HPE Software Information Management

Comprehensive data protection for the modern enterprise

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Purpose of today's presentation

Introduce
HPE Software's future

Share
our vision and the evolution of Adaptive Backup & Recovery

Show
the use case of backup to Microsoft Azure with DP

Going beyond
ABR with Data Governance

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Introducing HPE's Software Future

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A compelling strategic vision

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Provides secure Hybrid IT and Campus Mobility solutions built on its next generation, software-defined infrastructure portfolio

Meg Whitman
President & Chief Executive Officer

$33B Revenue*

Trusted infrastructure partner with leadership across hardware, software, & technology services	Redefining IT at the edge with campus mobility solutions and IoT	Innovation engine targeting key market inflection points -- hyper-converged, composable.

HPE SW and MF

Pure-play software companies, with solutions such as IT operations, security, information management, big data analytics, cloud, open source and development.

Chris Hsu
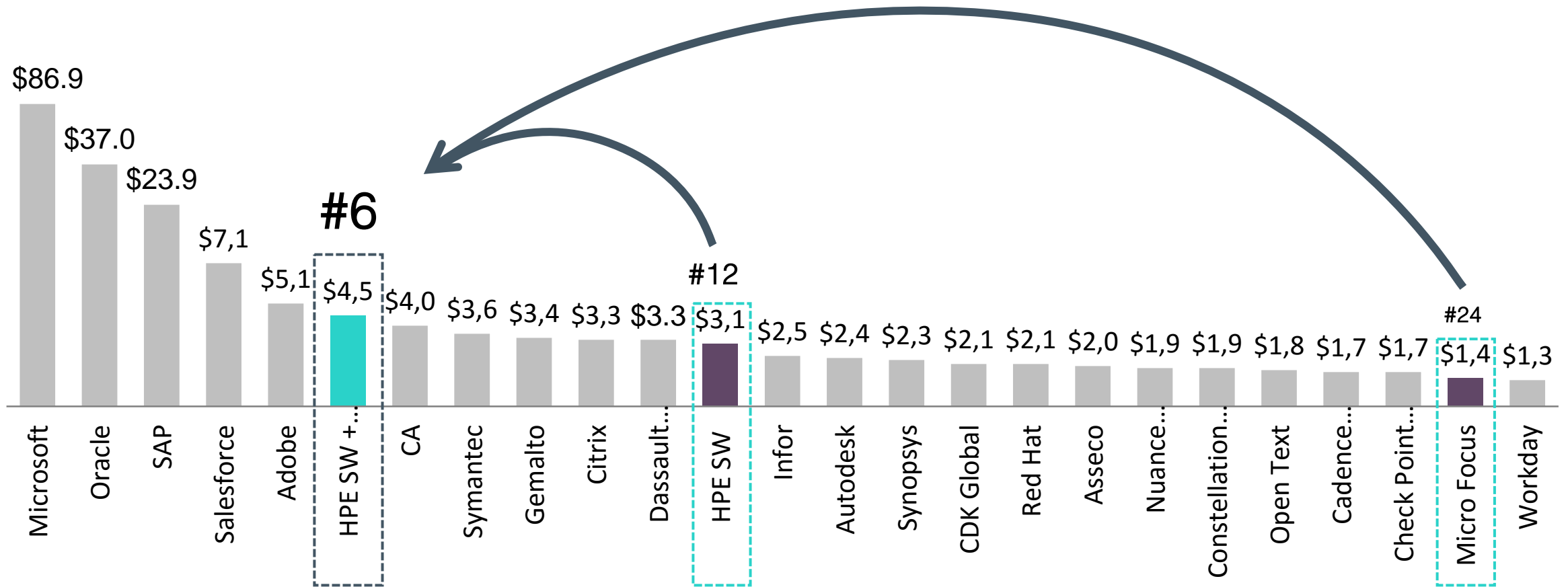Chief Executive Officer

$4.5B Revenue*

Leading IP in financial services, healthcare, transportation, consumer products, and insurance	Best-in-class cloud, mobility, security services, app development and modernization, IT services, workplace, big data and analytics, and business process services

*Expected revenues

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Combined Micro Focus – an Industry Leader

Company	Value
Microsoft	$86.9
Oracle	$37.0
SAP	$23.9
Salesforce	$7,1
Adobe	$5,1
HPE SW +... (#6)	$4,5
CA	$4,0
Symantec	$3,6
Gemalto	$3,4
Citrix	$3,3
Dassault...	$3,3
HPE SW (#12)	$3,1
Infor	$2,5
Autodesk	$2,4
Synopsys	$2,3
CDK Global	$2,1
Red Hat	$2,1
Asseco	$2,0
Nuance...	$1,9
Constellation...	$1,9
Open Text	$1,8
Cadence...	$1,7
Check Point...	$1,7
Micro Focus (#24)	$1,4
Workday	$1,3

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Software Suite for Enterprise Business

MICRO FOCUS®

Extract value with advanced analytics	Protect users, apps and data across locations and devices	Help customers understand, organize, control & protect information	Testing and Lifecycle tools for traditional and DevOps	Automate, Orchestrate and Transform IT operations
Big Data Platform	**Enterprise Security**	**Information Management & Governance**	**Application Delivery Management**	**IT Operations Management**

+

Micro Focus Portfolio
- Identify based access governance
- Security
- COBOL development
- Mainframe solutions
- Application development and testing
- IT operations management Host connectivity

VERTICA

IDOL

ArcSight

ATALLA

FORTIFY SOFTWARE

Voltage security

Digital Safe
Data Protector

Control Point

Structured Data Manager

Storage Optimizer

ALM **AppPulse**

StormRunner Mobile Center

Unified Functional Testing

Service Management

Operations Bridge

Hybrid Cloud Management

Data Center Automation

Network Management

SUSE®

SUSE Portfolio
- Enterprise Linux
- OpenStack private cloud
- Software-defined storage

Annual Revenue $3.1 billion*	Annual Revenue $1.4 billion*

Annual Revenue **$4.5** billion*	FTSE **50** company	Customers **50,000**	Employees **~20,000**

Share our vision & the evolution of ABR

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Today's world

Today's challenges

- Massive data growth and diversity of new workloads
- 24x7 data center zero tolerance of downtime and maximum resiliency
- More compliance requirements, scrutiny and audit requests (GDPR)
- New security threats (Ransomware)

Today's reality

- SLAs are becoming more stringent; more demanding RTOs and RPOs
- Storage requirements are growing double digit
- Shorter backup windows to backup, test, upgrade and maintain
- Technology disruption: virtualization, software-defined storage, cloud
- Traditional responses to common challenges no longer work

What is needed

- A new innovative approach of addressing backup and recovery - one that adapts as it protects at scale, making backup both smarter and more efficient.

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Our vision on Data Protection

Challenges	Unified Solution	Customer Value
Transition to Virtualization and Cloud	**HPE Adaptive Backup and Recovery Suite**	Improved business insight and agility
Information explosion	E2E Backup Solution for physical, virtual and Cloud	Improved TCO with reduction in storage
Increasing regulations (GDPR…) and security threats	Analytics & Insight	Increased efficiency
	Policy-based storage tiering	Improved compliance & security based on metadata

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ABR's continuous cycle of analytics and optimization

- **Core-to-edge data protection**
- **Consolidated and standardized backup processed**

- **File analytics and policy-based storage tiering**
- **Infrastructure optimization**
- **Reduced storage footprint**

Optimize with **Storage Optimizer**

Protect with **Data Protector**

Analyze with **Backup Navigator**

- **Interactive web-based monitoring and reporting tool**
- **Insight into backup environment with operational analytics**

A unified protection for the modern enterprise

| Applications, files and database | Virtualization | Mobile and Big Data | Remote sites | DR |

One unified management layer

Protect, manage, monitor, analyse and discover

Adaptive Backup and Recovery Suite
Data Protector/Storage Optimizer/Backup Navigator

One integrated storage platform

Consolidated, federated deduped storage

Storage Arrays

Backup to Disk Appliances

Tape Libraries

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Belgian customer success stories

- **Biggest telecom operator :**
  - Choice for DP over competition for full backup coverage for physical and VMWare with 3par and StoreOnce.

- **Biggest European military organization :**
  - DP customer for many years for their physical and Hyper-V env, going for full ABR suite (Storage Optimize and Backup Navigator)

- **Floor manufacturer:**
  - DP customer for many years using Data Domain Boost as backup to disk devices, spread over Europe.

- **Big media concern using DP+3Par+StoreOnce**

- **2 of the largest Utility Energy Providers in Benelux :**
  - Using outsourced DP env, including biggest Backup Navigator installation in Europe.

- **Many hospitals using DP in cooperation with Realdolmen**
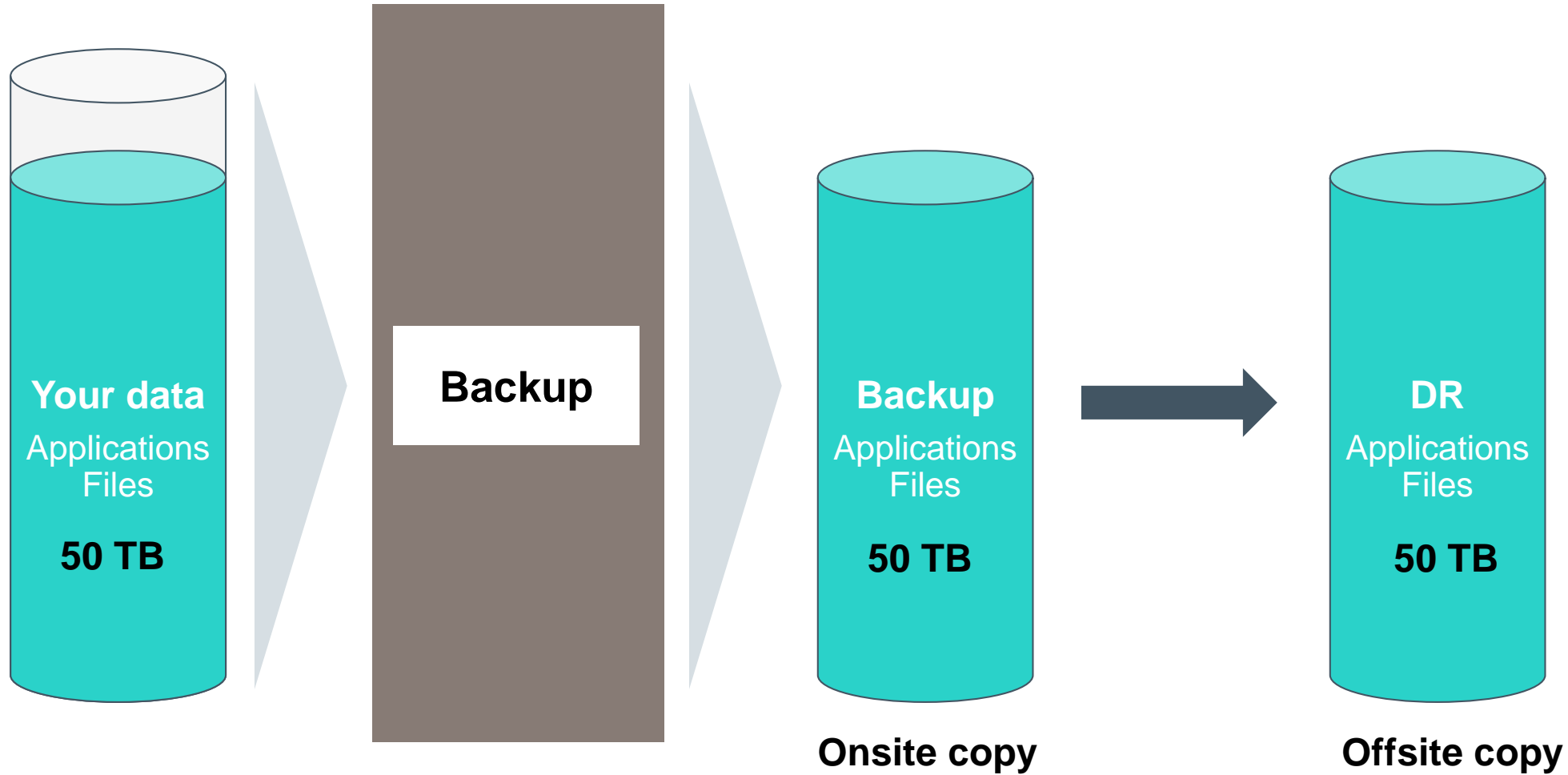
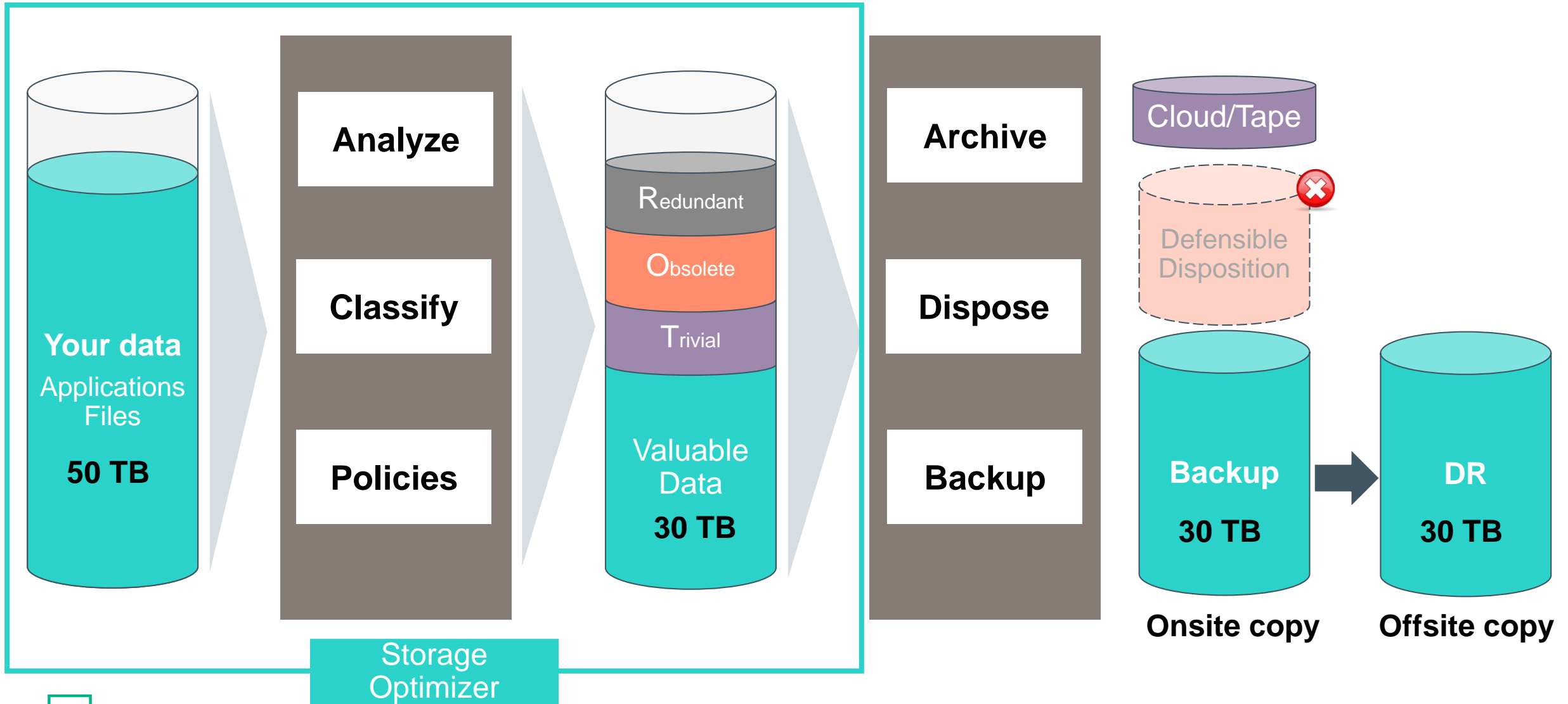**More then 60K customers WW including HPE.....**

ABR in practice

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ABR's continuous cycle of analytics and optimization

Optimize with Storage Optimizer

Protect with Data Protector

Analyze with Backup Navigator

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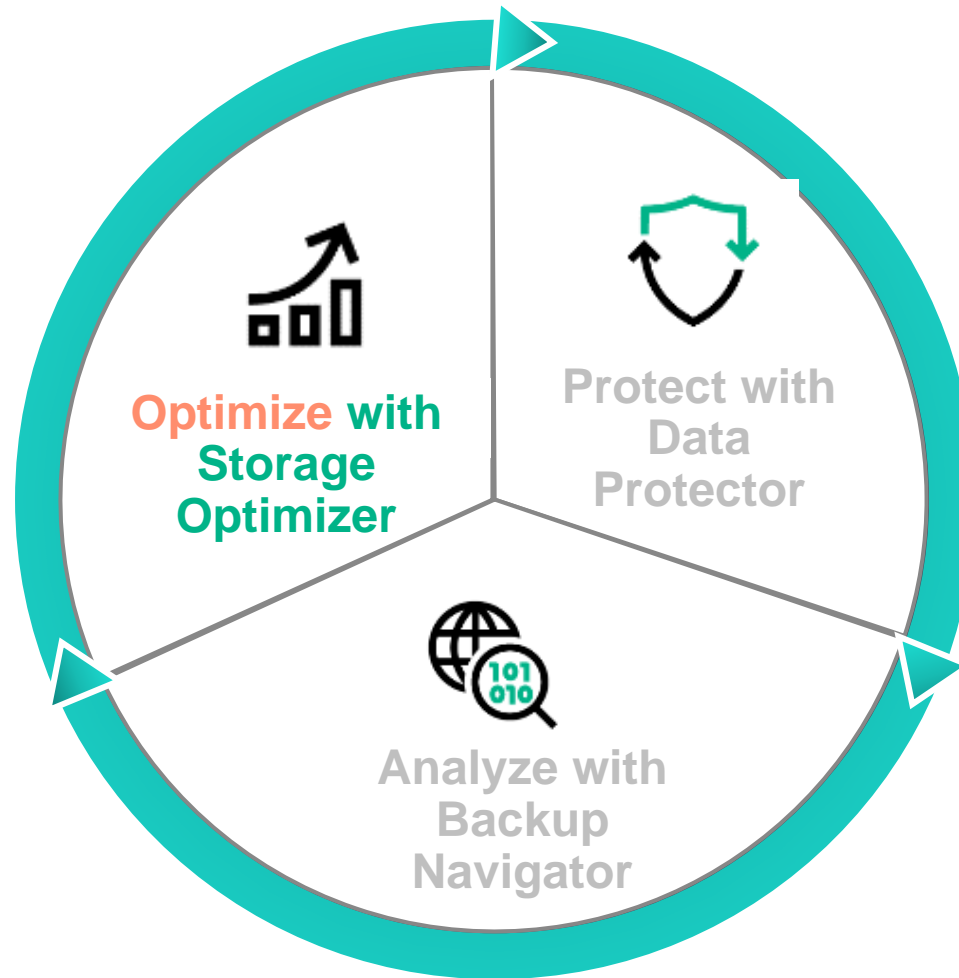
A typical backup scenario

Your data
Applications
Files

50 TB

Backup

Backup
Applications
Files

50 TB

Onsite copy

DR
Applications
Files

50 TB

Offsite copy

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Start with analyzing and classifying your information

Analyze

Classify

Policies

Storage Optimizer

Your data
Applications
Files

50 TB

Redundant

Obsolete

Trivial

Valuable
Data

30 TB

Archive

Dispose

Backup

Cloud/Tape

Defensible
Disposition

Backup

30 TB

DR

30 TB

Onsite copy

Offsite copy

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HPE Storage Optimizer: manage information based on its value

Candidates for archiving and deletion

Potential risks

Volume and data growth
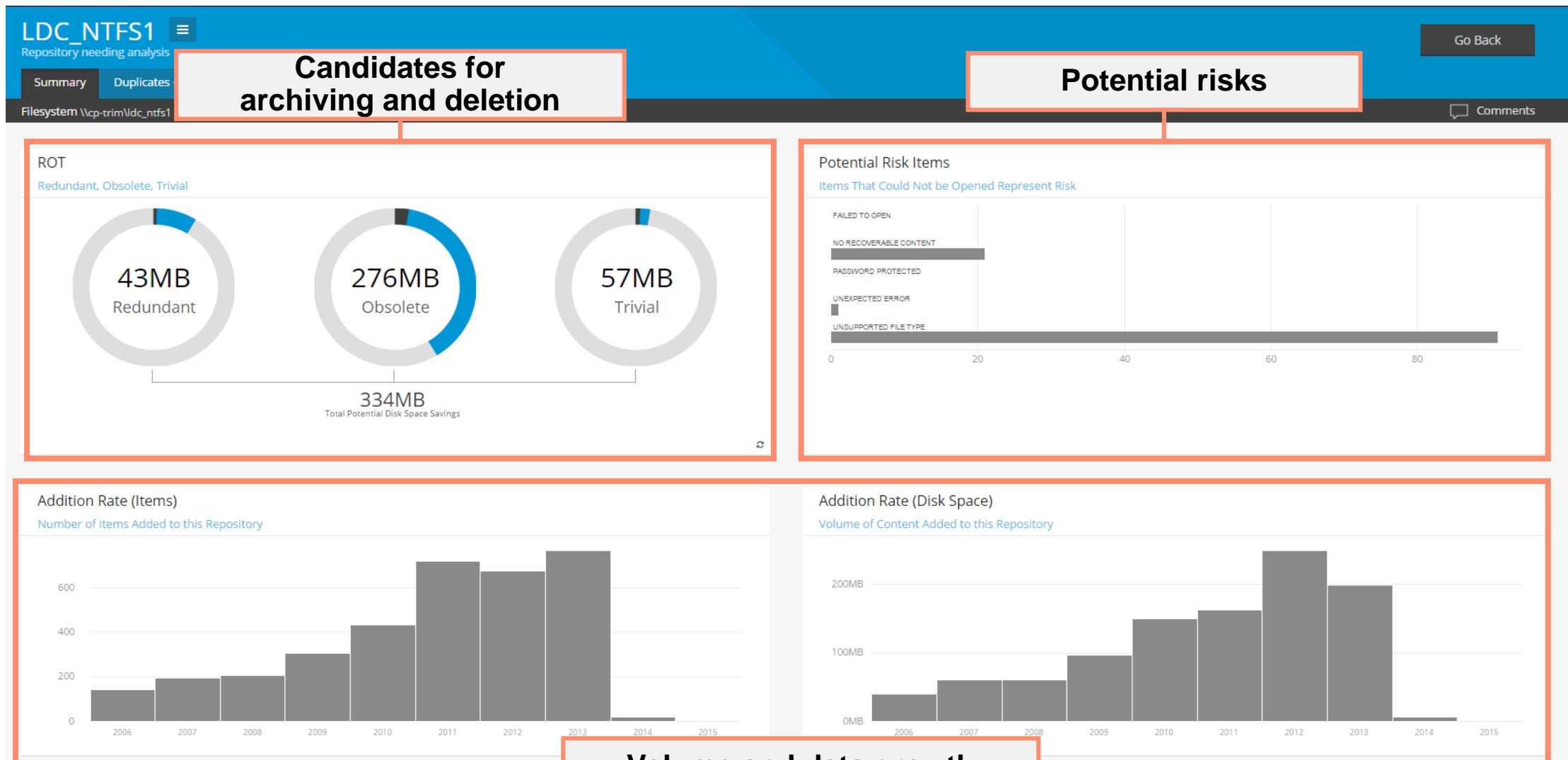
Reduce risks and costs, improve backup

Lower risks associated with data mismanagement
- Dispose of information that is no longer valuable
- Bridge gap between IT and legal

Improve backup and recovery
- Identify redundant, obsolete, and trivial data that is not required for backup
- Speed-up backup up to 50% by archiving and stubbing files based on policies

Reduce data footprint & storage costs
- Materially lower cost on primary storage and backup storage
- More effectively tier storage for added costs savings

Improve infrastructure management
- Optimize storage with high levels of transparency and intelligence
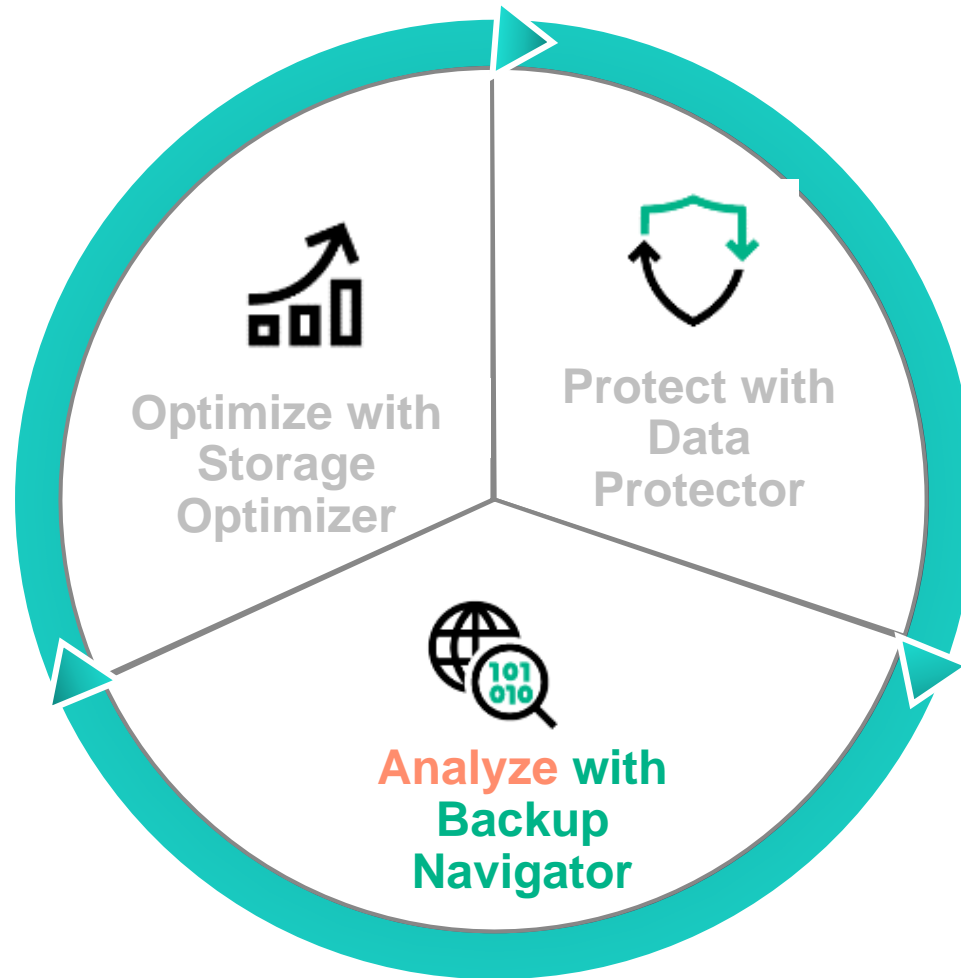- Get more life out of infrastructure without additional CapEx

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ABR's continuous cycle of analytics and optimization

Optimize with Storage Optimizer

Protect with Data Protector

Analyze with Backup Navigator

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Consolidated and standardize protection with Data Protector

ABR's continuous cycle of analytics and optimization

Optimize with Storage Optimizer

Protect with Data Protector

Analyze with **Backup Navigator**

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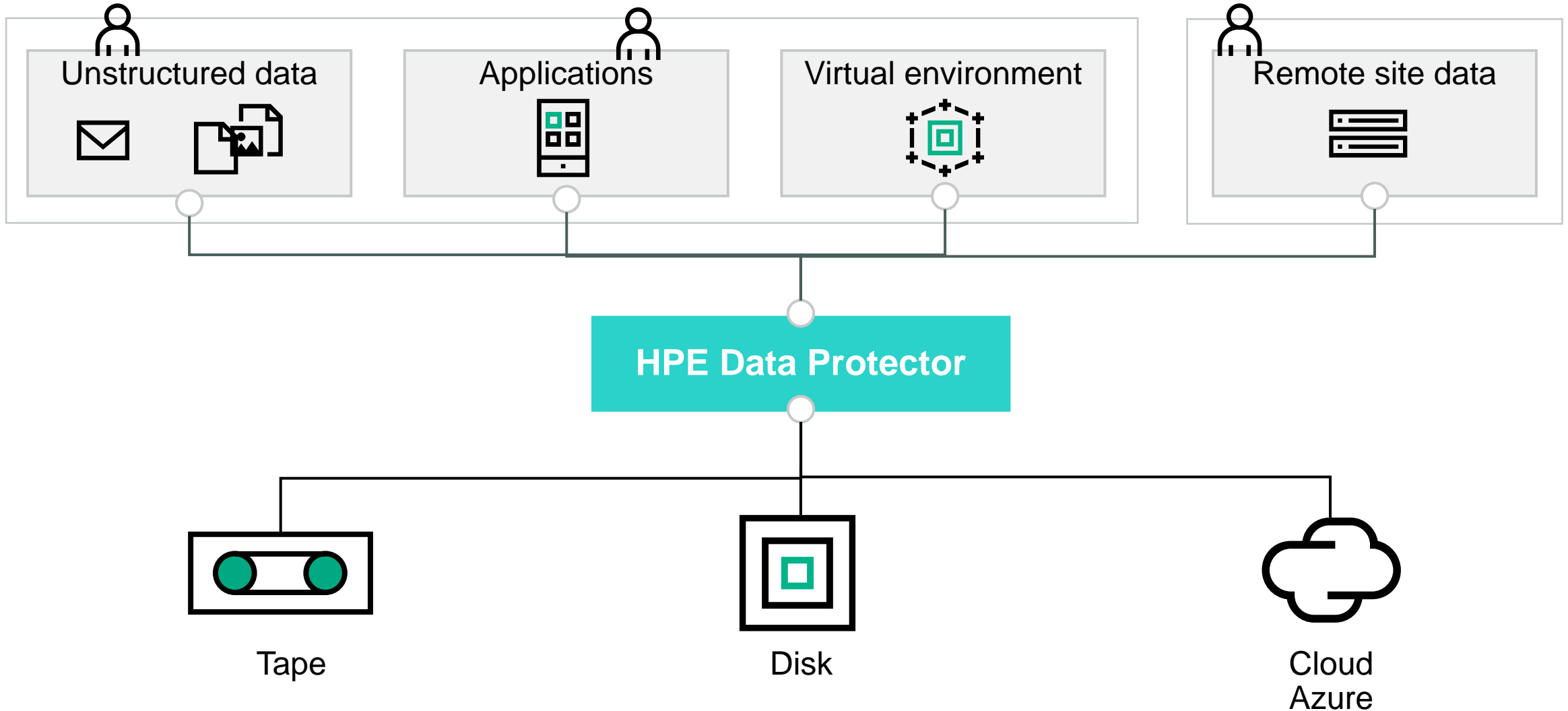
Customer survey shows analytics help improve backup and recovery

71% Reduced backup times	**57%** Reduced cost of storage	**78%** Reported improved restore times

Access more than **450** customer testimonials here

https://www.techvalidate.com/portals/hpe-data-protector

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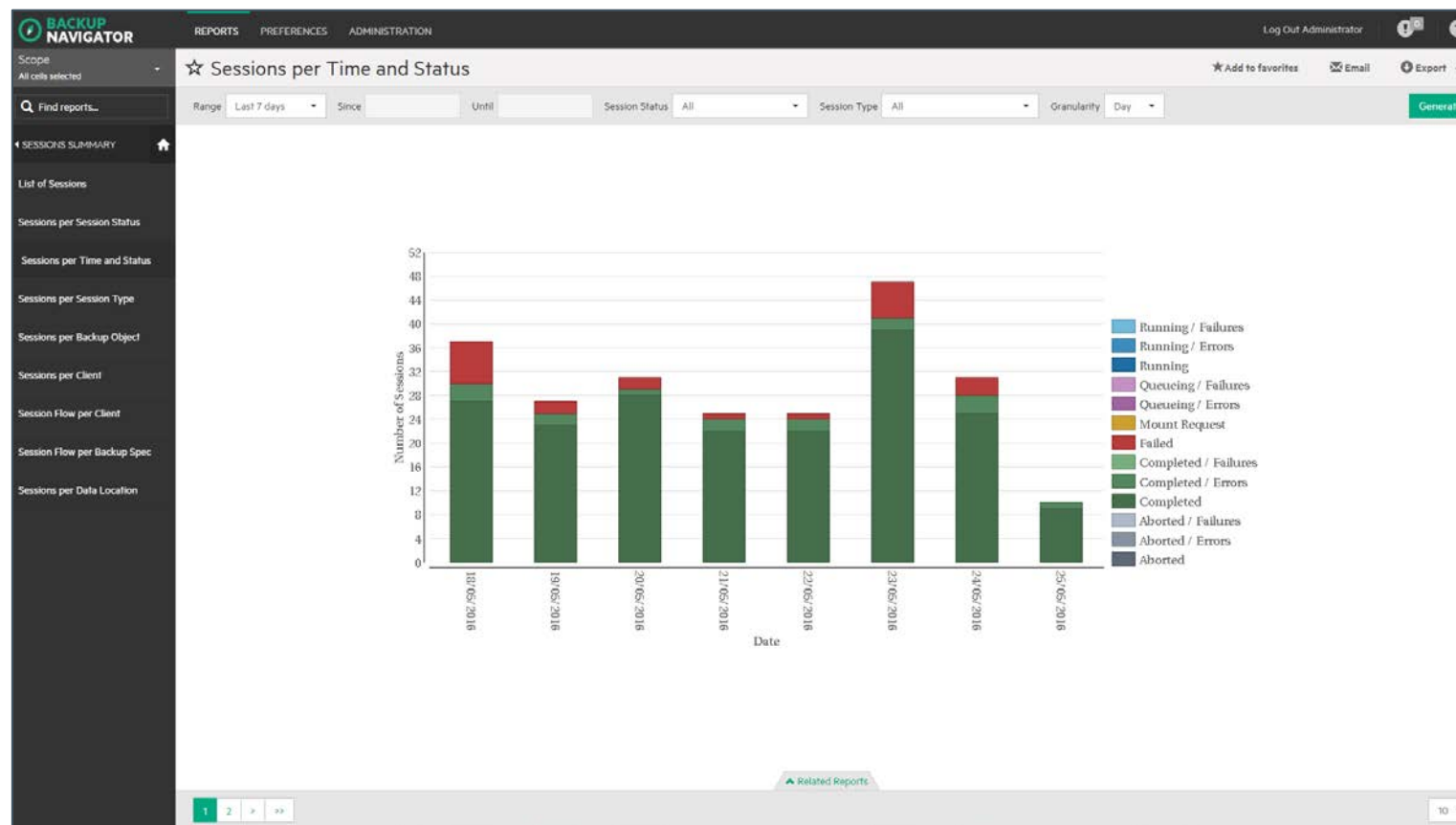Enterprise

HPE Backup Navigator – Analytics and advanced reporting

>90 Reports, 75+ KPIs

Schedule and Subscription-Based

Web-based User Interface, multi-user

Interactive Dashboards

Real-time Predictive Analytics

Analyze Data Protector infrastructure, locate and troubleshoot problems, simplify usage in multi-cell, multi-tenant environments

Customer scenarios: how analytics can improve backup

Gain insights into backup environment	Troubleshoot and resolve issues	Meet recovery point time needs	Predict issues, future resources

Session overview	Health/status monitoring and events	Application RPOs/RTOs	Data growth trends
Device / media / client summary	Most unreliable sessions/devices	Application prioritization	Data growth per client / backup specs
Physical & virtual infrastructure overview	Drill-down reporting & related reports	Average backup completion times	Deduplication report
Clients / VMs without backup	Remediation steps	Device utilization summary	Current / future backup schedules

How do I gain a full view of my backup environment?

How do I know protection gaps?

I see errors in the logs but I don't know what's causing it.

How do I quickly troubleshoot and resolve the issue?

I need to prove that we can meet recovery time objectives for some critical applications.

How do I find out that we can meet the RPOs/RTOs that are agreed upon?

I need to add more applications to my backup plan. Do I have enough capacity?

Will there be any potential resource conflicts?

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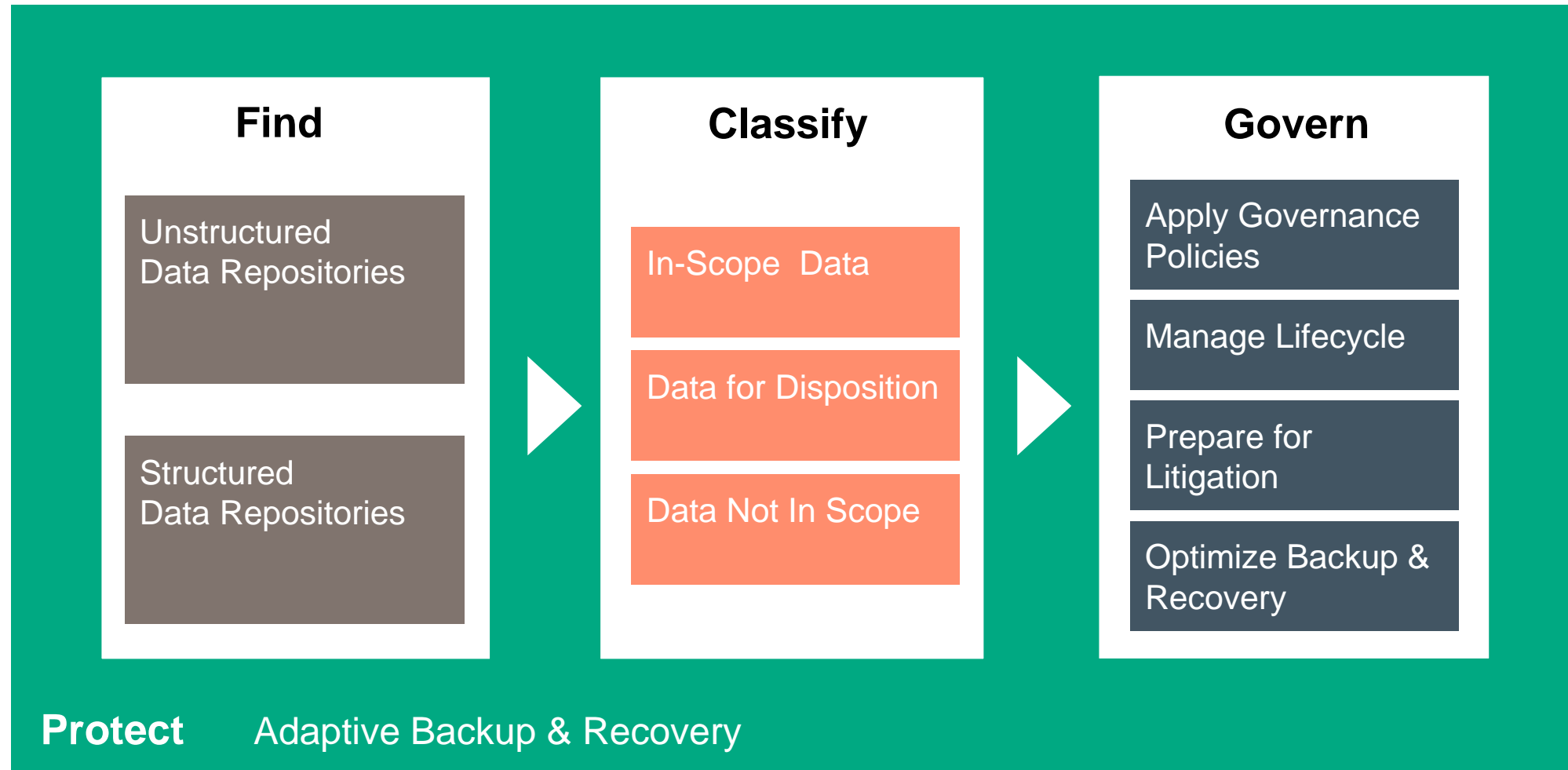
Resources

- ABR press release from 10/17
- ABR announcement blog

- A dedicated ABR page on hpe.com www.hpe.com/software/abr
- DP external page
- BN external page
- SO external page

- New ABR Video: Presentation + demo's.

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Going beyond ABR…

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Information Lifecycle Management & Governance

Find

Unstructured Data Repositories

Structured Data Repositories

Classify

In-Scope Data

Data for Disposition

Data Not In Scope

Govern

Apply Governance Policies

Manage Lifecycle

Prepare for Litigation

Optimize Backup & Recovery

Protect Adaptive Backup & Recovery

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Information Lifecycle Management & Governance

Find

Classify

Govern

Data Repositories

Applications

Files

Email

Document Management

SharePoint

Messaging

Data Warehouses

Social Media

Web Content

SDM	Control Point

Analyse

Read

Declare

SDM	Control Point

Action

Apply

Eligible Records

Store

Policy Center

Apply Retention rules

Compliance, Legal Hold & Audit

Content Manager

Record Repository

Content Manager

Data Archive

Database

Third Party

Backup to Microsoft Azure with DP

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Microsoft

Powers Microsoft Learning with HPE Data Protector and HPE Storage

Challenge
- Management overhead to ensure that data is correctly configured
- Backup and restores cumbersome, taking a very long time
- Thousands of servers, many virtualized, must be efficiently and rapidly backed up and replicated to Microsoft Azure

Solution
- HPE Data Protector, HPE StoreOnce, HPE 3PAR StorServ

Result
- Application restores fast and easy
- Granular restores of databases, log files, transaction files, etc.
- Reassurance that data is fully protected
- Streamlined management
- Customers know that their data is safe and intact

Watch Microsoft in a video testimonial

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Why using the cloud for backup?

- **Scalability**
- **Pay-as-you-grow**
- **Reduce administrative overhead**
- **Meet regulatory compliance requirements**

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# HPE Data Protector Backup or Copy to Cloud – Features

- Object Copy to Cloud. Backup to local device first for good performance.

- Supported for files and VMware VM's. Other data types to be added later.

- **Two options are available:**
  - Native directly to Cloud with OpenStack Swift (HPE Helion and Microsoft Azure)
  - Via gateway appliance (i.e. Amazon AWS or Microsoft StorSimple)

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Native copy to cloud

Copy to Microsoft Azure Cloud

MS Azure also provides an Object Storage interface used by DataProtector and it is basically used the same way. This ensures universal access across your backup/recovery strategy. Data is compressed and encrypted by default.

Backup / Restore activity

Object Copy

Backup Clients

Backup to disk device

Azure Cloud Storage
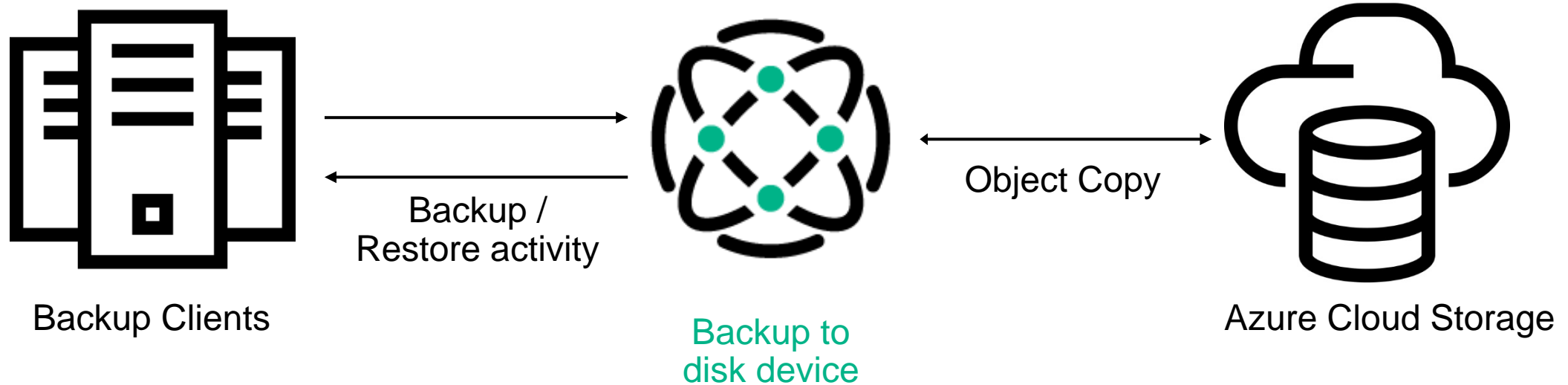
Backup to cloud via gateways

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Backup to Cloud via Microsoft StorSimple Gateway

- MS StorSimple is an appliance/gateway approch to MS Azure
- It creates a iSCSI drive (LUN) which ca be easily seen by DP
- Backup is to a File Library on that LAN, StorSimple will upload/download with Azure
- Restore is also the same as ith any other device
- Data is optimized before being moving into the Cloud

Backup done
to File Library

Upload/Download

Access provided
by iSCSI LUN

Backup Clients

StorSimple
Gateway

Azure Cloud Storage

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