



Hyper-converged Infrastructure의 이해와 활용

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“Uberization” in markets of excess capacity



The leader for **ground transportation** services doesn't even own a car.



The market leader for **accommodation** services doesn't even own a bed.



The **retail** leader doesn't own or deliver any product.



The most popular **website** doesn't own or produce any content.

Disruptive business models in markets of excess capacity



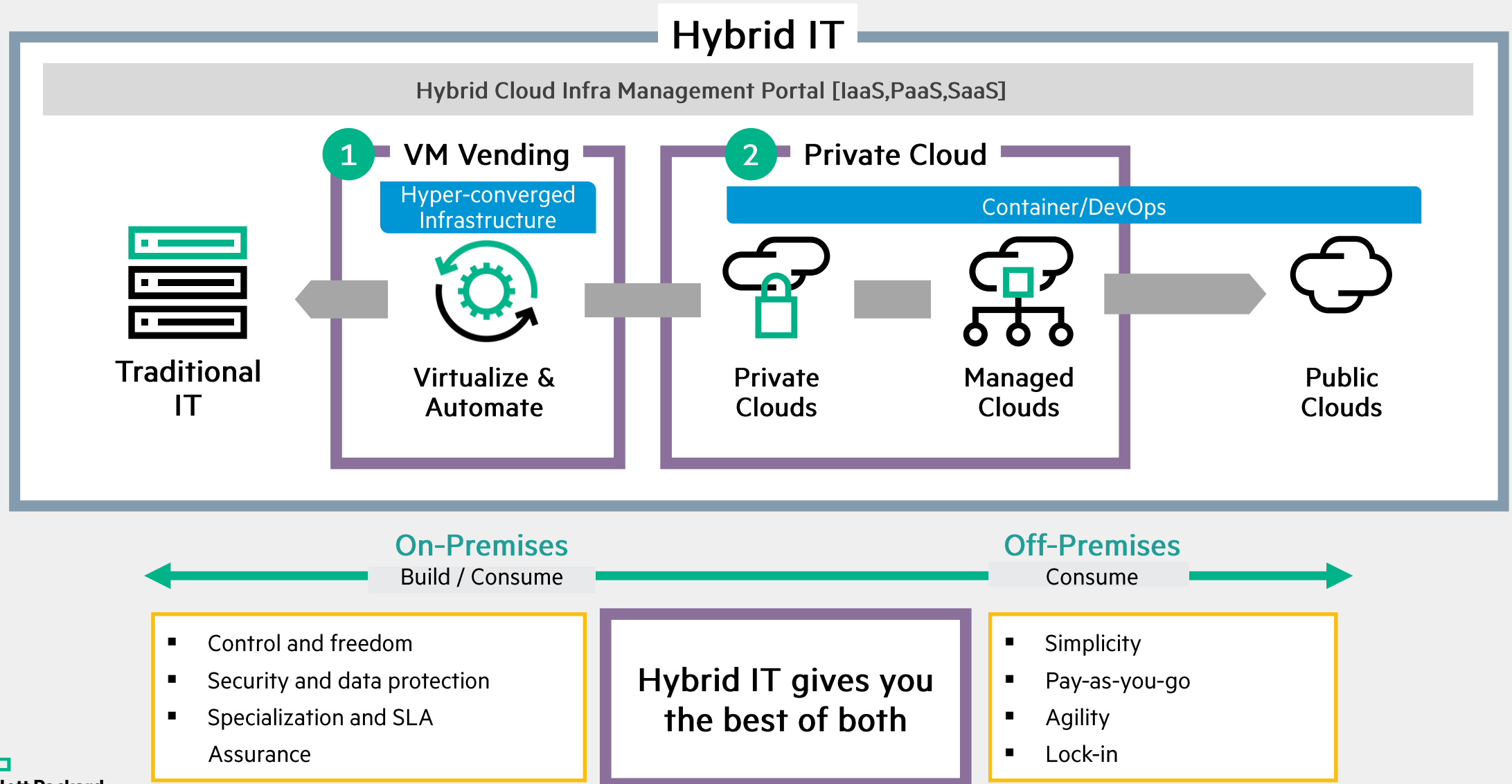
**Hewlett Packard
Enterprise**

Age of Digitization

- SDDC based hybrid cloud

- Cloud native application

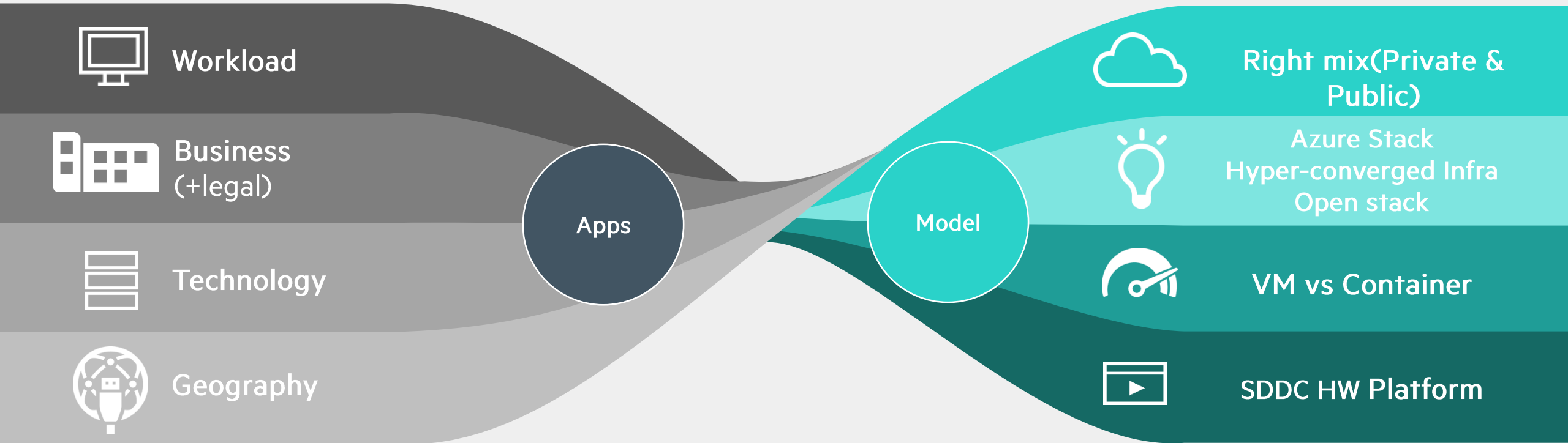
Define your right consumption mix



Apps are the most important components for Cloud model

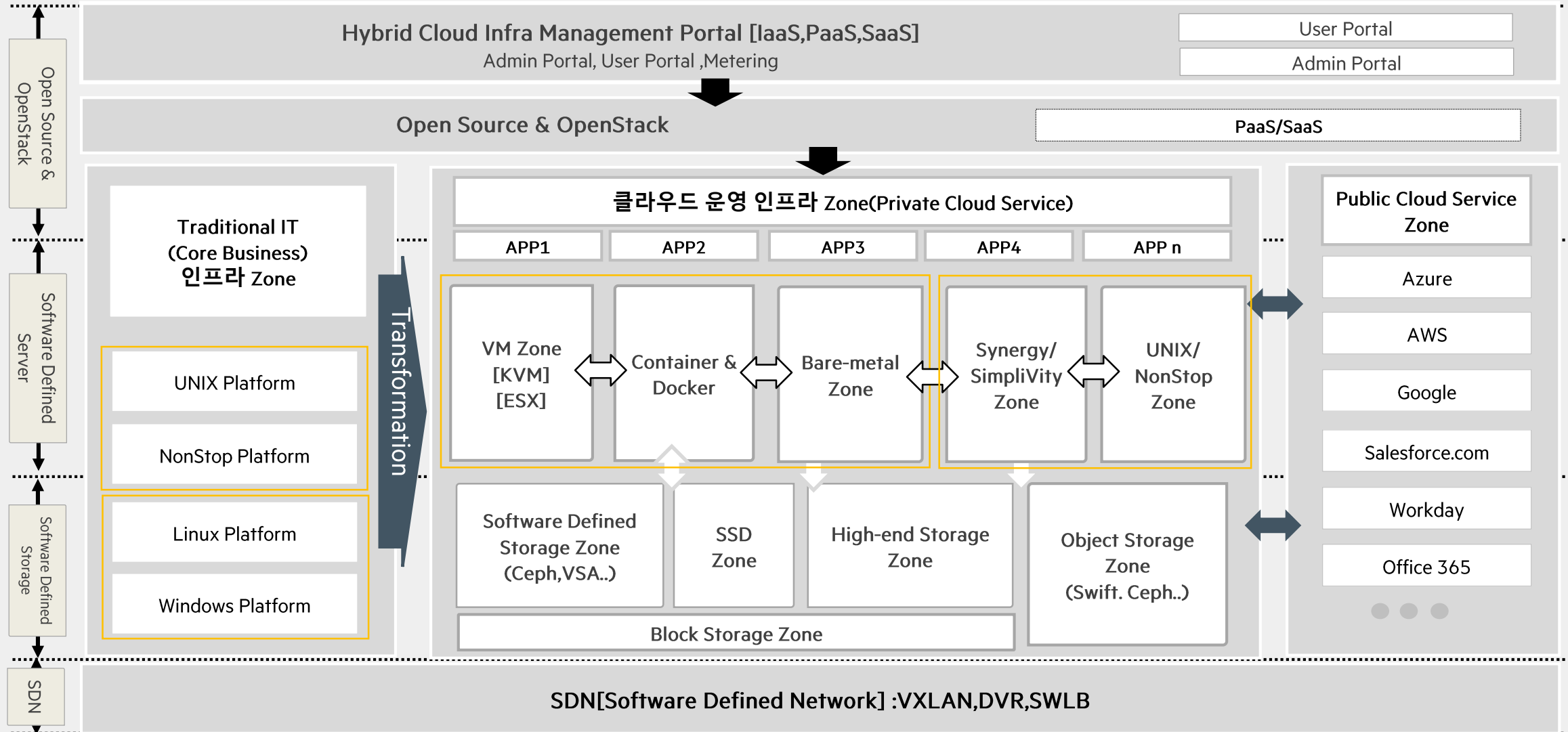
Apps의 특성

Hybrid IT의 모델



Apps의 특성에 따라 Hybrid IT Model이 결정됨

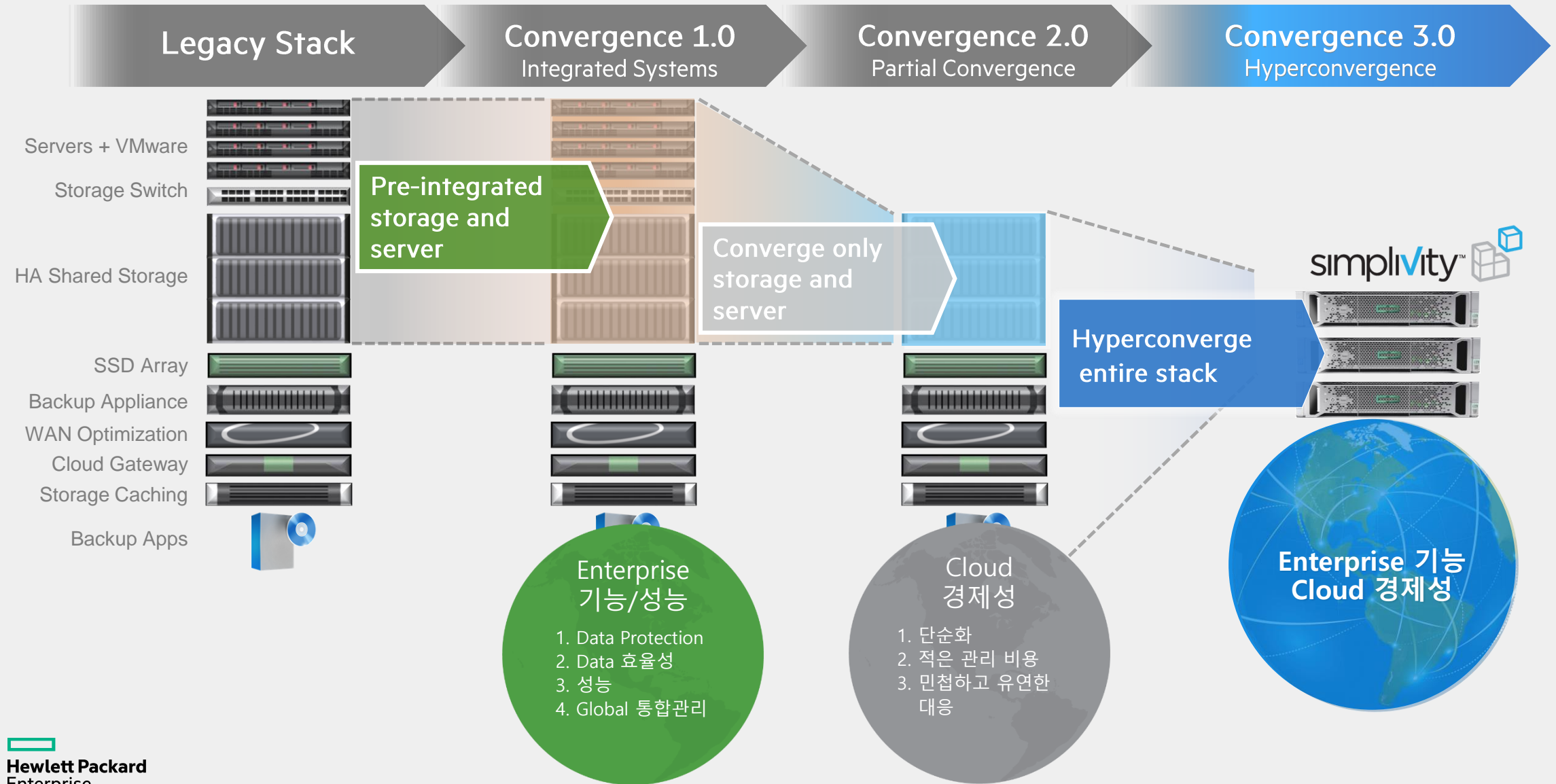
Hybrid IT Model





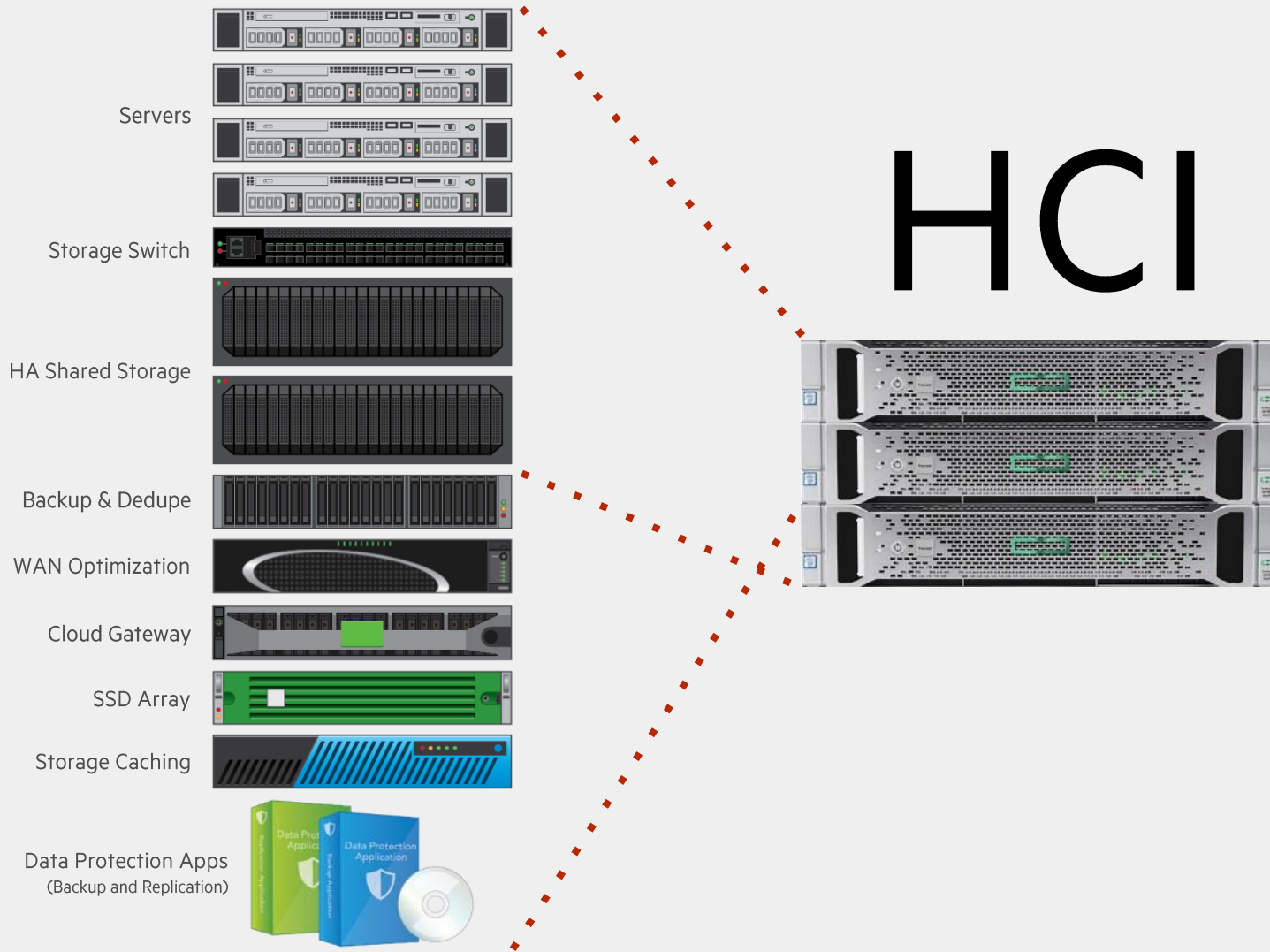
Hyper-converged Infrastructure

Evolution of Convergence



HCI

IT 인프라 단순화
CAPEX 절감
OPEX 절감
TCO 절감



Powered by
HPE SimpliVity
Data Virtualization Platform

73% TCO Reduction

10:1 Device Reduction

40:1 Average Storage Reduction

Hyper-convergence 효과

IT 비용 절감효과
연속적인 운영환경



1. 전통적인 IT infrastructure 대비하여 73% TCO 절감효과 - a 3.7x 절감 (Forrester Consulting)
2. 10:1 device 감소 (Forrester Consulting)
3. Public Cloud Service 업체와 비교하여 49% TCO 절감효과 (Evaluator Group)

민첩한 업무 대응
생산적인 업무 시간



1. 81%의 관리시간을 절감하여 새로운 projects에 시간 할당 (IDC)
2. 1,000 VMs 을 최대성능/ 예측가능 성능까지 빠르게 확장 가능 (ESG)
3. 1시간 : 8-node cluster 구성 (ESG)

Maximize Uptime
Data loss 방지



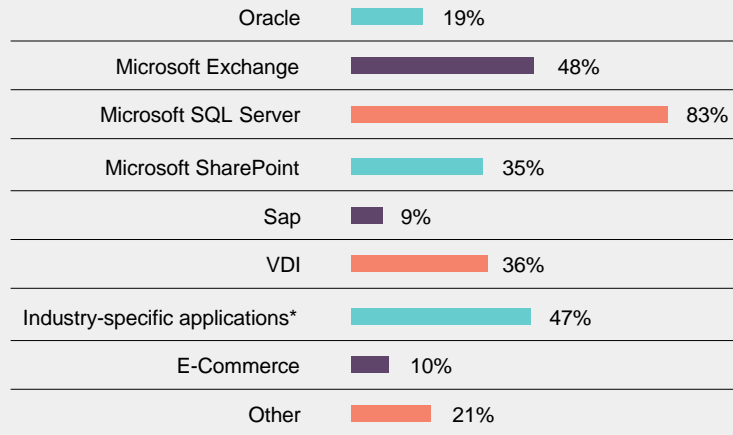
1. 57% 고객이 days/hours에서 minutes으로 recovery time의 개선효과 (TechValidate)
2. 70% 고객이 backup/recovery/DR 개선효과 (IDC)
3. 대다수의 고객이 기존에 사용하던 third-party backup / replication solutions을 Simplivity에 포함된 solutions으로 변경(IDC)



HCI Workloads

Production workloads running on HPE SimpliVity

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



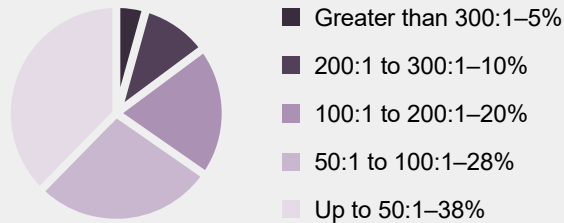
Majority of customers run

>75%

of virtualized workloads on HPE SimpliVity

HPE SimpliVity enables dramatic efficiency

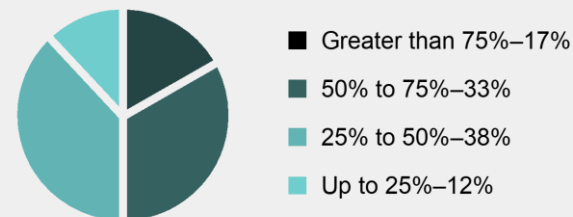
Since deploying HPE SimpliVity, what efficiency benefits have you realized or what do you expect to realize regarding IO and capacity savings?



>1/3 with
>100:1
Data Efficiency

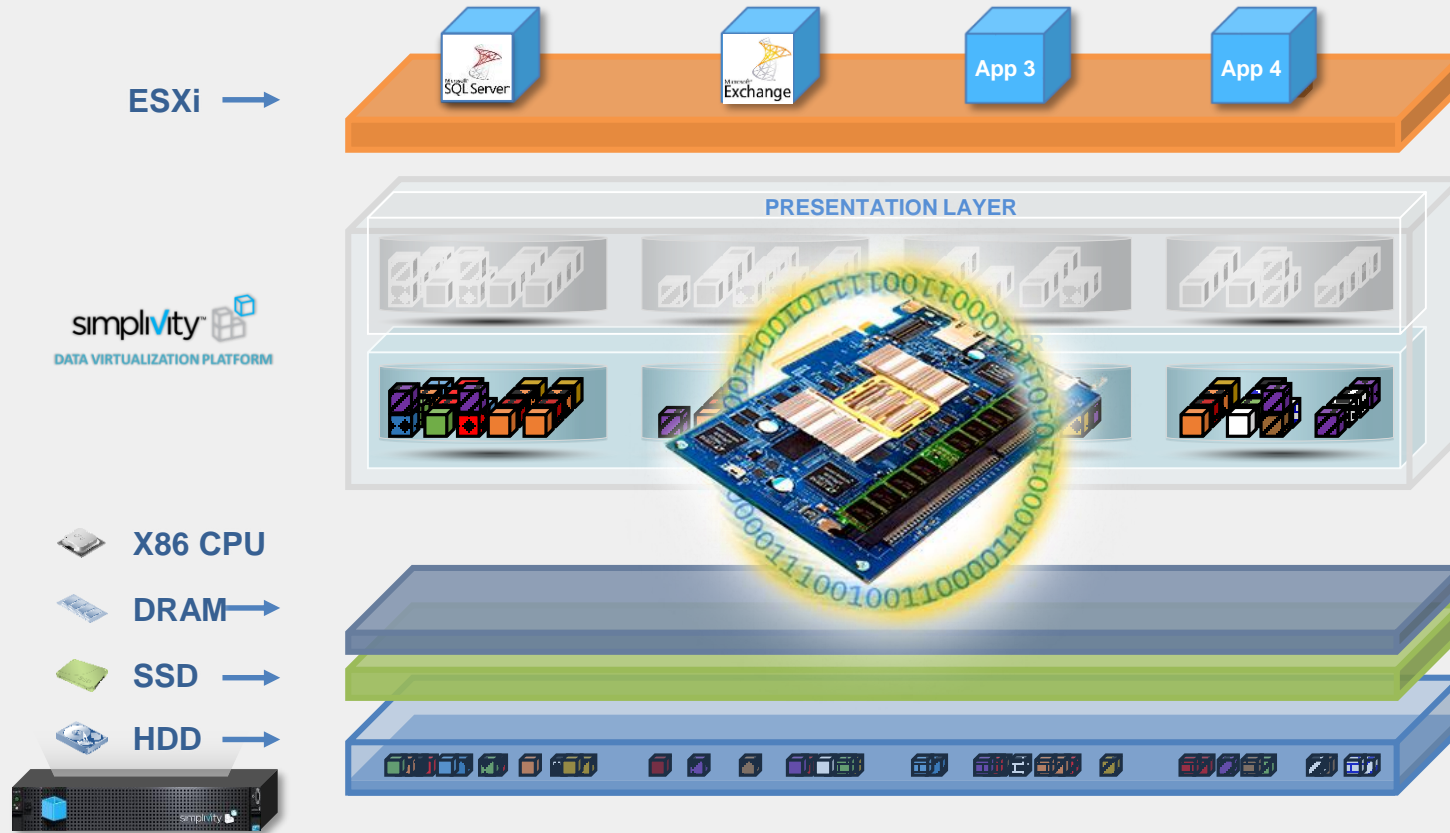
HPE SimpliVity provides dramatic application performance improvements

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



1/2 see
>50%
Performance Improvements

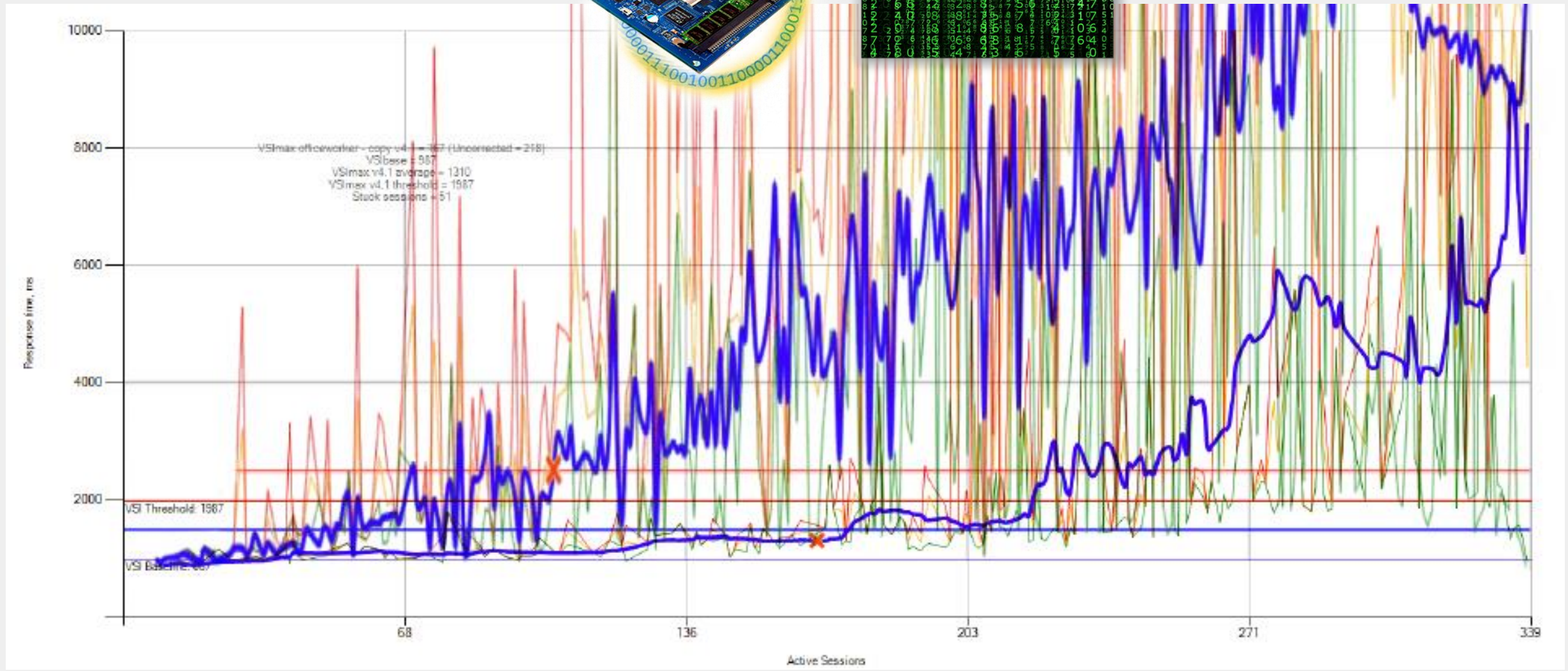
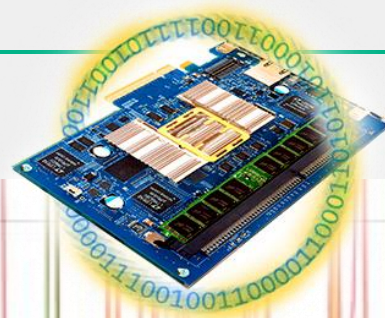
성능향상



실시간
중복제거 및 압축

Metadata 를 통한
백업/복구

Head-to-Head Comparison



SimpliVity

효율성

최초 3 노드 시작

노드 **2개** 단위로
업무구성

실시간 중복제거 및 압축

성능향상

실시간 중복제거 및 압축

노드당

8vCPU

24Gb

FPGA 카드

Metadata을 통한

백업/복구

안정성

NO RAID

3중화 : 5노드 필요

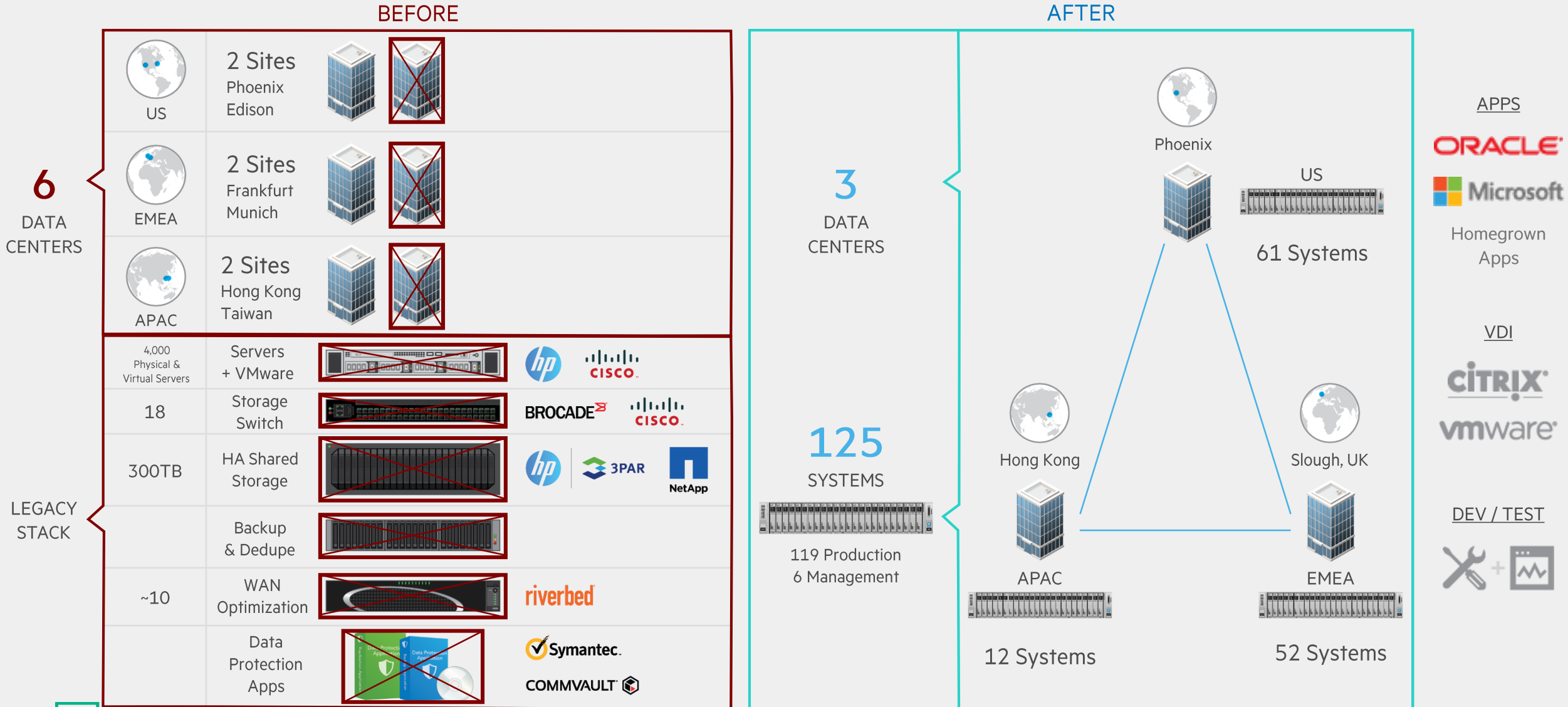
Enterprise급 안정성

편리성

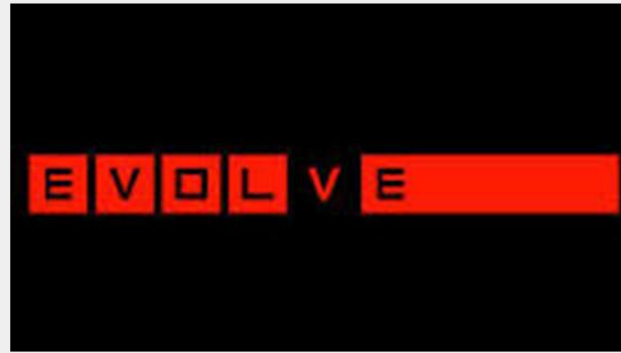
별도 백업, DR솔루션

vCenter에 통합
백업, 복구, DR, WAN가속
SimpliVity에 통합

Global 50 financial services co. (고객사례)



Improving Agility and Mitigating Risk at Turtle Rock Studios



Accelerated Application Development

New agility with support for rapid VM restores and clones in seconds

Highly efficient storage of VMs for test/dev

Enterprise-class Disaster Recovery

Full VM backups every 15 minutes and sent 30 miles over 100Mbps link

Failed over entire primary site and successfully failed back

“The SimpliVity solution allows us to innovate. We can rapidly restore and clone VMs for Test/Dev. Built-in DR features and support are amazing.”

**Jerry Bennett,
Director of IT
Turtle Rock**

Recovering from Cryptolocker with SimpliVity-Case study



- A recovery point was selected prior to the infection
- SimpliVity restored the 500GB VM in seconds
- Database was operational in minutes
- Subsequent transactions recovered and processed



No data lost. No ransom paid.

A 사

Manufacturing

Challenge

효율적이고 안정적인 **Database** 사용
공장간 **DR**을 비용 효율적으로 구성

Use Cases

공장 제어 및 자동화
Oracle DB 사용

Benefits

2대 + 1대의 효율적인 **DR** 구성
안정적인 **DB** 및 **Application** 운영
스토리지 용량 절감

B사

Energy

Challenge

상면 공간의 효율적 사용이 필요
IT자원의 효율적인 구성 및 운영

Use Cases

웹서버
자원의 신속한 프로비저닝 및 효율적인 관리

Benefits

상면 공간을 **50%** 이상 절약
신속한 웹서비스 구성이 가능

SimpliVity HyperGuarantee*

➔ 엔터프라이즈급의 성능, 보호와 가용성을 제공하는 클라우드 서비스급의 경제적인 솔루션



1 **HyperEfficient:** 스토리지 90%의 용량 절감 (백업 포함)

2 **HyperProtected:** 1TB VM의 로컬백업이나 복원을 1분 이내에서 완료

3 **HyperSimple:** 단일 콘솔에서 VM의 백업,복구,이동,복제를 단 3번의 클릭으로 수행

4 **HyperManageable:** 수십개의 사이트에 걸쳐 있는 약1000개의 VM들을 1분 이내로 백업 정책 생성 및 업데이트 지원

5 **HyperAvailable:** 로컬 혹은 원격사이트의 시스템을 무중단(Zero downtime)으로 증설 혹은 교체 지원

- *Zero disruption to local or remote SimpliVity backups*
- *Zero reconfiguration of SimpliVity backup policies for local or remote sites*
- *Zero re-entry of IP addresses in remote sites*

Full portfolio/experience gives guidance to the right direction

Private Cloud solution



Public cloud service partner Cloud Appliance



Hyper-converged Infrastructure SDDC specific hardware platform



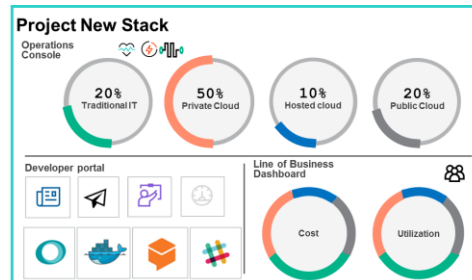
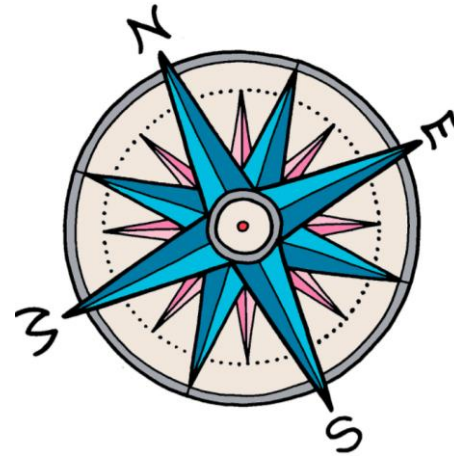
SDN Open Switch



Cloud centric



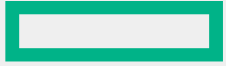
Synergy
Infrastructure as code



Cloud/SDDC consulting & delivery

- Advisory
- Build/Transform
- Optimize





Hewlett Packard
Enterprise

Thank you