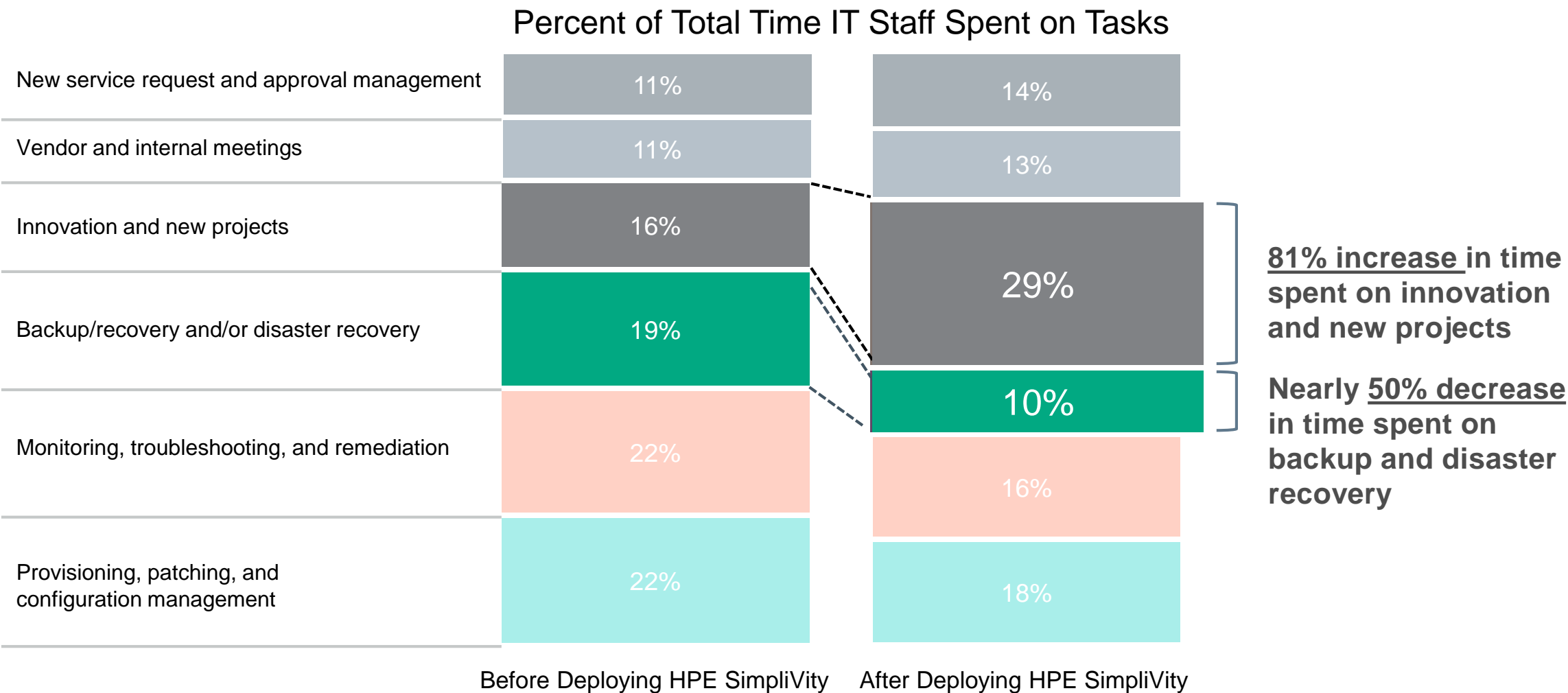# Simplifying IT with HPE SimpliVity

Real business impact with simplified virtual infrastructure

What your IT is busy with?

Percent of Total Time IT Staff Spent on Tasks

Task	Before Deploying HPE SimpliVity	After Deploying HPE SimpliVity
New service request and approval management	11%	14%
Vendor and internal meetings	11%	13%
Innovation and new projects	16%	29%
Backup/recovery and/or disaster recovery	19%	10%
Monitoring, troubleshooting, and remediation	22%	16%
Provisioning, patching, and configuration management	22%	18%

81% increase in time spent on innovation and new projects
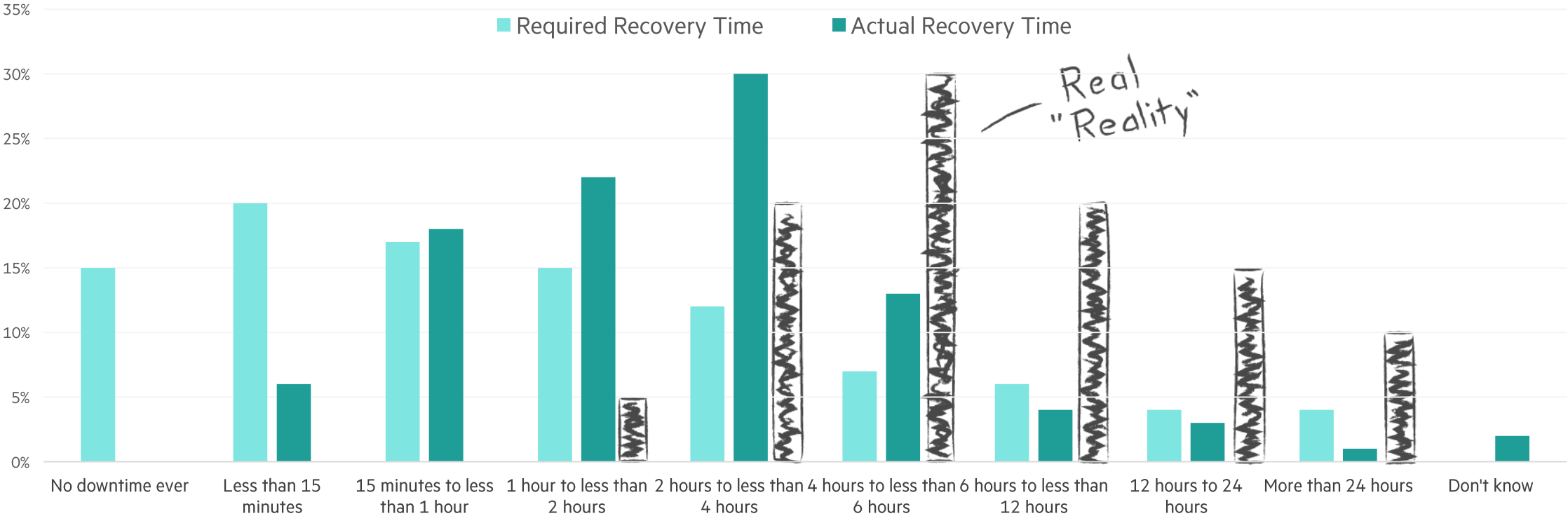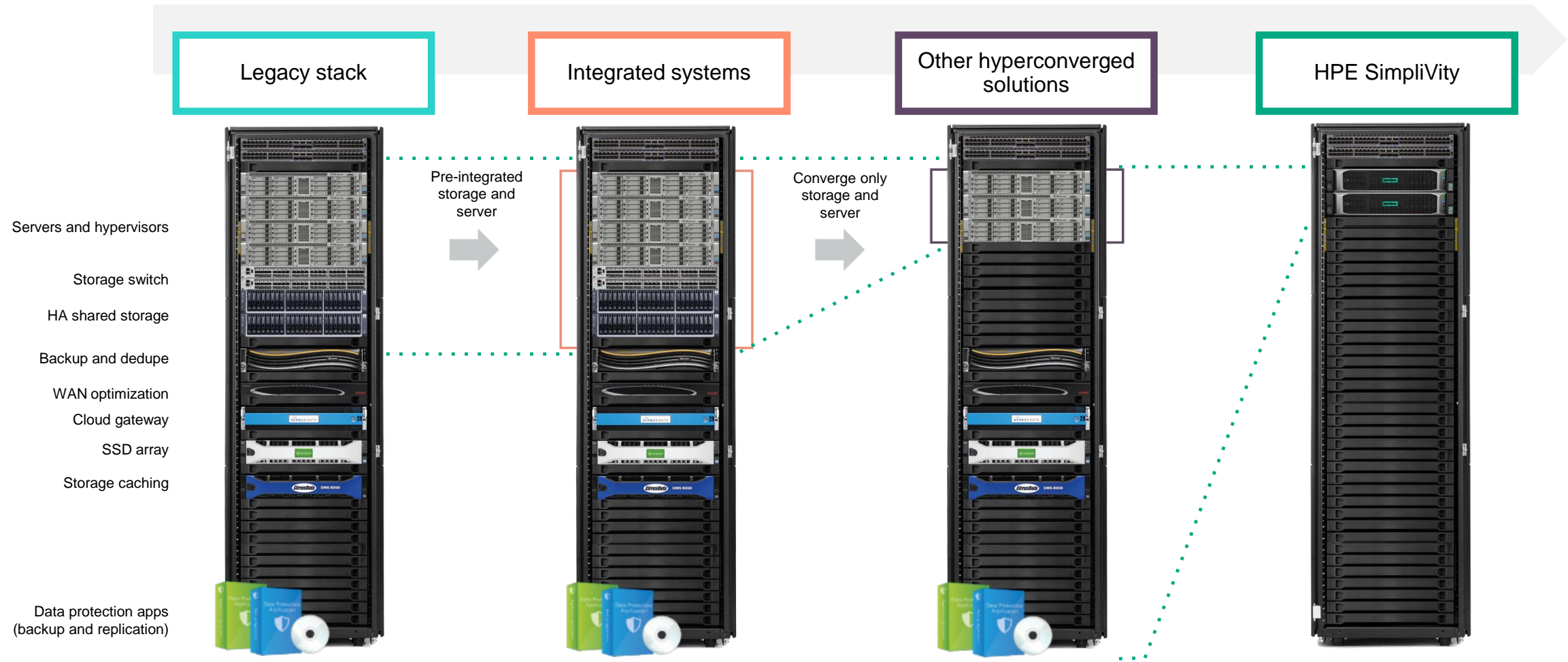
Nearly **50% decrease** in time spent on backup and disaster recovery

Hewlett Packard
Enterprise

Can IT deliver SLAs business demands?

Required Recovery Time   Actual Recovery Time

Real "Reality"

Categories: No downtime ever | Less than 15 minutes | 15 minutes to less than 1 hour | 1 hour to less than 2 hours | 2 hours to less than 4 hours | 4 hours to less than 6 hours | 6 hours to less than 12 hours | 12 hours to 24 hours | More than 24 hours | Don't know

Hewlett Packard
Enterprise

ESG

The evolution of hyperconvergence

Legacy stack

Integrated systems

Other hyperconverged solutions

HPE SimpliVity

Servers and hypervisors

Storage switch

HA shared storage

Backup and dedupe

WAN optimization

Cloud gateway

SSD array

Storage caching

Data protection apps
(backup and replication)

Pre-integrated storage and server

Converge only storage and server

Hewlett Packard Enterprise

HPE SimpliVity: the powerhouse in hyperconvergence

The industry's most powerful hyperconverged platform with best-in-class data services

Legacy servers and hypervisor

Storage switch

HA shared storage

Backup and dedupe

WAN optimization

Cloud gateway

SSD array

Storage caching

Data protection apps
(backup and replication)

Hewlett Packard
Enterprise

Collapse the stack with advanced data services in a single building block

– Integrated with hypervisor (vSphere or Hyper-V) to run virtualized workloads on x86 resource pool

– All functionality managed via existing native hypervisor tool (vCenter, SCVMM)

– High resiliency, with integrated backup and DR functionality to rapidly recover

– Performance improved with data locality, all-flash, and inline deduplication and compression

– Reduced costs compared to legacy IT

– Designed for simplicity, easy deployment and scale, and both hypervisor and hardware independence

HPE SimpliVity Data Virtualization Platform

A modern data architecture

Global VM-Centric Management and Mobility

Built-in Resiliency, Backup, and Disaster Recovery

Guaranteed Data Efficiency

HPE SimpliVity Data Virtualization Platform
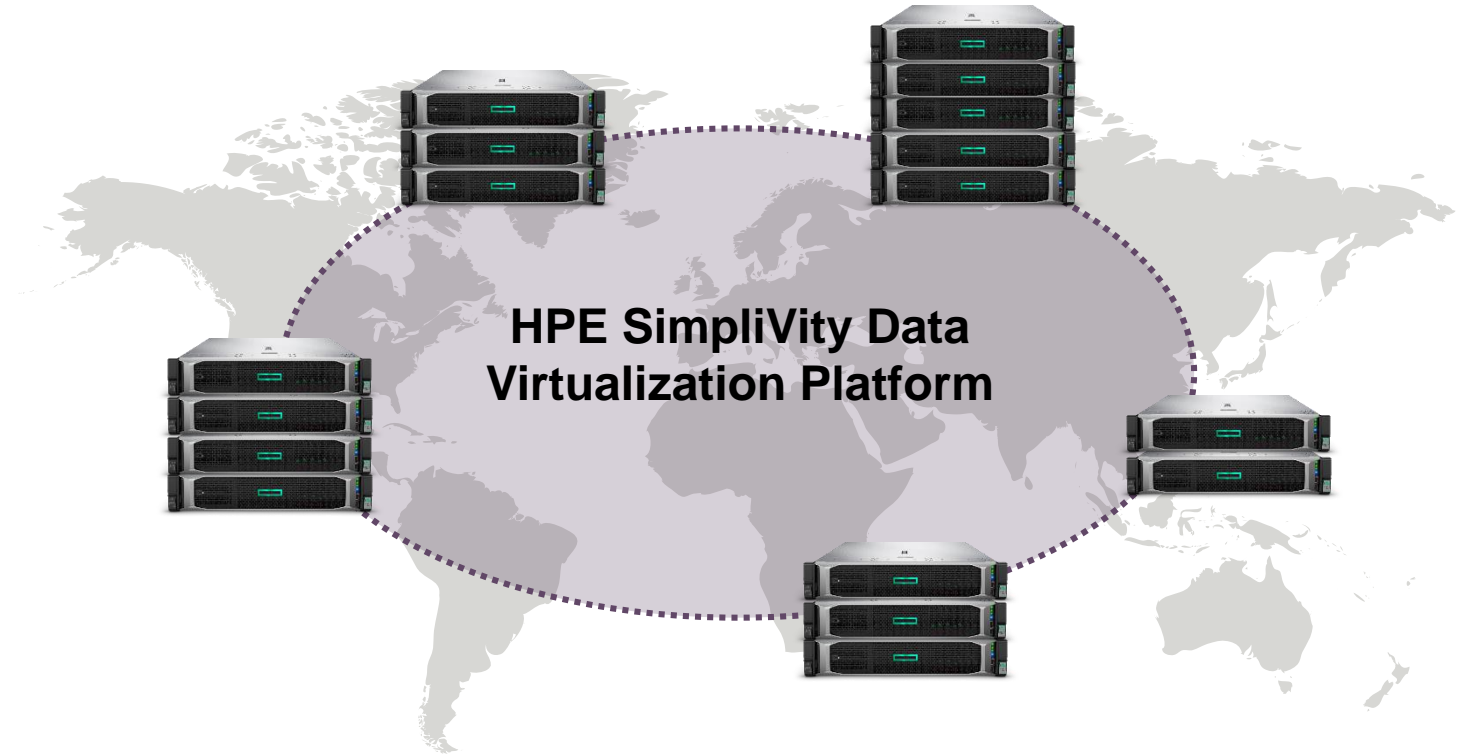
- Manage resources in a federated pool
- Seamlessly move data across sites
- Eliminate islands

Hewlett Packard Enterprise

8

Increase admin speed and productivity

Global VM-centric management and mobility

- Policy-based, VM-centric management

- No LUNs, shares or volumes

- Native tool integration and REST API for extensibility

- Single view of all data centers and remote offices/branch offices (ROBOs)
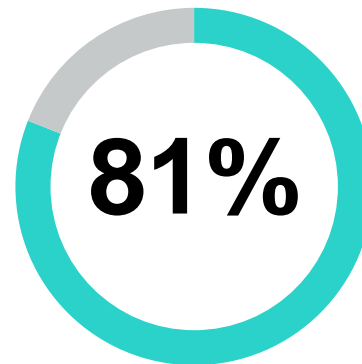
81% **increase** in time available to focus on apps and new projects

IDC
Analyze the Future

Hewlett Packard
Enterprise

Efficiency gains from built-in resiliency, back-up and disaster recovery

Built-in resiliency, backup, and disaster recovery

- Disk-level and node-level protection of data
- Full logical backups with near-zero overhead
- Reduce RTOs and RPOs from hours to minutes
- Simple, affordable offsite data recovery

51% of customers using HPE SimpliVity built-in data protection **retired existing third-party backup or replication** (IDC)[1]

70% **improvement in backup/recovery and DR** reported by HPE SimpliVity customers (IDC)[1]

57% of HPE SimpliVity customers **reduced recovery times** from days or hours to minutes (TechValidate)[2]

IDC
Analyze the Future

TechValidate™

[1]IDC white paper, "HPE SimpliVity Hyperconvergence Drives Operational Efficiency and Customers are Benefiting," June 2017
[2]2017 TechValidate survey of HPE SimpliVity infrastructure customers

Hewlett Packard
Enterprise

10

Data efficiency improves capacity, speeds recovery

Guaranteed data efficiency

- Always-on compression and deduplication

- All data at inception, globally

- Guaranteed 90% capacity savings across primary storage and backup*

- Consistent, high performance with offload to HPE OmniStack Accelerator Card

52:1

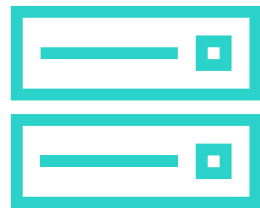Customers average **52:1 efficiency** > 1/3rd surveyed achieve over 100:1[1]

FORRESTER®   TechValidate™

Save 90% capacity across storage and backup combined[2]

[1] Reported in Forrester Total Economic Impact Study, 2017; TechValidate survey data
[2] HPE SimpliVity HyperGuarantee applies to current HPE SimpliVity and HPE OmniStack products and the new HPE SimpliVity 380 product.

Start small and scale out – from pilot to production

– Start at two nodes

– Fast and simple deployment

– Linear scale to match demand

Initial pilot
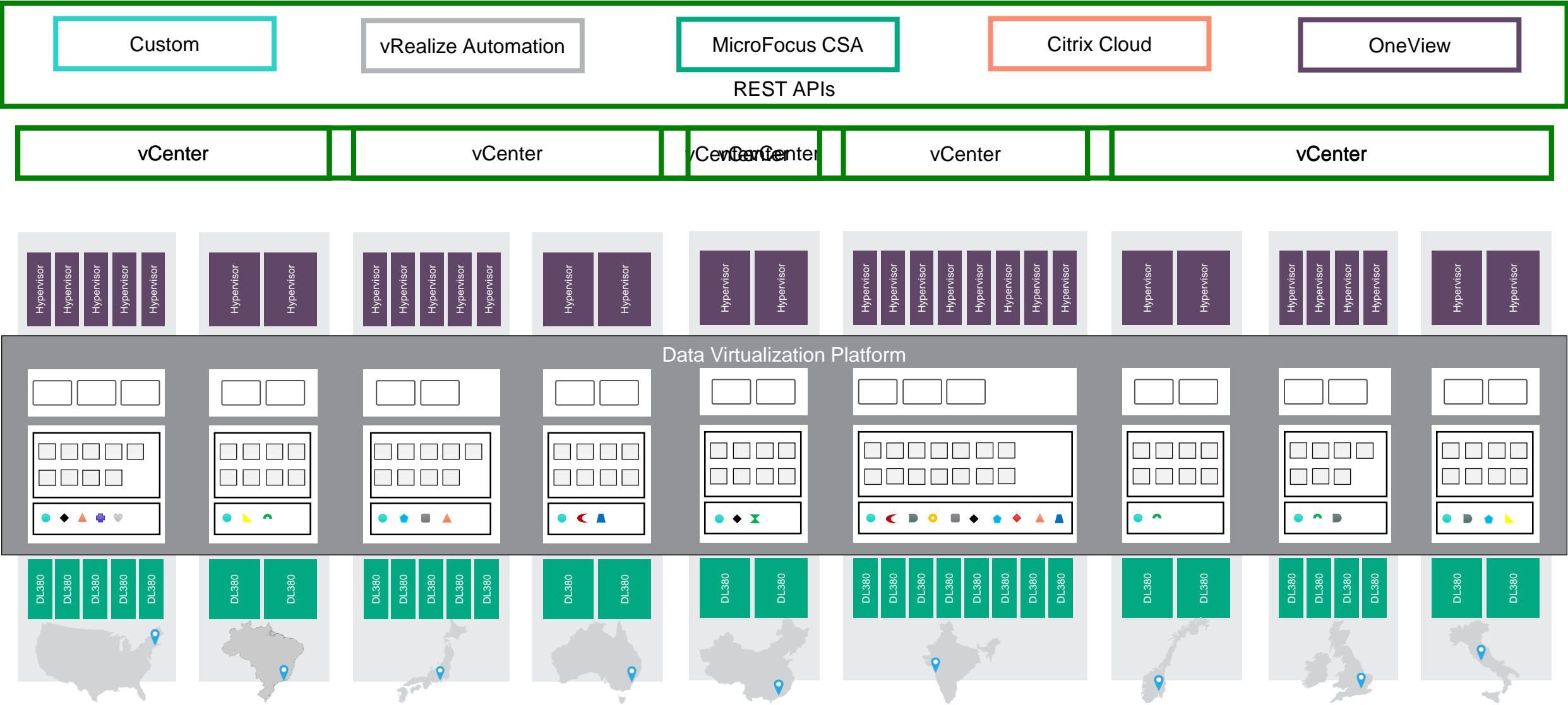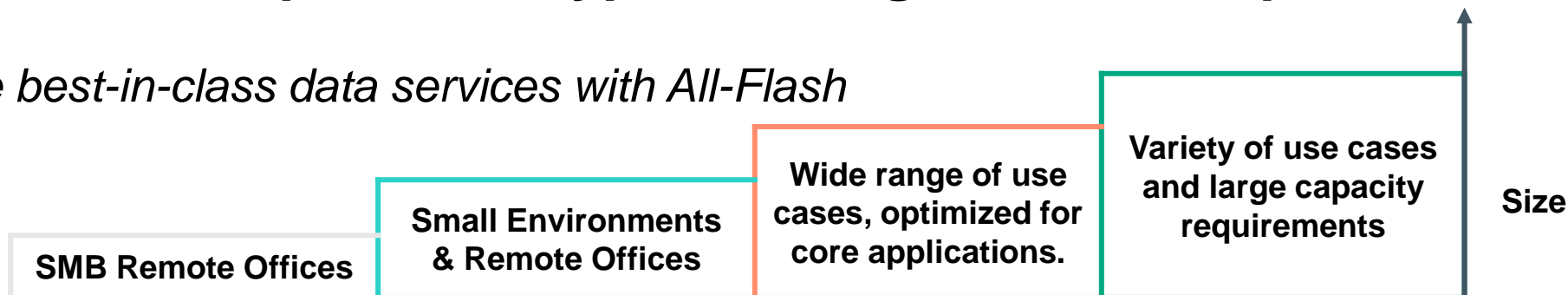
Production
rollout

Expanded
rollout

Hewlett Packard
Enterprise

13

Global scale and automation

| Custom | vRealize Automation | MicroFocus CSA | Citrix Cloud | OneView |

REST APIs

| vCenter | vCenter | vCenter | vCenter | vCenter | vCenter |

Data Virtualization Platform

HPE SimpliVity 380: Most powerful hyperconverged All-Flash portfolio

Unite best-in-class data services with All-Flash

Variety of use cases and large capacity requirements

Size

Wide range of use cases, optimized for core applications.

Small Environments & Remote Offices

SMB Remote Offices

	Extra Small	**Small**	**Medium**	**Large/Extra Large**
CPU	Latest Intel Xeon Scalable Processor Family spanning single, dual socket and multi-cores			
Memory	HPE Smart Memory DDR4 spanning various configurations up to 1436 GB			
Effective Capacity	3 – 6 TB	6 – 12 TB	12 - 25 TB	Large: 20 - 40 TB Extra Large: 40 - 80 TB
Storage Configurations*†	5 x 960 GB SSD RAID-5	5 x 1.92 TB SSD RAID-5	9 x 1.92 TB SSD RAID-6	Large: 12 x 1.92 TB SSD Extra Large: 12 x 3.84 TB RAID-6
New Common Options	GPU Accelerator for VDI , End User Computing* Data at Rest Encryption for Data Privacy RapidDR for DR automation* FlexCapacity consumption options			
Common Features	Accelerated Inline Dedupe/Compression, High Availability, Redundant Power, VM-centric Policy-based Backup/Recovery/DR, Replication, VM Mobility, Integrated Management via hypervisor (VMware, MSFT SCVMM)			

* For VMware, available in two versions, 6000-series and 4000-series except for Extra Large 4000-series
† For Microsoft Hyper-V, available for 4000-series in Extra Small, Small, Medium, and Large configurations
   6000-series is best for high performance, IO intensive mixed workloads
   4000-series is best for typical workloads (heavy reads/lower ratio of writes) at lower cost than the 6000-series.

HPE SimpliVity 2600 for VDI and ROBO

Server Node Models	CPU configuration	Memory	Storage configuration	Effective storage capacity	RAID configuration
HPE SimpliVity 170	1-2P Intel Xeon 8-22 Cores per socket	256–768 GB	6 x 1.92 TB SSD	7–15 TB	Multi-tier (RAID 1+0 + RAID 5)
	Minimum 2 nodes per chassis Maximum 4 nodes per chassis				
HPE SimpliVity 190	2P Intel Xeon 8-22 Cores per socket	256–768 GB	6 x 1.92 TB SSD	7–15 TB	Multi-tier (RAID 1+0 + RAID 5)
	2 nodes per chassis Two optional PCIe GPU or NIC supported with HPE SimpliVity 190 models				

HPE SimpliVity HyperGuarantee

HyperEfficient — 90% capacity savings across all of your storage including backup.

HyperProtected — 60-seconds or less on average for local backup or restore a 1 TB VM.

HyperSimple — 3 clicks to backup, restore, clone or move a VM from a single console.

HyperManageable — 60-seconds or less on average to create or update backup policies for 1000s of VMs across dozens of remote sites from a single console.

HyperAvailable — Add or remove a local or remote HPE SimpliVity system without downtime, without interruption to local or remote backups, and without reconfiguration of backup policies or IP addresses

Use cases and customer results

Hewlett Packard
Enterprise

Top use cases for HPE SimpliVity

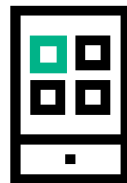**Data center consolidation**

ROBO

VDI

Private cloud
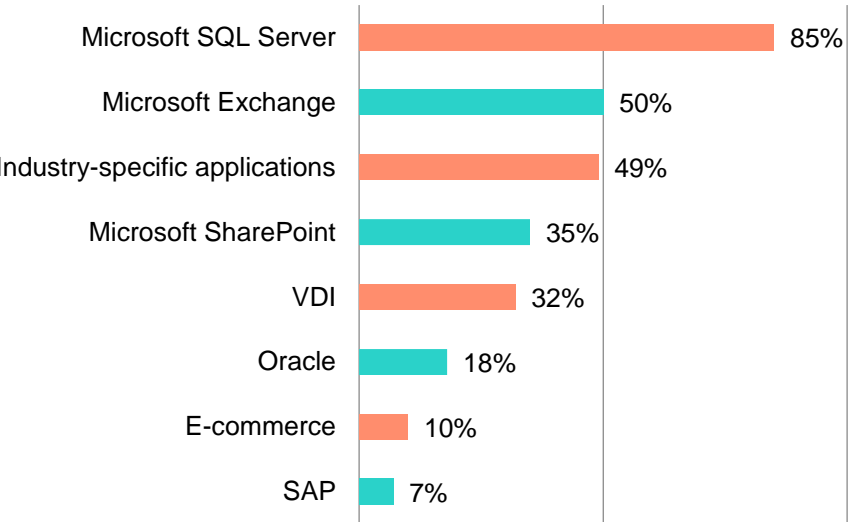
Tier-1 applications

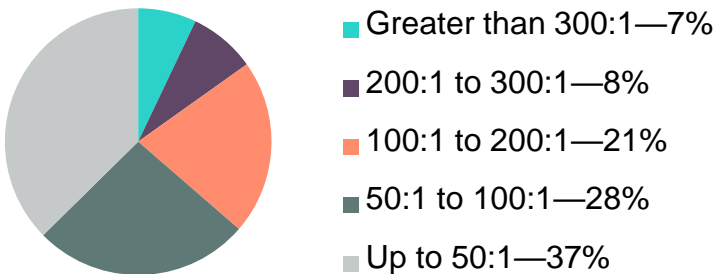**Data protection**

Test/dev

Independently validated usage data

Production workloads running on HPE SimpliVity
Which application types are you running or planning to run on HPE SimpliVity?

Application	Percentage
Microsoft SQL Server	85%
Microsoft Exchange	50%
Industry-specific applications	49%
Microsoft SharePoint	35%
VDI	32%
Oracle	18%
E-commerce	10%
SAP	7%

Majority of customers run
>75%
of virtualized workloads on HPE SimpliVity

HPE SimpliVity enables dramatic efficiency
Since deploying HPE SimpliVity, what efficiency benefits have you realized or what do you expect to realize regarding IO and capacity savings?

- Greater than 300:1—7%
- 200:1 to 300:1—8%
- 100:1 to 200:1—21%
- 50:1 to 100:1—28%
- Up to 50:1—37%

HPE SimpliVity provides dramatic application performance improvements
Since deploying HPE SimpliVity, how much have you improved or do you expect to improve performance?

- Greater than 75%—19%
- 50% to 75%—41%
- 25% to 50%—28%
- Up to 25%—12%

>1/3 with
>100:1
Data efficiency
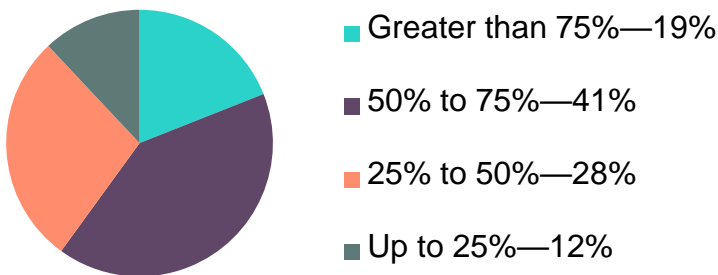
88% of
customers see dramatic increases in application response times

For example, 911 system, healthcare application, legal case management, CAD/CAM, and so on.
Source: TechValidate, IDC, and internal research

Cost efficiencies and streamlined operations versus legacy IT

Financial Analysis (risk-adjusted)
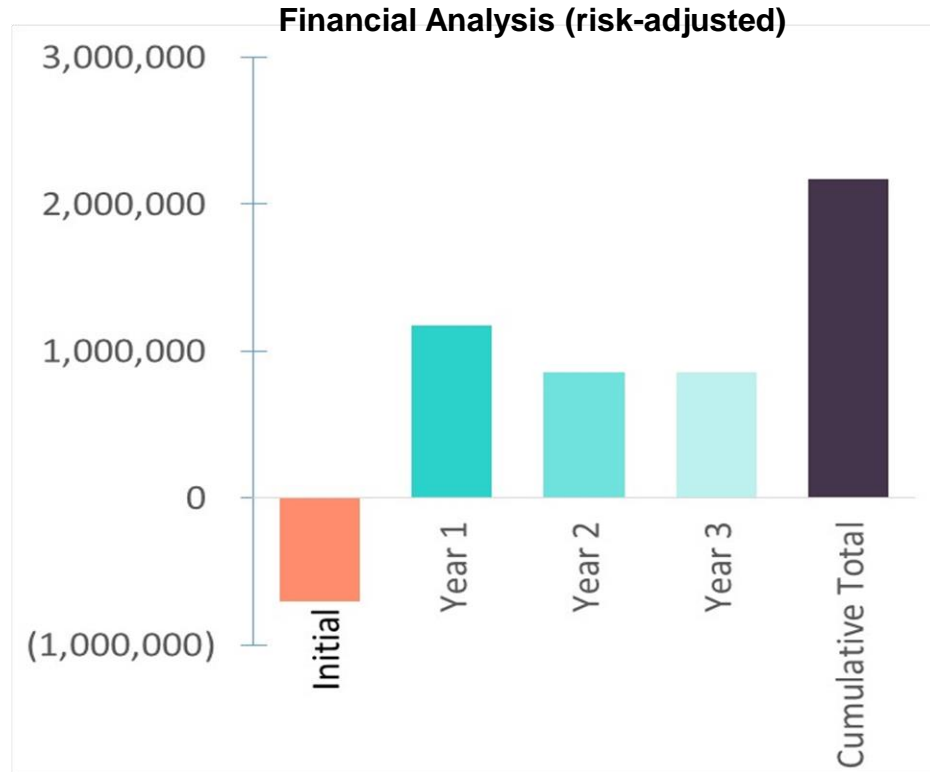
| 183% ROI | 7.2 month payback | 69% cost savings |

FORRESTER®

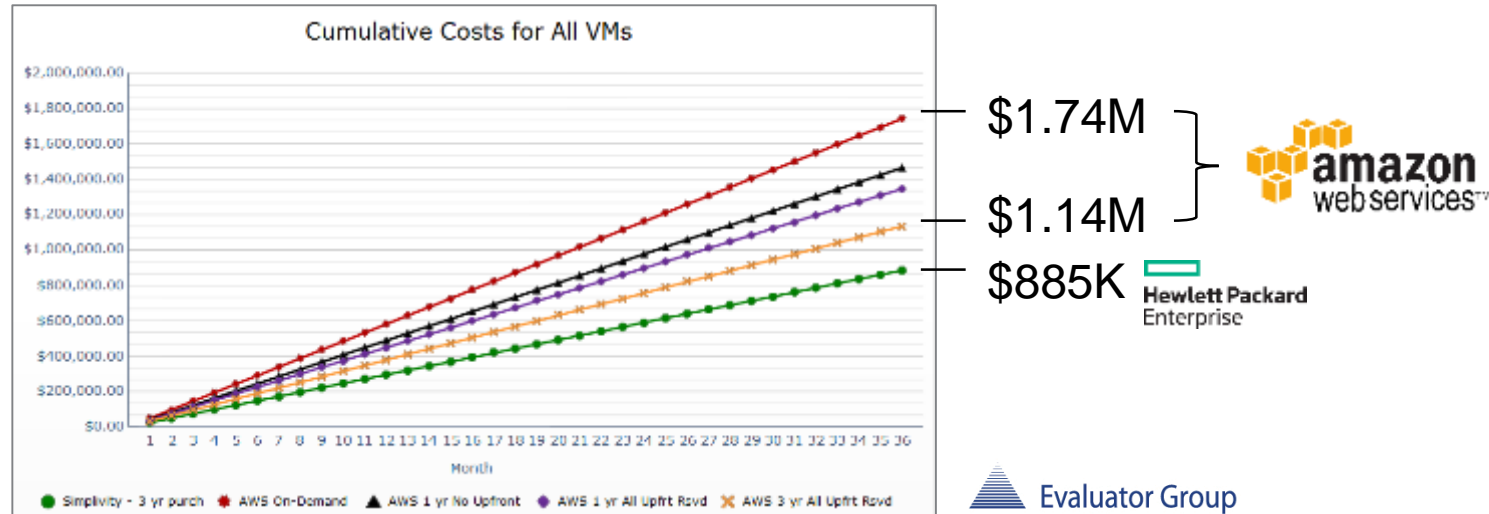*Independent commissioned study conducted by Forrester Consulting*

- Increased storage efficiency: **52:1**
- Reduced data center footprint: **10:1**
- Backup management savings: **25 hours/ week**
- Consulting hour savings: **50% reduction in first year**

- More time back for innovation
- Increased application performance
- Improved disaster recovery
- Unified management

HPE SimpliVity TCO up to 55% less than Amazon Web Services

Cumulative total costs over 3 years for 515 VMs

Cumulative Costs for All VMs

$1.74M — amazon web services™

$1.14M — Hewlett Packard Enterprise

$885K

Evaluator Group

- – Simplified setup and install
- – Data and storage efficiency gains
- – More VMs per admin
- – 4% less per VM than AWS

22%
less TCO than AWS 3 year all upfront reserved

55%
less TCO than AWS On-Demand

ROBO Efficiency with HPE SimpliVity

Edge - SimpliVity 2600

- Efficiency where at edge sites where requirements are low
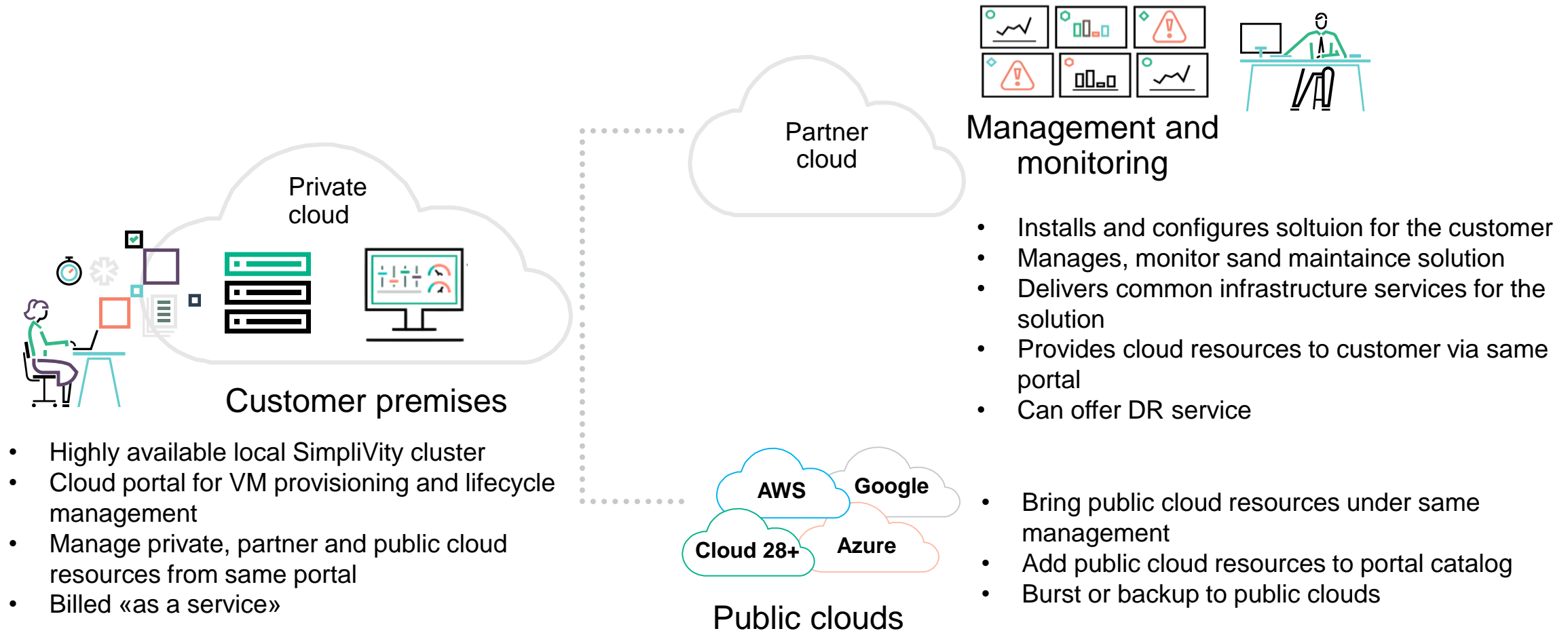- Up to 96 nodes total per federation
- Keep management centralized

Core – Simplivity 380

- Centralize DR and data protection at headquarters or core data centers
- Backup and replicate data from the edge to the core
- No need for fat links or WAN acceleration
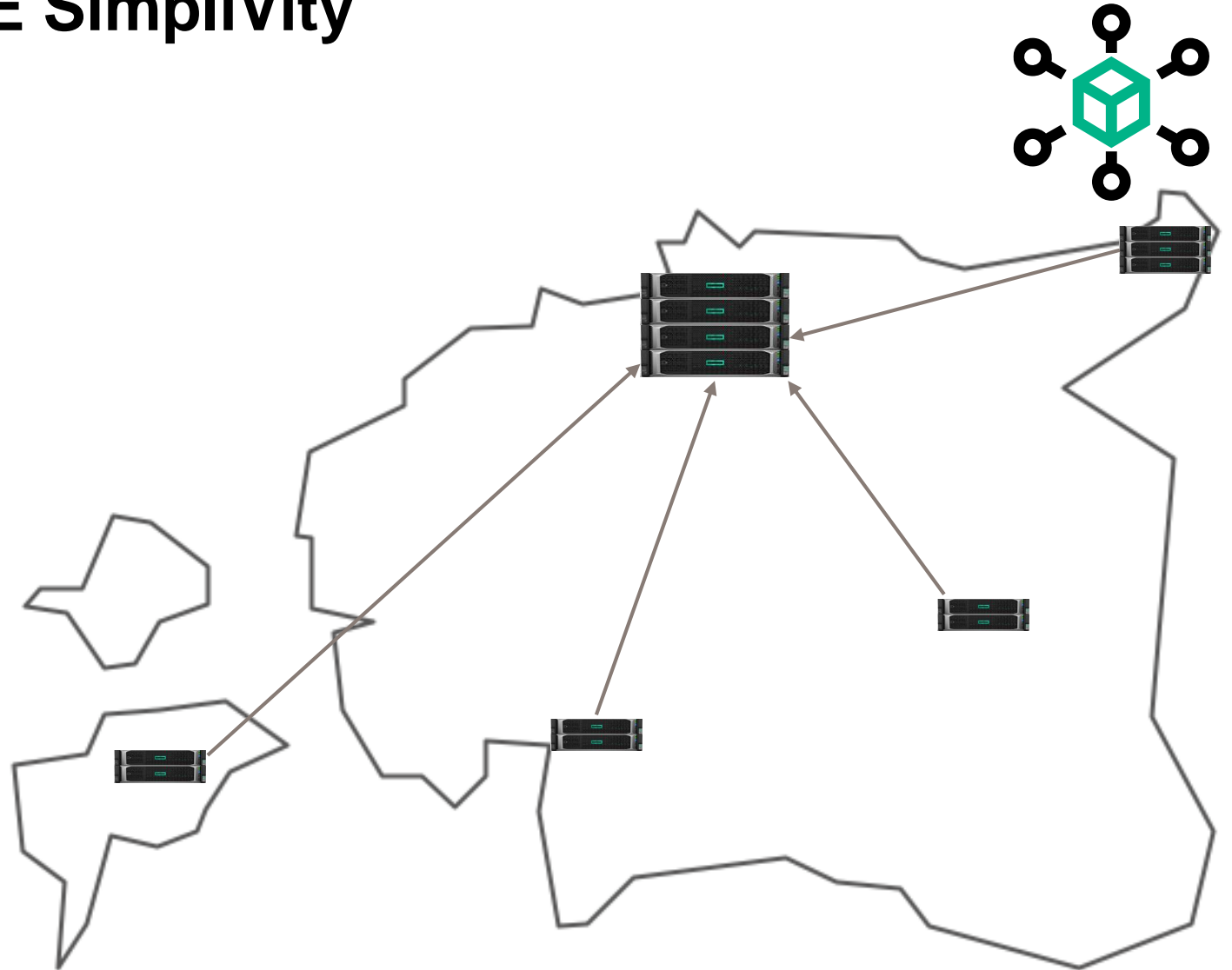
Managed Hybrid cloud solution based on HPE SimpliVity
Addresses both on-premises and public cloud resource management

Private cloud

Customer premises

- Highly available local SimpliVity cluster
- Cloud portal for VM provisioning and lifecycle management
- Manage private, partner and public cloud resources from same portal
- Billed «as a service»

Partner cloud

AWS   Google

Cloud 28+   Azure

Public clouds

Management and monitoring

- Installs and configures soltuion for the customer
- Manages, monitor sand maintaince solution
- Delivers common infrastructure services for the solution
- Provides cloud resources to customer via same portal
- Can offer DR service

- Bring public cloud resources under same management
- Add public cloud resources to portal catalog
- Burst or backup to public clouds

Hewlett Packard
Enterprise

24

HPE makes Hybrid IT simple with Software-Defined Infrastructure

Simplify virtual apps and data - accelerate app performance, speed business continuity, lower costs and enable multi-cloud

4.5X
Better application performance than traditional IT

<1
Minute to backup and restore a 1TB VM - Guaranteed

69%
Cost savings compared to traditional IT and up to 55% compared to public cloud

Thank you