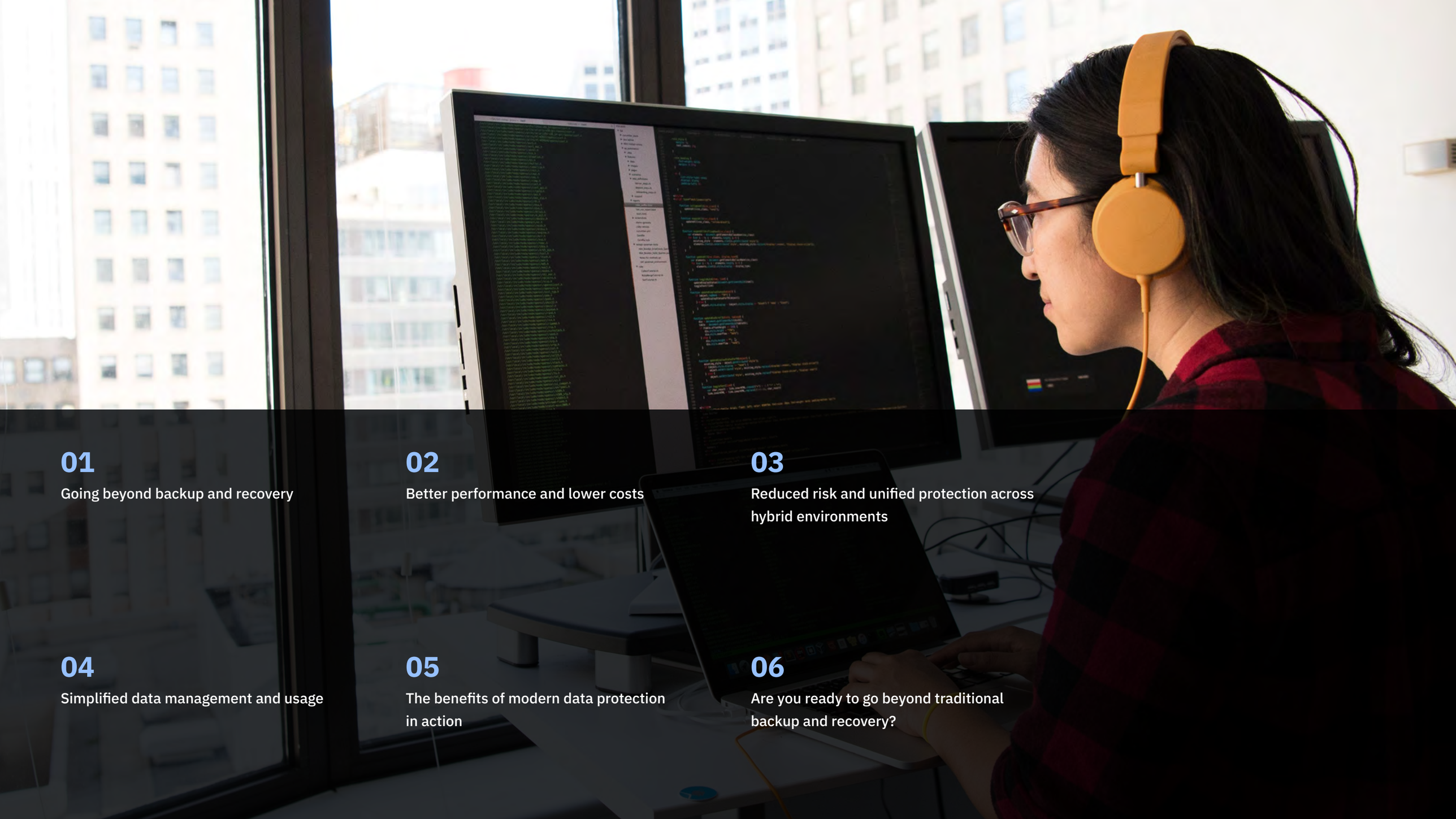
Understanding the must-haves of modern data protection

Storage edition



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Going beyond backup and recovery

Data protection modernization is among the top five most critical IT priorities for 73% of organizations.[1] The primary objective of traditional data protection solutions has been data backup and recovery. However, today's digital world is increasingly complex, meaning IT environments are more dynamic than ever — and their needs are anything but traditional.

Organizations now expect data protection solutions to deal with exponential data growth and new workloads, recover quickly in the event of a cyberattack, and improve the efficacy of analytics and efficiency of development.

To meet expectations, organizations must move beyond backup. They need to unify data recovery, retention and reuse across their hybrid multicloud environments, including for physical, virutalized and container-based workloads. And, they must support cybersecurity objectives. Having this solid foundation drives the key capabilities that propel today's modern data protection agenda:

- Management simplicity
- Greater performance
- Lower storage costs
- Ability to secure backup repositories
- More efficient and effective business operations

In short, the right modern data protection solutions can transform data protection from an insurance policy to a business-centric solution that enables data-driven transformation.

This eBook examines the important business benefits that modern data protection solutions can provide. It also reviews the necessary capabilities that make those benefits obtainable, and highlights IBM clients who have found success by modernizing their data protection.

Better performance and lower costs

Minimizing mission-critical data loss and boosting uptime tops the list for most IT professionals, and it starts with improving your ability to better meet recovery point objectives and recovery time objectives.

But facing the challenge of managing massive data growth is also now a key focus area. The amount of data in the world will reach 175 zettabytes by 2025, a 61% increase from the 33 zettabytes recorded in 2018.[2] This massive influx of data your organization will take on in the coming years must be protected and managed. Simultaneously, storage and operating costs must be controlled.

Rapid recovery
In the event of an IT disaster, you need fast, simple and flexible recovery that minimizes data loss. Rapid recovery is a key benefit of modern data protection, achieved through the ability to instantly mount data volumes; support for storing files in native formats; and a searchable global catalog of virtual machines (VMs), databases and files.

When data volumes can mount instantly, the need for data hydration and conversion is eliminated. This reduces downtime and access to backup data is restored almost immediately.

Efficient and cost-effective storage
As the amount of data your organization relies on grows, you'll need data protection that doesn't impact performance and only requires minimal consumption of storage. Look for space-efficient snapshots, compression, deduplication and object storage to ensure large data sets aren't as demanding and still readily available when needed.

And when companies embrace software-defined solutions, they realize the cost benefits of leveraging their existing storage investments.

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Reduced risk and unified protection across hybrid environments

Adoption of hybrid multicloud environments is on the rise. That means there are more storage targets to protect across an increasingly diverse and complex IT infrastructure. And as your attack surface goes up, the more imperative the need for modern data protection becomes. You need to reduce risk for all of your workloads — whether those workloads exist on-premises or in the cloud — through a unified platform that simplifies management and strengthens resiliency.

Cyber resiliency

Every organization has a 1 in 4 chance of experiencing a cyber breach within the next two years.[3] When modernizing your data protection, look for solutions that can automatically detect potential ransomware attacks and provide security notifications.

Rock solid data security goes beyond data encryption to provide the ability to air-gap data on physical tape or lock down data on object storage. Ransomware detection is another strategy for mitigating cyberattacks.

Storing data on physical tape is a proven strategy for securing backup repositories. If you use tape to air gap data, you ensure that the backups saved to tape are isolated and protected from cyber breaches that could impact your other systems.

Manage complexity across hybrid environments

Complexity is the inherent result of hybrid multicloud environments, but you must have control over your data wherever it resides — and having a single solution that extends across your entire IT infrastructure unifies workload protection.

Regardless of where data is hosted the right modern data protection solution will automate backup frequency, data retention and data reuse across your entire environment. You can now easily manage data recovery, data copy creation, and SLA compliance “under one roof.”

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Simplified management

Lower operational costs and easier data usage
The other half of the equation when it comes to reducing risks is lowering operational costs. The ESG modern data protection survey, Trends in Modern Data Protection, March 2019, revealed that 31% of survey respondents see lower operational cost as a benefit they expect to achieve from data protection modernization. Lowering operational costs centers around having a solution that is easy to deploy, maintain and manage.

But, organizations also need data protection solutions that improve the veracity and efficacy of analytics for the business teams, while also speeding up development and helping to ensure data compliance for the IT teams. To fulfill these objectives, 68% of organizations use data stored on secondary storage for more than just data backup and recovery.[1]

86%

of organizations say self-service access to secondary data for business users has increased efficacy of analytics.[1]

In other words, data protection is quickly becoming a source of business efficiency and an enabler of IT innovation.

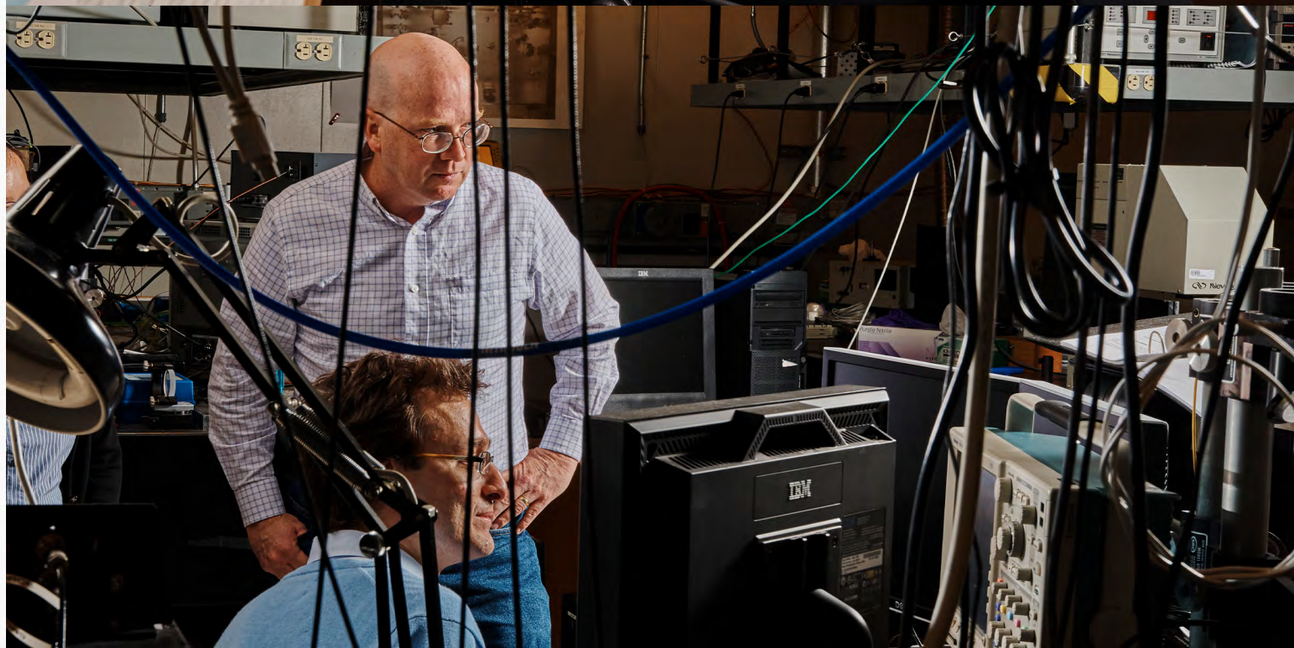
Lowering operation costs starts with simple deployment and having a solution that is easy to maintain, so complexities such as agent management should be avoided. Having a centralized dashboard can streamline operations by providing a quick view of storage utilization and data protection status, and drilldowns and alerts can help with troubleshooting.

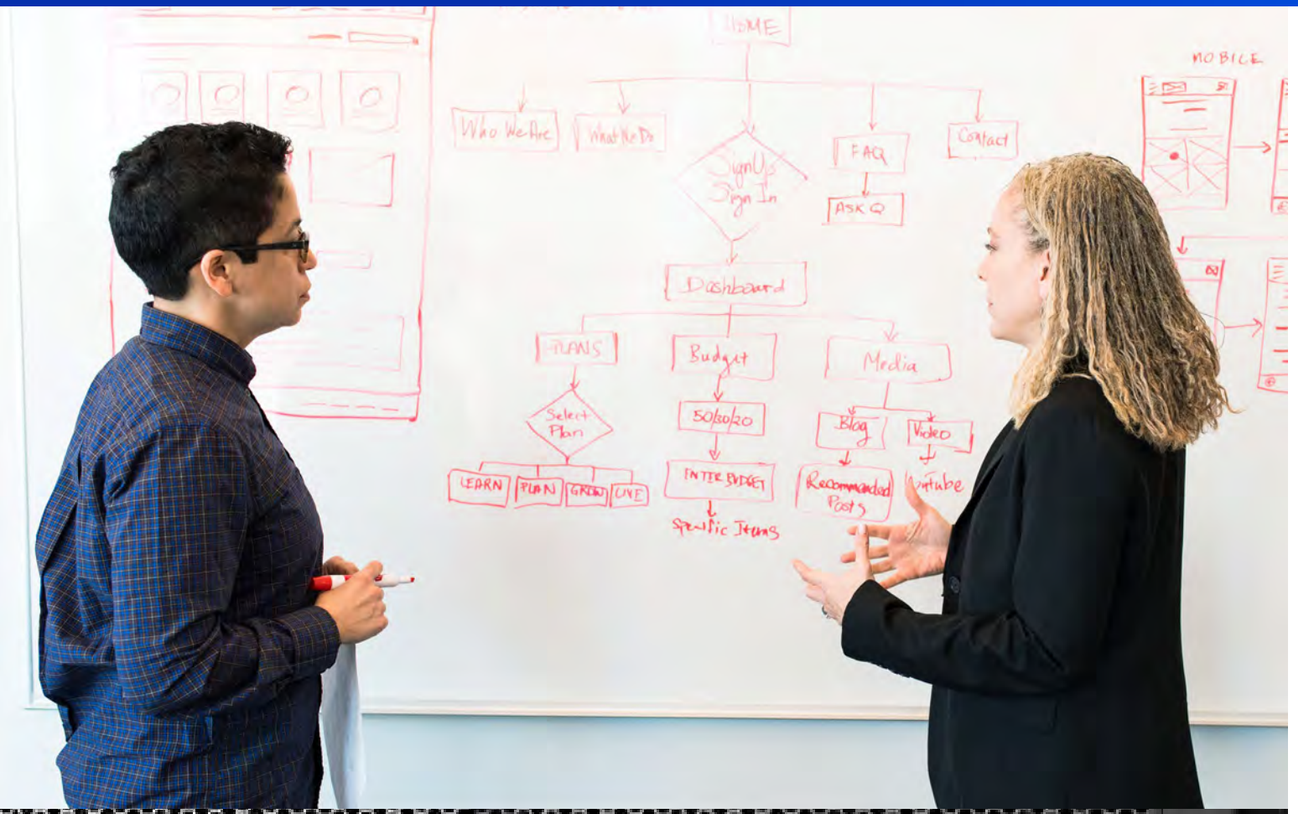
Moreover, most companies need to protect many different types of workloads. Protecting all workloads with a single platform, including VMs, file systems, and applications, whether they reside on bare metal, in VMs, in containers, or in the cloud can greatly simplify operations.

Some additional tools and capabilities include:

Self-service data access
Modern data protection solutions should offer a self-service portal for business users to create copies of data they need for analytics and other various business purposes. That being said, those same solutions should also instill processes and automated workflows that ensure consistency and reduce complexity.

The right data protection solution relies on role-based access control (RBAC) and SLA-based policies to help streamline and secure access to backup data. REST APIs simplify application and tool integration. This powerful combination improves the speed and effectiveness of development, testing and analytics.





As containerized applications move into production, companies are leveraging DevOps processes, container orchestration platforms and volume snapshots to provide developers with persistent container data protection services. Offering self-service container backup and recovery via APIs, such as Kubernetes kubectl, enables fast adoption by application developers.

Metadata management for unstructured data

Modern data protection solutions should provide consolidated visibility into stored data, even as the amount of data stored grows and becomes increasingly unstructured.

Going forward, your organization will need an efficient metadata management tool that can rapidly ingest, consolidate and index metadata for billions of files and objects across your on-premises and cloud environments.

The right solution will automatically identify and classify sensitive information; immediately differentiate mission-critical business data; and give data scientists, IT teams and business users a fast and efficient way to search through petabytes of data.

85%

of organizations improved quality and speed with self-service access to secondary data for developers.[1]

The benefits of modern data protection in action

IBM modern data protection meets the criteria necessary for effective and innovative modern data protection. The offerings simplify protection management across hybrid multicloud environments, maximize business uptime and lower costs while improving resiliency against cyber threats.

And IBM clients and business partners are seeing the benefits firsthand.

Increased business uptime
One client now completes its backup process 75% faster than before, reducing disruption and freeing up the IT team for strategic tasks. Another client, a healthcare provider, decreased patient record seek times by 50% and reduced response times by 99.9%.

Meanwhile, a state government's administrative services office used IBM Storage data protection management solutions to restore a critical 2.5 TB VM in under 3 minutes.

Operational efficiency and lower costs
A consumer goods supplier partnered with IBM Storage to reduce its backup costs by 60%, eliminating the need for tape and manual programming.

Another client reduced its TCO by 50% and improved storage efficiency with a 5:1 data reduction ratio.

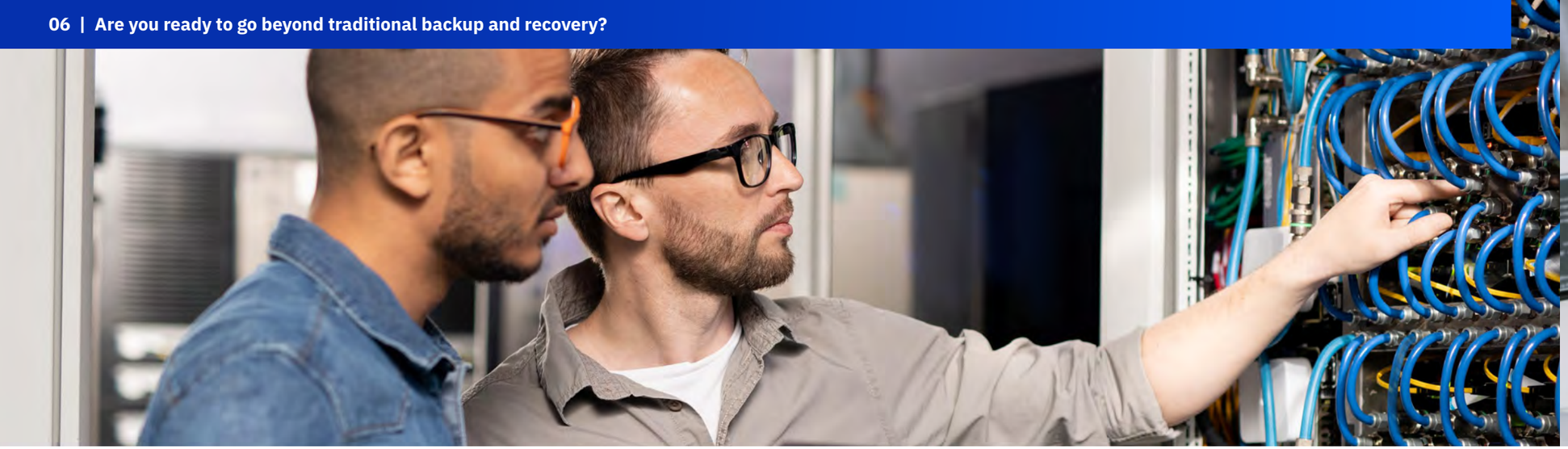
The General Treasury of the Kingdom of Morocco consolidated backup systems, leading to a 60% lower system administration workload, and a 70% reduction in backup and recovery infrastructure costs.

Stronger cyber resiliency
IBM Storage clients are improving their cyber resiliency with modern data protection features, such as:

- Resiliency orchestration that allows them to recover an entire process, application, database or discrete system with the click of a button
- Fast detection and alert of data corruption
- Scalability to handle large, site-level detection and recovery in minutes
- Leverage tap to air-gap data
- Lockdown data on immutable object storage (WORM)

Simplified management and greater productivity
Through simplified data management across its hybrid environment, one client was able to scale its storage capacity by 2,400%, with zero increase in IT headcount.

Unlocked data value
A prominent university extended access of secondary data to 5,000 environmental researchers, supported by a data protection platform that helps them provide self-service access to vital information without compromising data protection.



Are you ready to go beyond traditional backup and recovery?

If your current data protection stops at backup and recovery, then it's time to consider a modern approach. You need data protection that helps you:

- Manage increasing amounts of data
- Maximize business uptime
- Lower storage and operating costs
- Strengthen cyber resiliency
- Simplify complexity across hybrid multicloud environments
- Leverage backup data for new business value
- Speed up application development and IT innovation

Make modern data protection a priority

IBM has the solutions and expertise to provide your organization with holistic and modern data protection that delivers simplicity, scalability and the unified management needed to protect and recover data across multicloud environments — all while helping you leverage secondary data for improved analytics, reporting and competitive business advantage.

To learn more about how IBM Storage solutions can help you, schedule a consultation or contact your IBM Business Partner today.

Resources

1. ESG Research Insight Paper, Trends in Modern Data Protection, March 2019
2. IDC White Paper, The Digitization of the World: From Edge to Core, November 2018
3. Ponemon Institute, Cost of a Data Breach Study, September 2018