Quantum®

Data Management Survey: Infrastructure Trends, Challenges, and Needs

Introduction

How unstructured data is managed, accessed, and stored is key for organizations to gain insights and extract value for effective decisionmaking and business operations. To get a pulse on current data management and infrastructure trends, challenges, and needs, Quantum recently surveyed more than 540 data management and IT professionals.

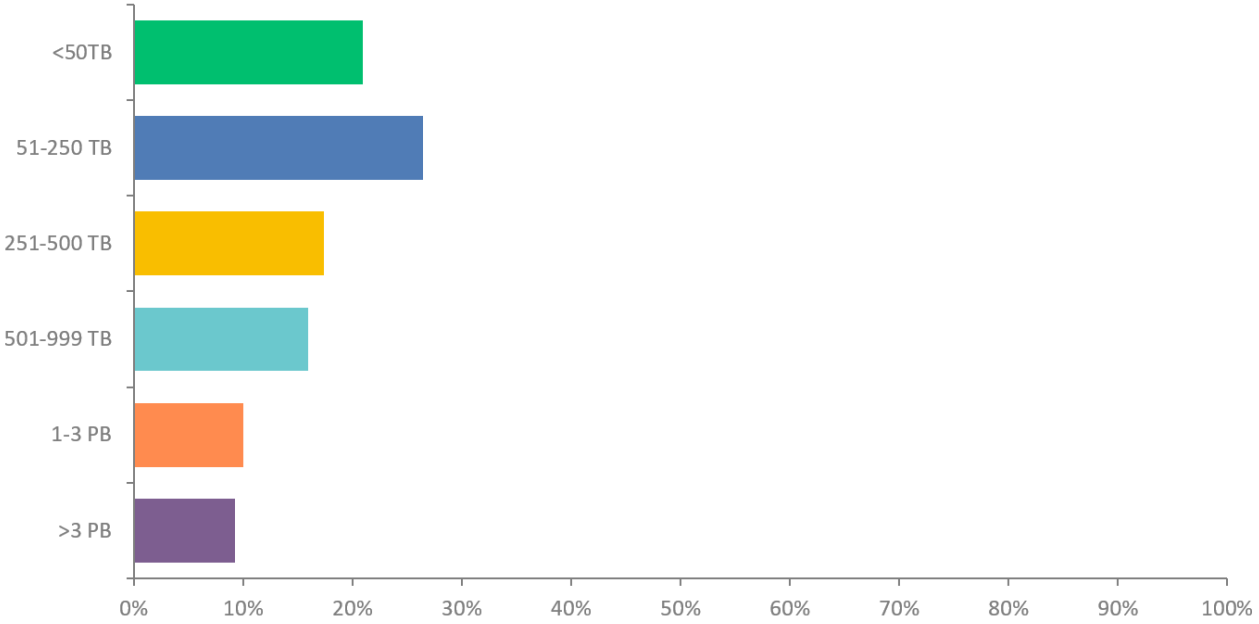
The survey responses reveal how organizations are currently managing their unstructured data, the top challenges they are facing, how frequently they are moving data between storage environments, and how their data infrastructure needs have evolved with the growth in AI.

Amount of Data and Digital Content Stored

Data growth is exploding and the sheer volume of information in circulation is difficult to grasp with the total amount of data created, stored, and consumed globally predicted to exceed 180 zettabytes by 2025, according to IDC. When asked how much data organizations are storing, **nearly 80% of respondents** have between **51 TB to 3 PB of data and digital content** stored, with a majority of it being unstructured data (video, imagery, IoT sensor data, etc.).

51 TB - 3 PB

Data and digital content stored



Biggest Challenges Organizations Face with Advancing an Unstructured Data Management Strategy

The **top challenges** for organizations with advancing unstructured data management include:

- Data storage **costs** are too high
- Managing data across both **cloud and on-premises**
- Managing **governance and security of data**
- Ensuring data is **available and accessible** when needed
- Lack of tools to **monetize** their data
- Lack of qualified **staff resources**
- Lack of **automation**

"Managing the long-term archiving of our unstructured data, particularly when dealing with massive amounts of historical information."

"Managing the growth of our data and storing and cataloging it for efficient future retrieval."

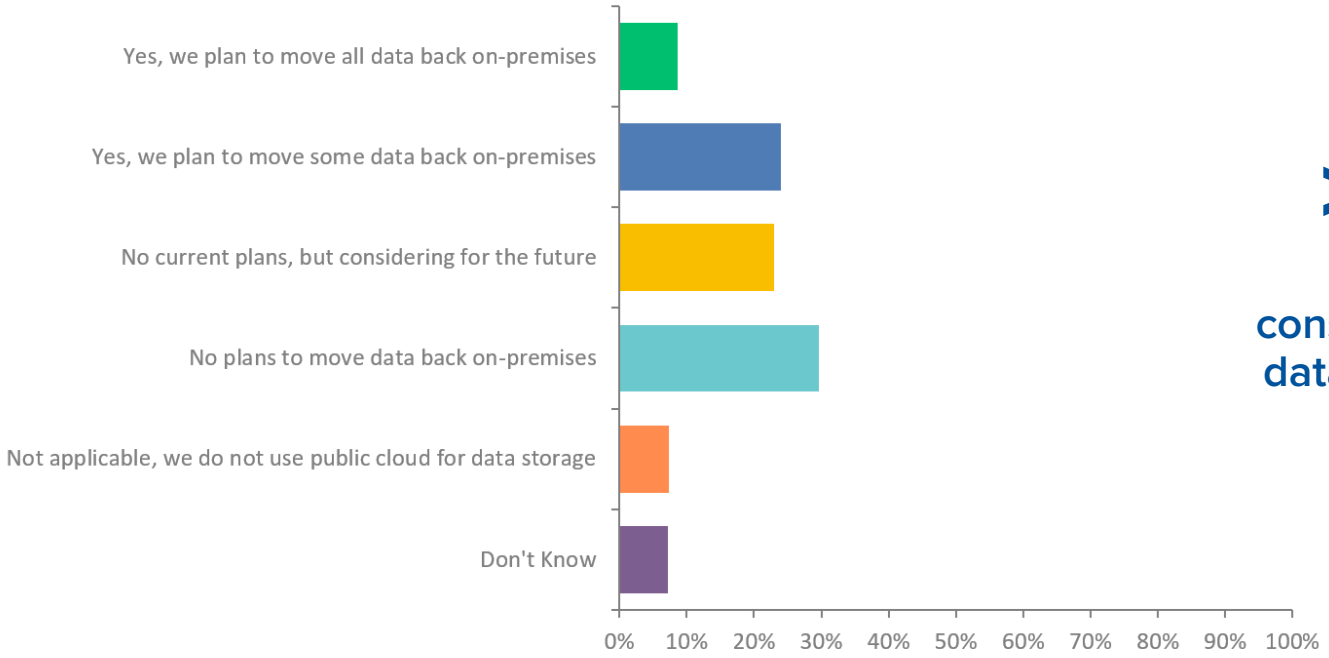
"Migrating our unstructured data to the right storage platform is a real problem."

"Being able to process and analyze data easily to derive meaningful insights in real-time."

"We are constantly concerned with protecting our data from ransomware attacks."

Storing Data in the Public Cloud and On-Premises

While a third of the organizations don't have plans to move data back on-premises, **over half are planning or considering moving data back on-premises**. There are multiple reasons why organizations are considering a **hybrid cloud approach**. Some need to comply with data sovereignty laws or exert greater control over security. Others are hoping to reduce costs or improve spending predictability.



>50%

Planning or considering moving data back on-prem

Reasons for Moving Data Back On-Premises

More organizations are **repatriating some data from public cloud back on-prem**.
Key reasons from respondents include:

Costs are Unpredictable

Data Security

Data Sovereignty
Compliance Requirements

Data Accessibility

Too Expensive

Migrating Data Between Storage Environments Today

Between core ➔ cloud ➔ edge locations

More than half of the respondents **currently migrate their data between environments either occasionally or on a regular basis**. Organizations are uniquely challenged by the massive volume of incoming data and its potential value, and the need to preserve and leverage that data in the future. This reiterates the importance of having a **flexible, scalable, and cost-effective storage environment for large and growing data volumes across core, cloud, and edge environments**.

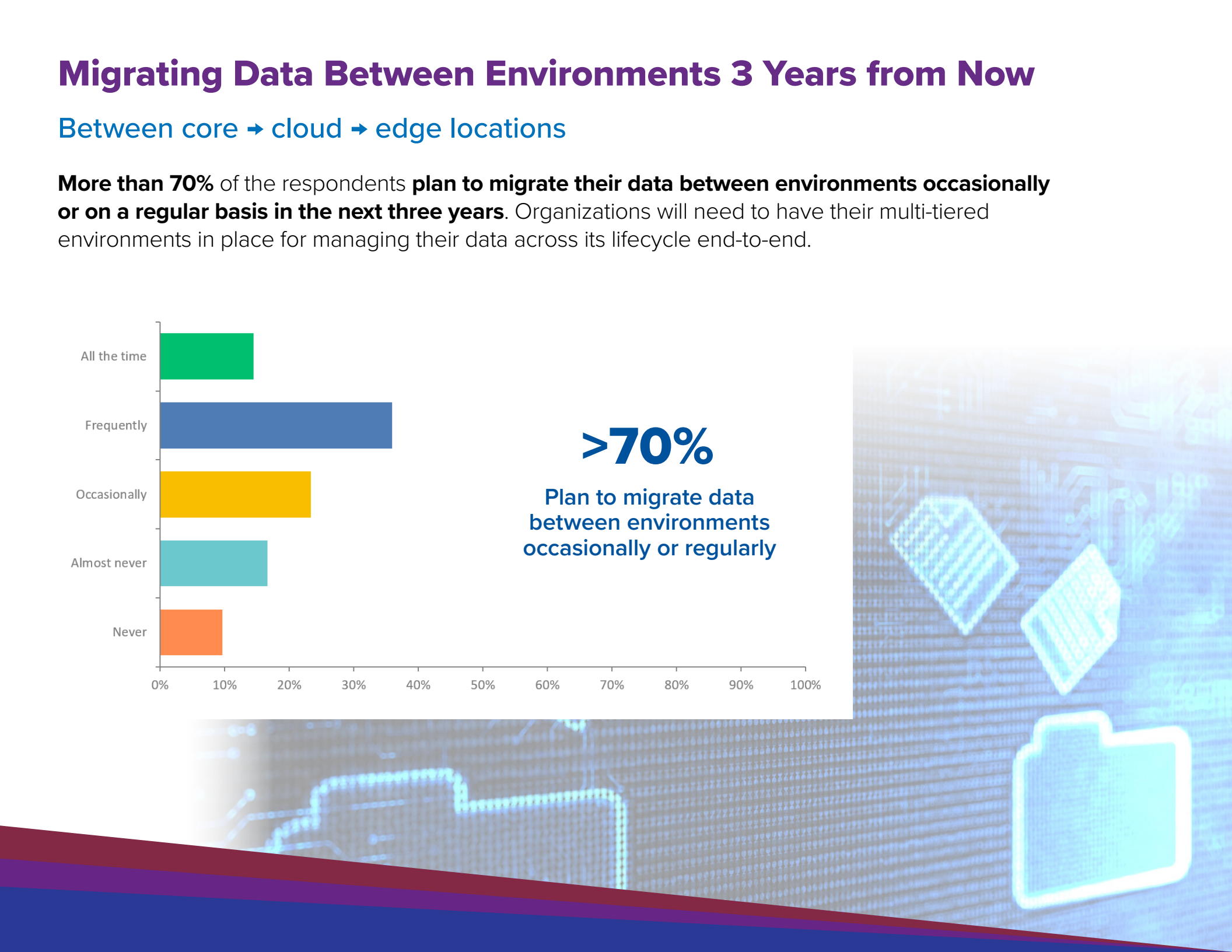
Migrating Data Between Environments 3 Years from Now

Between core ➔ cloud ➔ edge locations

More than 70% of the respondents **plan to migrate their data between environments occasionally or on a regular basis in the next three years**. Organizations will need to have their multi-tiered environments in place for managing their data across its lifecycle end-to-end.

>70%

Plan to migrate data between environments occasionally or regularly



Deleting or Discarding Useful Unstructured Data in the Past 12 Months

Almost half of the respondents reported that they **have discarded unstructured data that could have been used to fuel AI initiatives and create business value**. These results show that organizations not only need an end-to-end solution that effectively stores unstructured data securely and reliably, but always makes it available when and where it is needed and enriches data to unlock valuable insights.

44%
Likely

30.74%
Unlikely

24.81%
Don't Know

Business Benefits for Retaining More Data Longer

Top 5 business benefits selected by the respondents:

1. Better business discovery, insight, and decisioning

2. Compliance requirements would be easier to meet

3. Better data resiliency and recovery from ransomware attacks

4. Increased opportunity to monetize data value

5. Increased employee productivity

How Data Infrastructure Needs Have Evolved with the Growth of AI

With the rise of AI, organizations are rethinking their infrastructure needs. On the front end, AI workloads require high-performance storage to operate. On the back end, data needs to be stored indefinitely to train and fuel AI models. Here are the **top 5 reasons** respondents indicated **why AI has evolved their infrastructure requirements:**

1. Need more insight to data

2. Need more performant storage

3. Need more automation tools

4. Need to be able to tag and catalogue data

5. Need to store more data

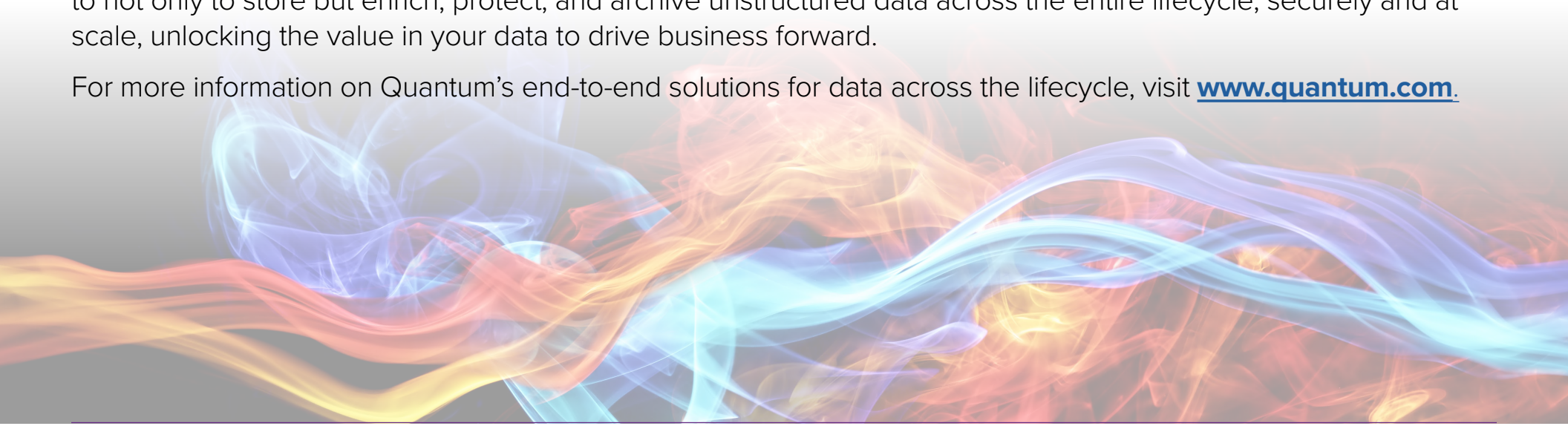
Conclusion

Survey responses revealed unstructured data management, storage access, and long-term archiving as the most common challenges facing data management and IT professionals.

The survey results underscore the need for organizations to have the right solutions in place for storing, accessing, archiving, and protecting their unstructured data. Most importantly, AI is changing their infrastructure requirements. Organizations need an end-to-end infrastructure that can support AI workloads AND provide a way to cost effectively retain data to fuel their AI initiatives.

Concerns around managing massive amounts of unstructured data, protecting it, unpredictable costs, and data accessibility point to the need for high-performance storage for active data through long-term archiving of inactive data. With decades of expertise, Quantum's end-to-end AI-driven data platform enables organizations to not only to store but enrich, protect, and archive unstructured data across the entire lifecycle, securely and at scale, unlocking the value in your data to drive business forward.

For more information on Quantum's end-to-end solutions for data across the lifecycle, visit **www.quantum.com**.



Quantum

Quantum technology, software, and services provide the solutions that today's organizations need to make video and other unstructured data smarter – so their data works for them and not the other way around. With over 40 years of innovation, Quantum's end-to-end platform is uniquely equipped to orchestrate, protect, and enrich data across its lifecycle, providing enhanced intelligence and actionable insights. Leading organizations in cloud services, entertainment, government, research, education, transportation, and enterprise IT trust Quantum to bring their data to life, because data makes life better, safer, and smarter. Quantum is listed on Nasdaq (QMCO) and the Russell 2000® Index. For more information visit www.quantum.com.