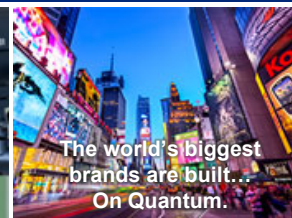
Years of expertise working with video in Hollywood

30,000+

Active support contracts around the world

24/7/365

World-class service and support organization



Massive Data Growth



**8K, 16K, 3D,
Immersive, AI**

**More: Cameras, Sensors, IoT,
Security, AI**



**Affordability = Massive
Deployments**



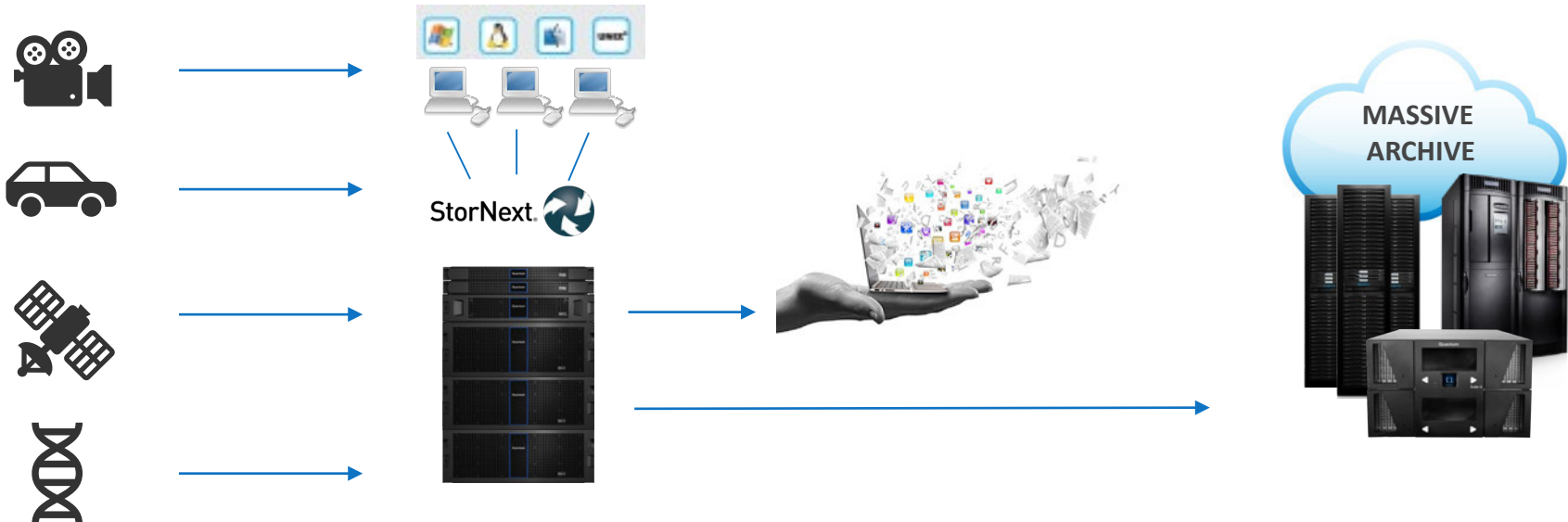
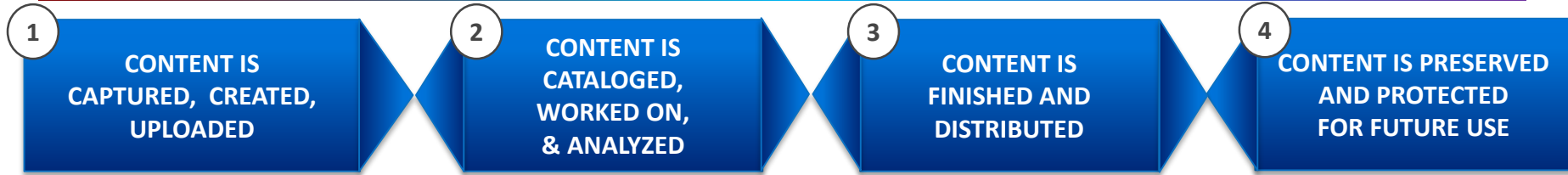
Video and Image Data is a Key Driver



By 2025, This Digital Content Will be >80% of the Data on the Planet

Source: IDC Datasphere reports

Video and Image Data Drive a Common Set of Requirements



Archive to External Cloud

The diagram illustrates a data flow process. At the top is a large blue cloud labeled 'Archive to External Cloud'. Below it is a row of six grey server icons of increasing size from left to right. Above each server icon is a blue arrow pointing upwards towards the external cloud. Below the server icons are two blue arrows pointing downwards towards a smaller blue cloud at the bottom labeled 'Internal Cloud Services'. A dark blue box with white text is positioned to the left of the bottom cloud.

Best Practices for Cloud
Archive Can Be Applied
Everywhere

Internal Cloud Services



CLOUD IS BOOMING!!

from newer use cases (AI, IoT, ...), and from traditional use cases (Analysis, Editing, ...) where cloud resources can improve workflow performance.



EXABYTE STORAGE

is driven by archive use cases, some in the cloud (consolidated users) and some on-premise (large users).



HYBRID WORKFLOWS

are being adopted to leverage the best of all worlds.

LTO Tape is Serving Massive Scale On the Ground and in the Cloud

**PETABYTE AND EXABYTE SCALE STORAGE IS NEEDED
FOR BOTH CLOUD AND ENTERPRISE ENVIRONMENTS**

Common Requirements

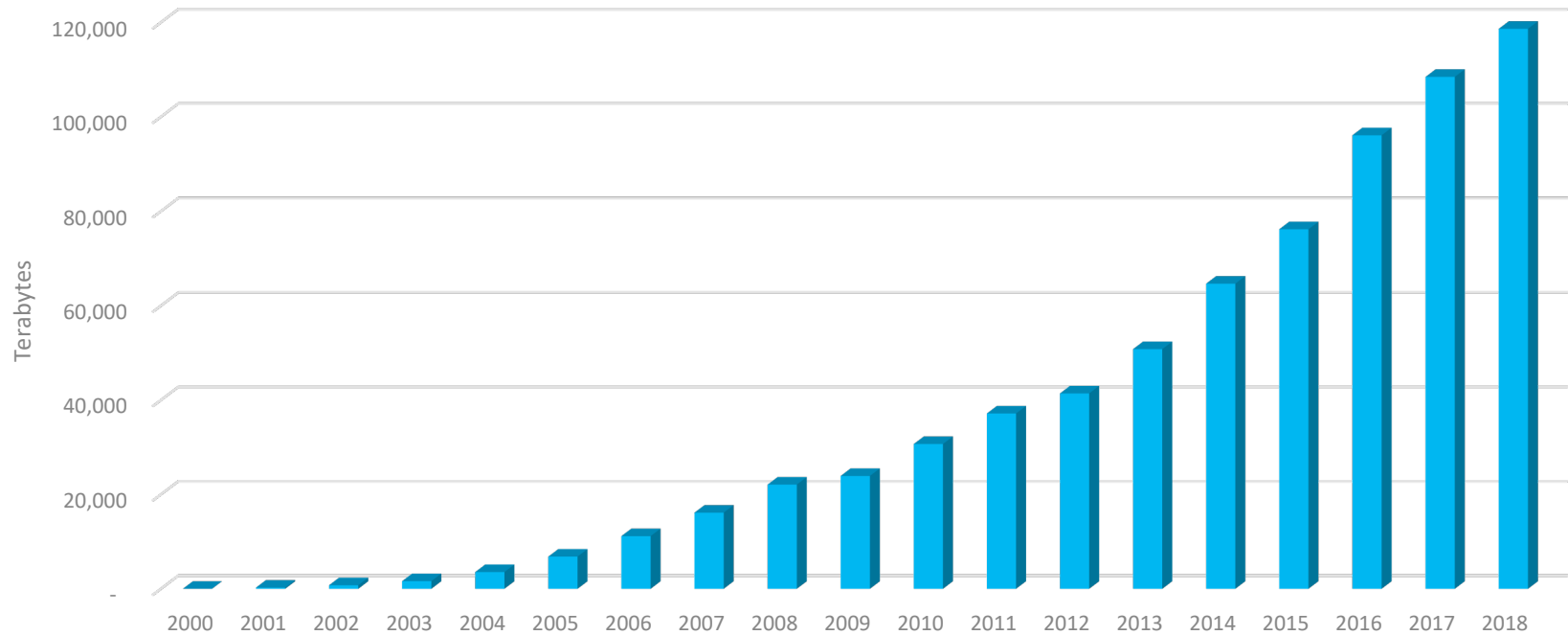
Low Cost

Durable

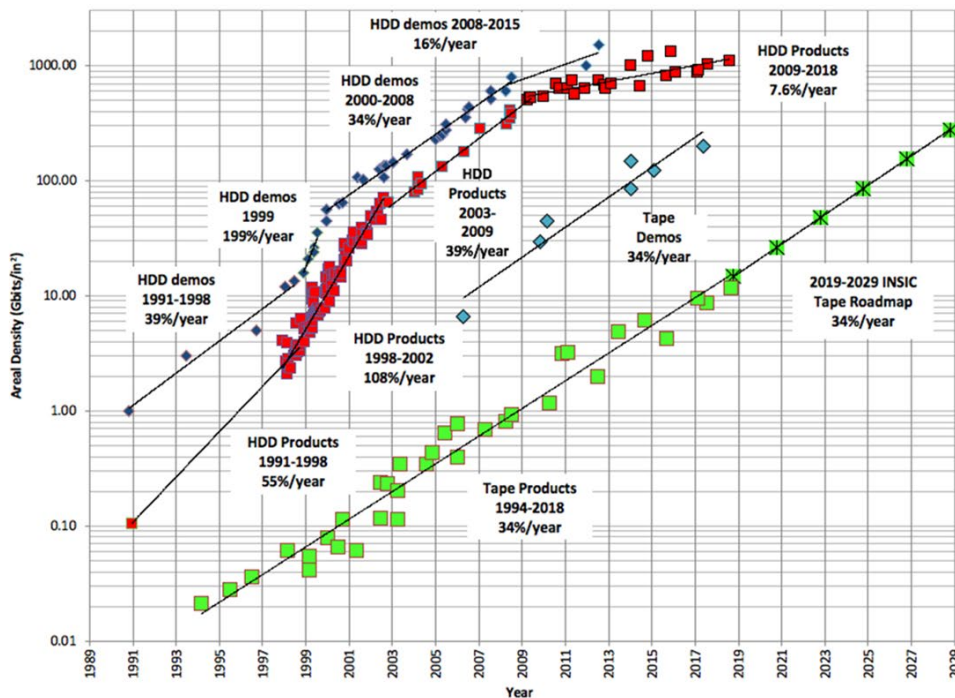
Available

Tape is the Only Choice for Massive Archive Storage

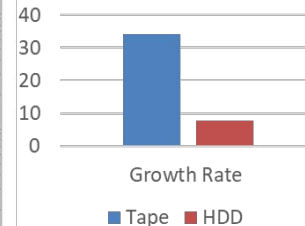
LTO Shipments: Compressed Capacity



Tape Has Legs



Areal Density Growth Rate



- ▶ Bit aspect ratio
- ▶ Track density
- ▶ Linear density
- ▶ Particle size
- ▶ Scatter heads
- ▶ Substrates
- ▶ Cartridge design
- ▶ And more

THE NATURE AND STATE OF TAPE YIELDS SUBSTANTIAL OPPORTUNITY FOR FURTHER ROADMAP DEVELOPMENT

Innovations for Massive Archive

Tune Tape System Scale, Durability and Performance with Redundancy

Increase Efficiency and Usability via Federation and Data spreading

Optimize Serviceability and Ease of Deployment

Optimize Serviceability and Ease of Deployment

- ▶ Intelligent UI
- ▶ Design for serviceability
- ▶ Factory configure
- ▶ Remote management and diagnostics
- ▶ System as a Service
- ▶ Predictive analytics
- ▶ ...

Massive Scale is Driving Seismic Shifts in Solution Architecture

› Drive Low Cost

- Increased tape recording density
- Efficient durability spread

› Increase User Efficiency

- User maintainability
- Remote management
- Management services
- Solution as a service

› Durability & Availability

- High redundancy

› Usability

- Ease of use
- Rich metadata catalog
- Predictive Analytics and AI

The Quantum logo is centered on a dark blue background. The word "Quantum" is written in a large, white, sans-serif font with a registered trademark symbol (®) to its upper right. Below it, the tagline "CREATE. INNOVATE. PROTECT. ON QUANTUM." is written in a smaller, white, all-caps, sans-serif font. The background features a grid of squares in various shades of blue and purple, with some squares being white or light gray.

Quantum[®]

CREATE. INNOVATE. PROTECT. ON QUANTUM.

We Can Show You How

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