

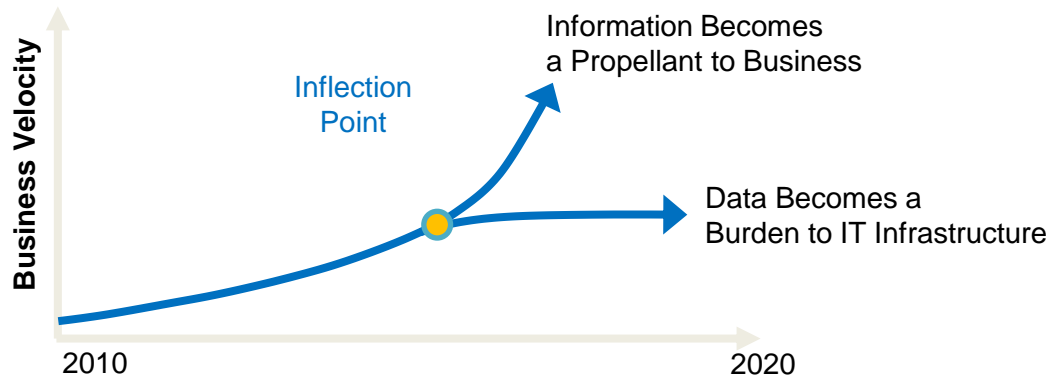




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# IT Infrastructure – Inhibitor or Enabler

## Data Growth Impact on Business



### What's Driving My Information Growth?

- Mobile Apps
- Decision Support / Analytics
- Machine Generated Data
- Systems of Record
- Systems of Engagement

### Where Is My Inflection Point?

- Number of Apps
- % Unstructured Data
- Number of Objects
- Measured Performance vs SLA's
- Measured Capacity and Growth Rate



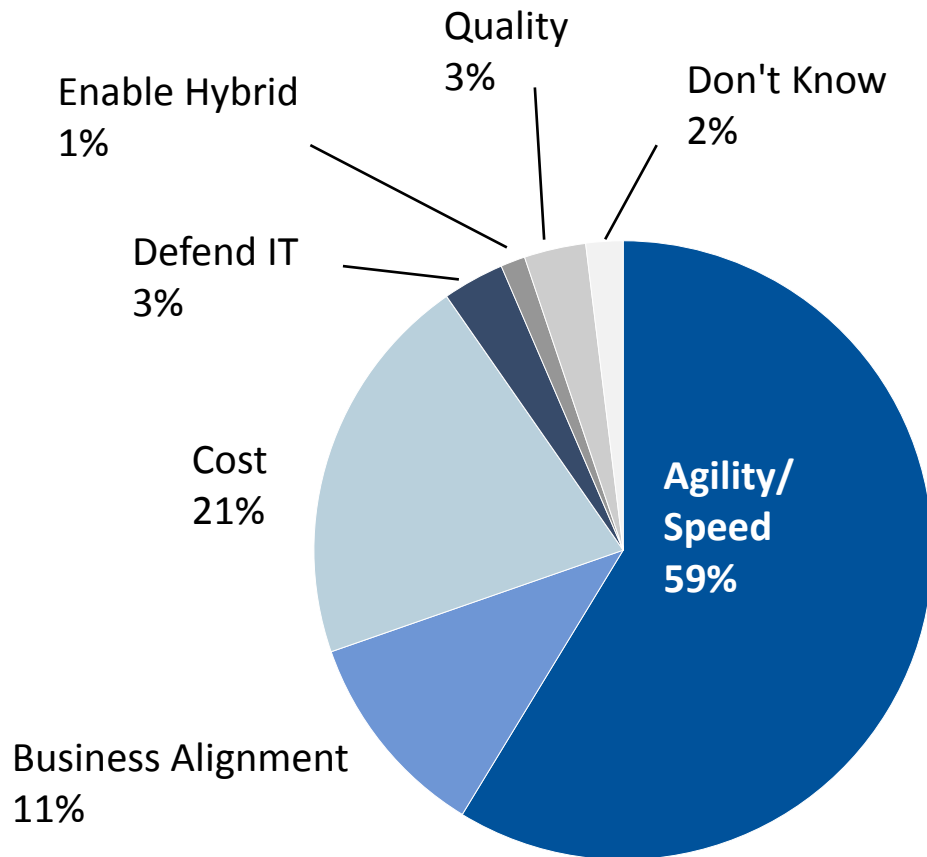
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# IT Infrastructure – Inhibitor or Enabler

What is your main driver in moving to (private) cloud ???



Gartner Data Center Conference  
Poll, December 2012





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# Your Goals = Our Aspirations

## Intelligent Data Management

“Storage is getting harder to manage. I need to **reduce complexity** so I can deliver business **impact faster**.”

## Immortal Data Availability

“My data needs to **live forever** and be **available non stop**. I can't afford lengthy data migrations as new technologies roll out.”

## Infinite Data Scaling

“I need storage that will scale indefinitely. Running out of space or hitting physical limits **slows my business**.”





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# i+i+i = Agile



Only **NetApp** delivers a single integrated platform for an **agile data infrastructure** that is...



*Intelligent*

Deliver Impact  
Faster



*Immortal*

Achieve  
Nondisruptive  
Operations



*Infinite*

Grow Business  
without Limits



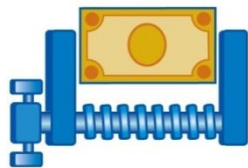
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i+i+i = Agile

# Intelligent Data Management



Service Automation  
and Analytics



Storage  
Efficiency



Virtual  
Storage Tiering





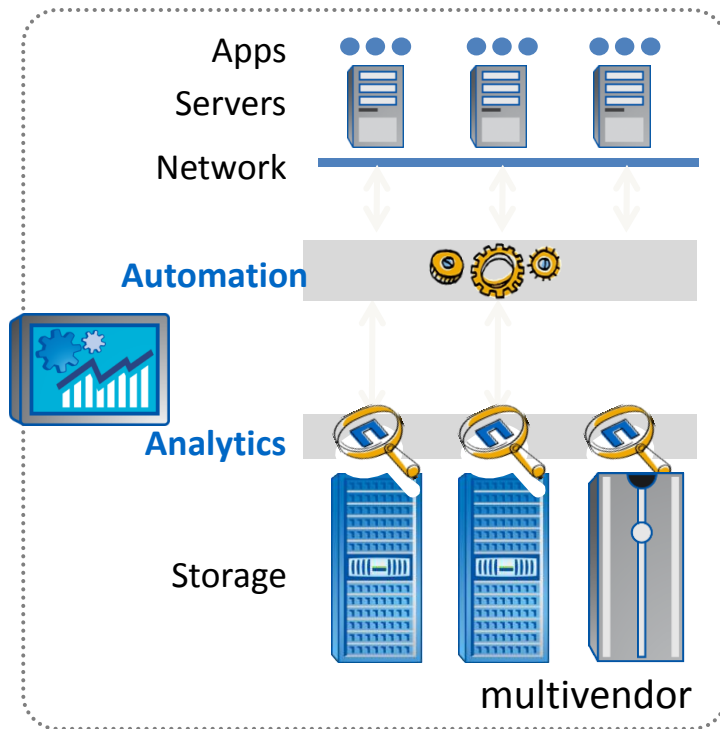
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# Service Automation & Analytics

Automated provisioning  
& protection of the data  
infrastructure



End-to-end view



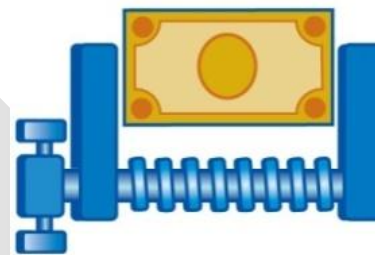
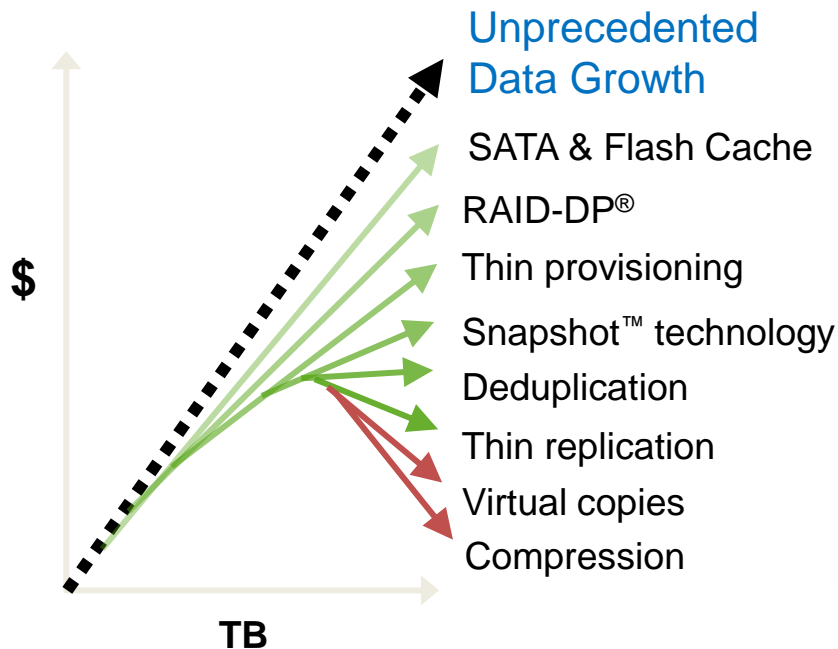
Integrated storage workflow automation



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# Storage Efficiency

## Efficiency Technologies



Store more  
in less space

Save at least 50% of your capacity for virtualized workloads with NetApp. \*Guaranteed.





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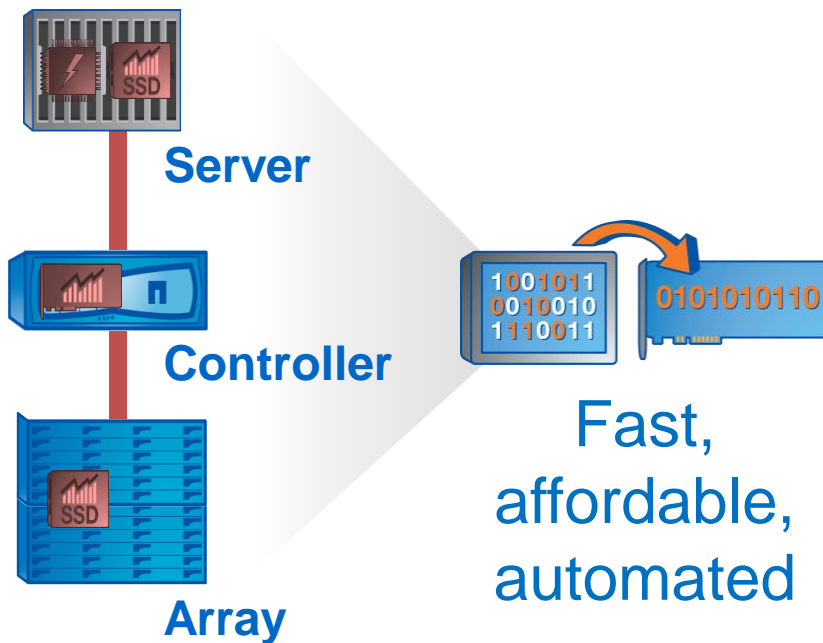
# Virtual Storage Tiering with Flash



- 40% lower cost
- 55% lower \$/GB



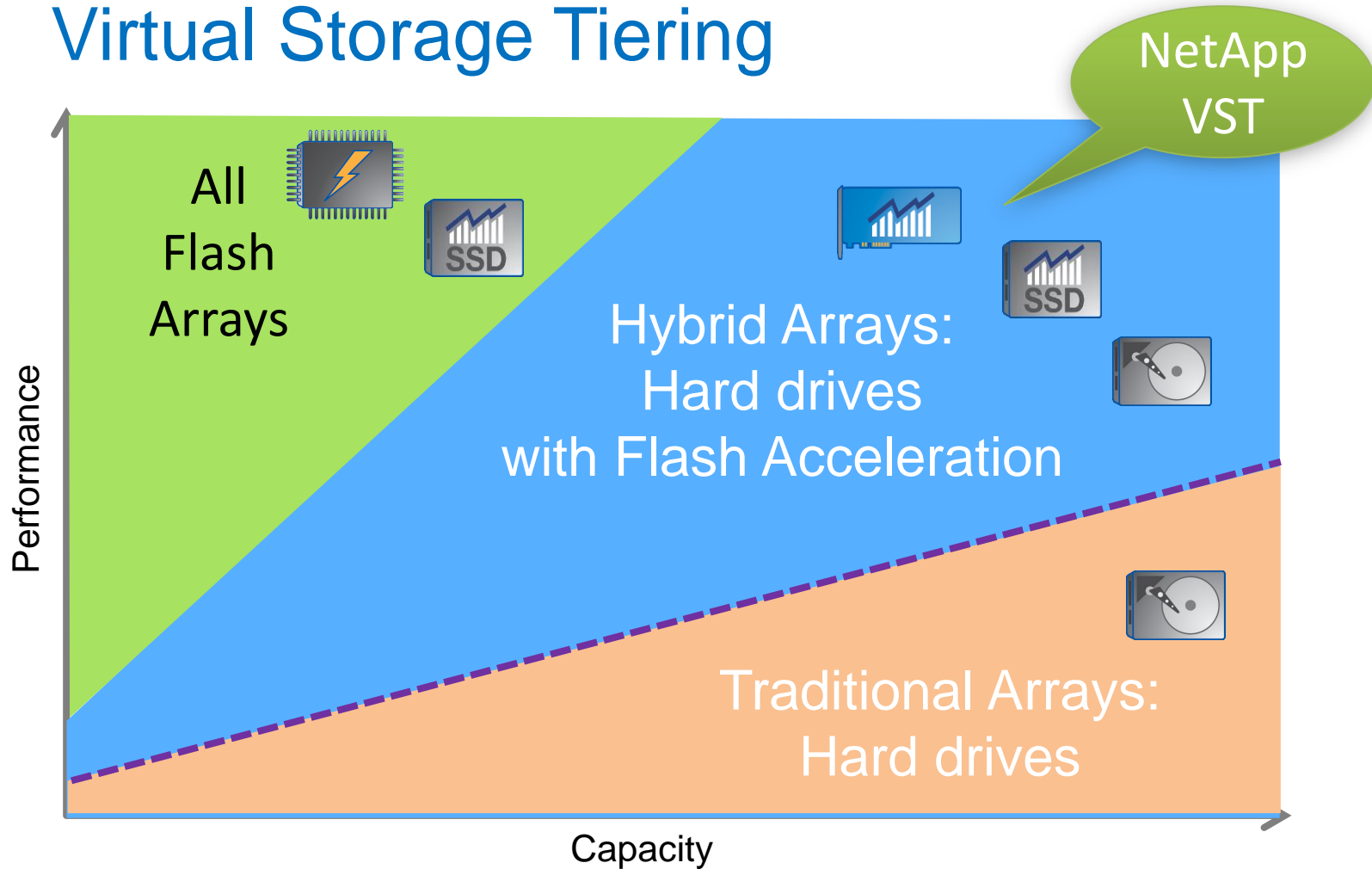
- 50% lower cost
- 50% lower \$/IOPs



Effective with Random Read Intensive Workloads like..  
Virtual server & desktop infrastructures, SW development, MS Exchange® and other messaging, MS SharePoint, General file services, Databases etc.



# Virtual Storage Tiering





# Flash Solutions

More than 36 Petabyte Flash installed  
Accelerates more than 2 Exabyte Storage



Server Flash



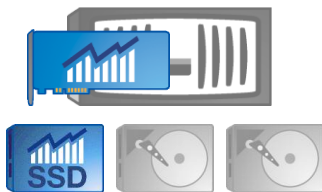
- Flash Accel
- Server Flash Partner (Fusion-IO)



All Flash Array



- EF540 Flash Array



Hybrid Array



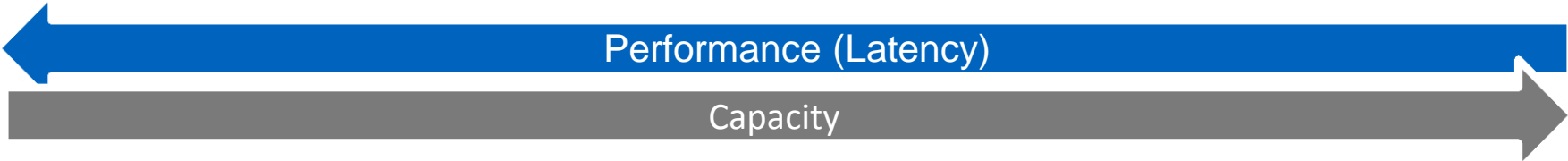
- FAS / V-Series
  - Flash Cache
  - Flash Pool
  - Flash Aggregate
- E-Series
- SSD Cache



Traditional Storage



- FAS / V-Series
- E-Series





# Crossrail, UK



- **Requirements**

- Rapidly changing environment with new requirements
- 28 Days data recovery
- Large data growth expectation
- CAD Workloads
- Backup / Archiving / DR
- Flexible / scalable
- Multiprotocol (CIFS, iSCSI, FC)
- Cost

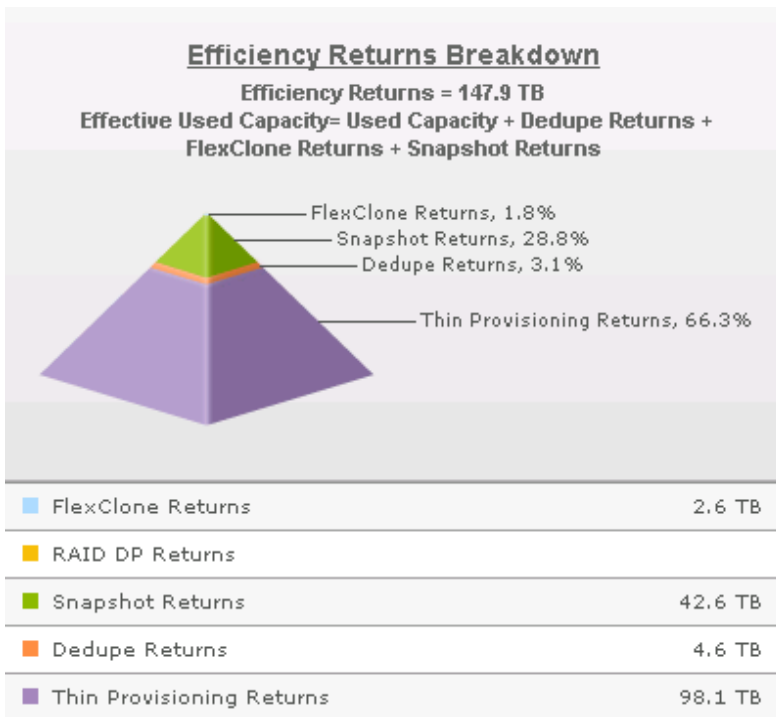
- **Solution**

- V-Series and ETERNUS at 3 sites
  - Production - Disaster Recovery - Test and Development

***Crossrail is the new high frequency, convenient and accessible railway for London and the South East. An estimated 200 million passengers will travel on Crossrail each year.***



# Crossrail, UK



## Crossrail key buying criteria:

- Multi-protocol support
- SnapManager Integration
- SnapShot flexibility

## Efficiencies measured

- Thin Provisioning returning 66%
- Snapshots returning 29%
- Dedupe returning 3%
- FlexClone returning 2%

Extending DataCentre efficiencies to ETERNUS with NetApp



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# Immortal Data Availability



Non-disruptive  
Operations



Embedded  
Data Security



Integrated  
Data Protection





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# Non-disruptive Operations



Non-disruptive  
Operations

- Key functionality is NetApp® DataMotion™ and Data ONTAP® 8
- Enables true data mobility across the infrastructure without affecting the availability of applications
- Critically important for lifecycle management tasks like system maintenance, technology refresh and software upgrades

**Any operational disruption impacts performance, production,  
OPEX and profitability**



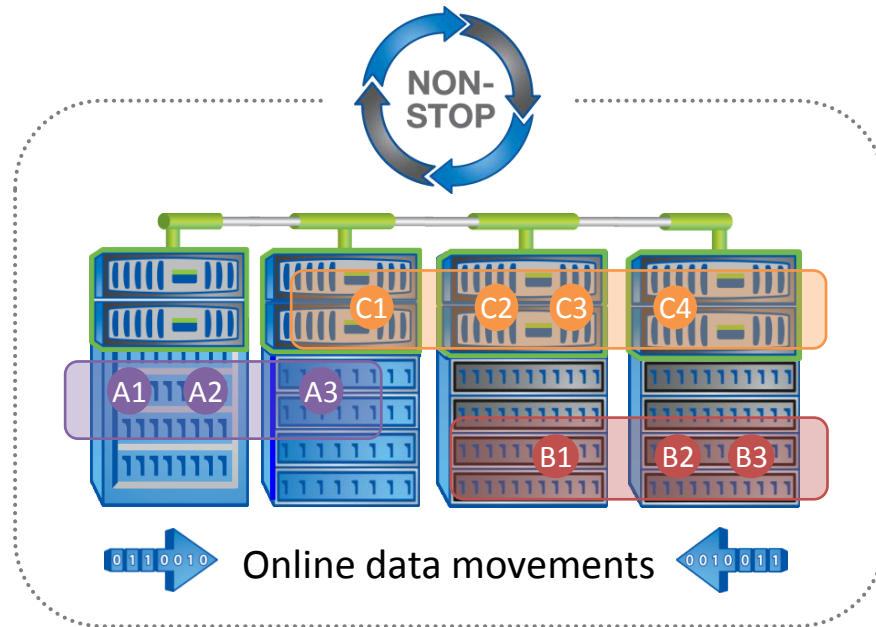
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# Non-disruptive Operations

- Expand
- Rebalance
- Refresh



**No application downtime**



**First and only vendor to provide fully transparent migration of block and file (unified) data**

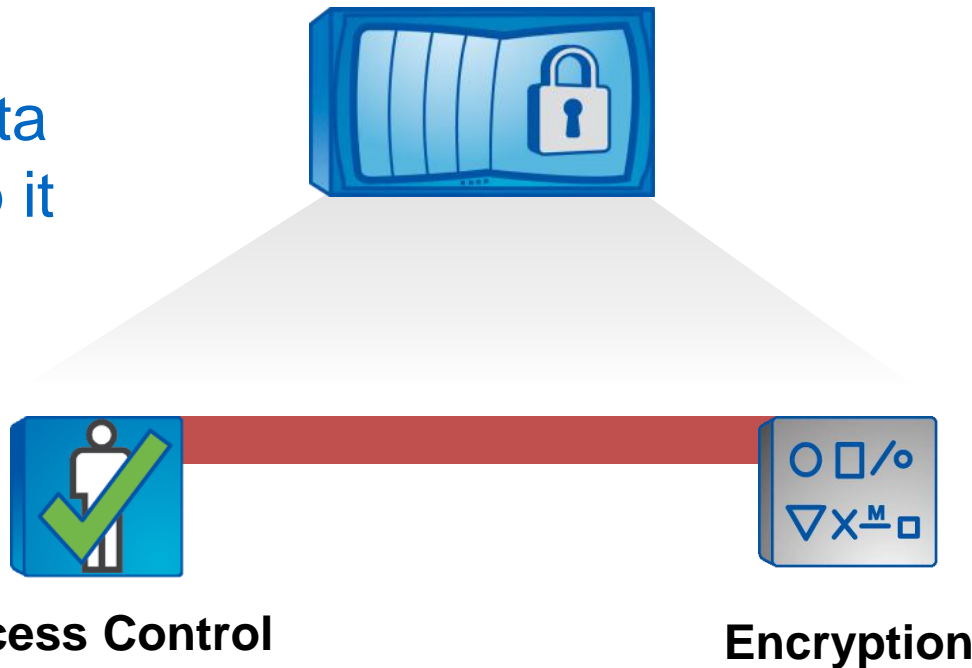




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# Embedded Data Security

Protect your data  
where you keep it



Completely integrated data security (RBAC & Encryption)



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# Integrated Data protection

## Primary Data Center

Application Agents

Continuous Availability

Manage and Monitor

Snapshot™ Copies

Archive Application

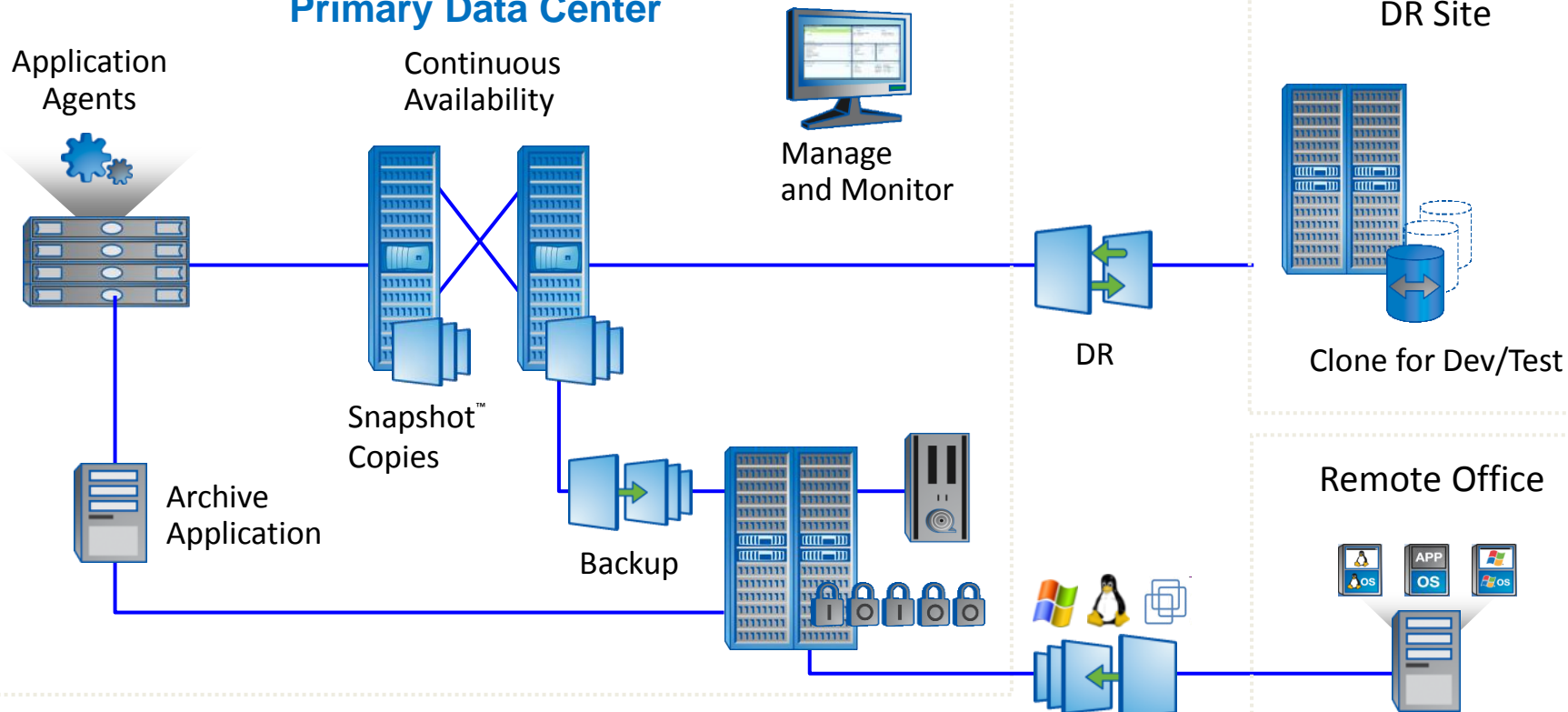
Backup

DR

DR Site

Clone for Dev/Test

Remote Office





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# Yara International, Norway



## ■ Challenges

- Backup/Restore
- Disaster Recovery
- Ease of management
- Remote offices
  - 132+ remote offices
  - 6000+ users
- Cost

## ■ Solution

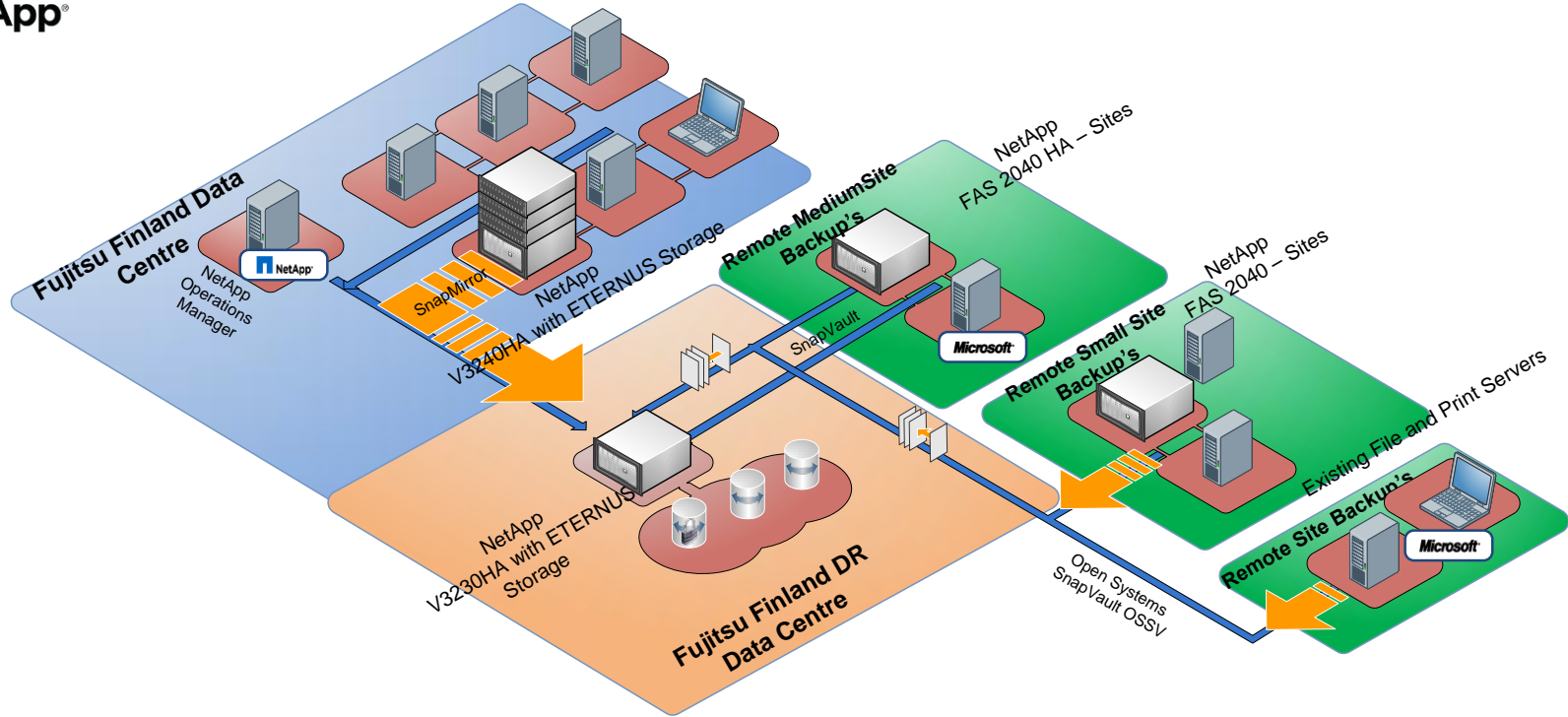
- Managed service
- V-series with Eternus
- Fujitsu DR solution
- Integrated backup
  - Data Centre
  - Remote
- Unified architecture

*■ Yara delivers solutions for sustainable agriculture and the environment. The fertilizers and crop nutrition programs help produce the food required for the growing world population. The industrial products and solutions reduce emissions, improve air quality and support safe and efficient operations*



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# Yara International, Norway

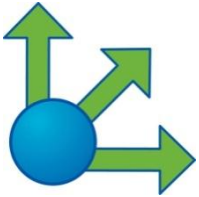


Infrastructure diagram

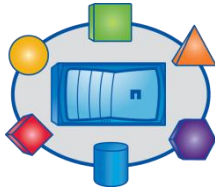


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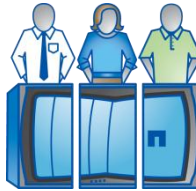
# Infitite



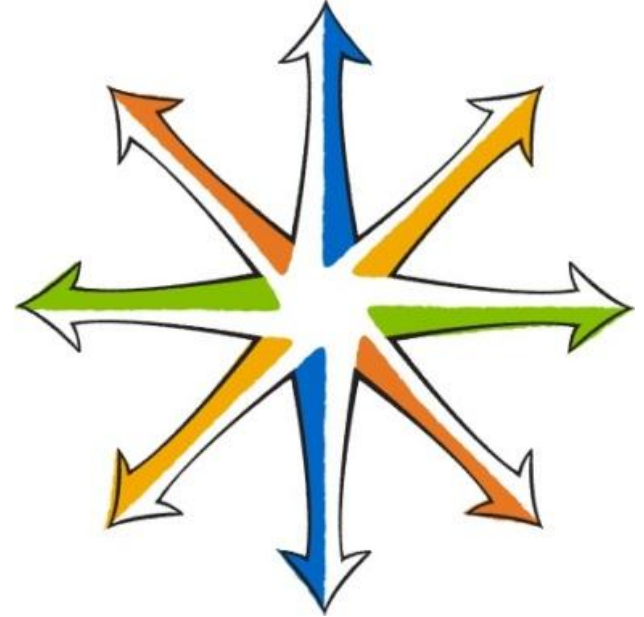
Seamless  
Scaling



Unified  
Architecture



Secure  
Multi-Tenancy

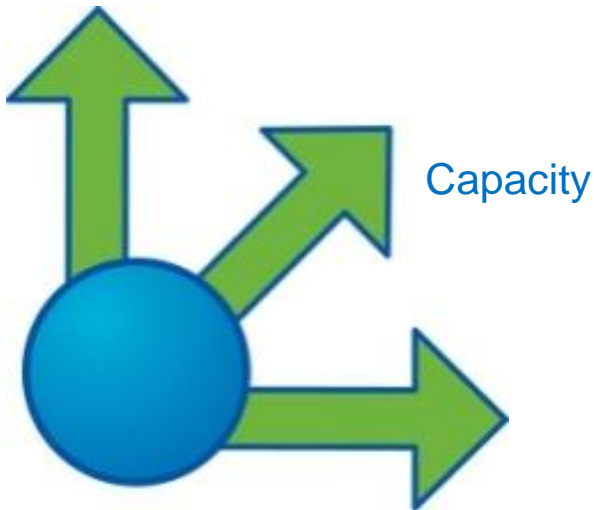




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# Seamless Scaling

Performance



Capacity

Seamless  
Scaling

Automated  
Operations

■ An agile infrastructure needs to scale in **3 dimensions**:

- ✓ Performance
- ✓ Capacity
- ✓ Operationally

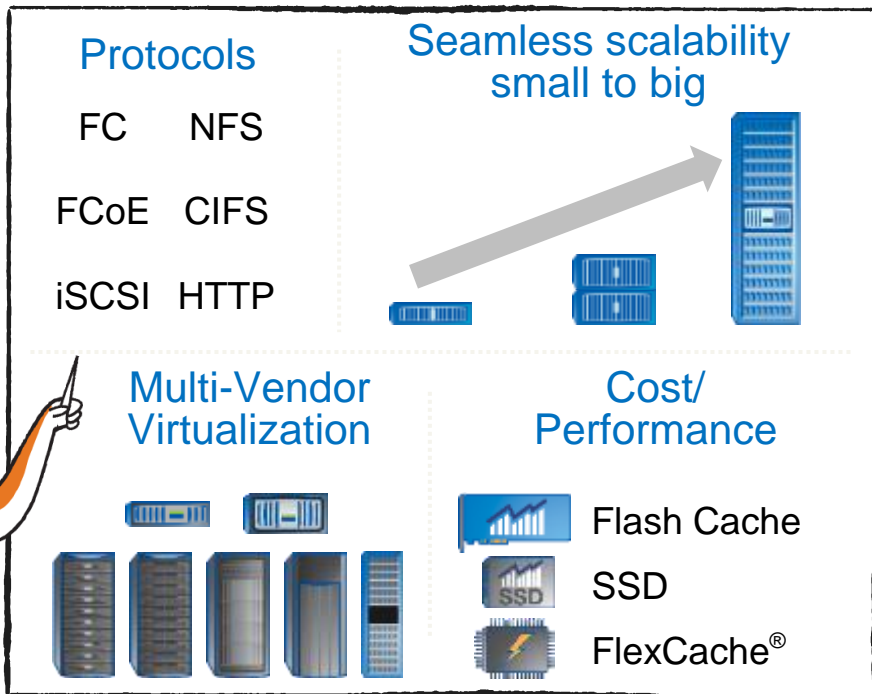
■ Data ONTAP offers the ability to independently scale out performance and capacity for both **NAS** and **SAN** environments, for both **technical** and **enterprise** applications.

**Largest clustered storage system:  
60+ petabytes**



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# Unified architecture



## Unified Management

- Same Tools & Processes: learn once, use everywhere
- Integrated Data management
- Integrated Data Protection

***“Unified Storage should be more comprehensive than simply combining 2 Storage protocols in 1 system”***

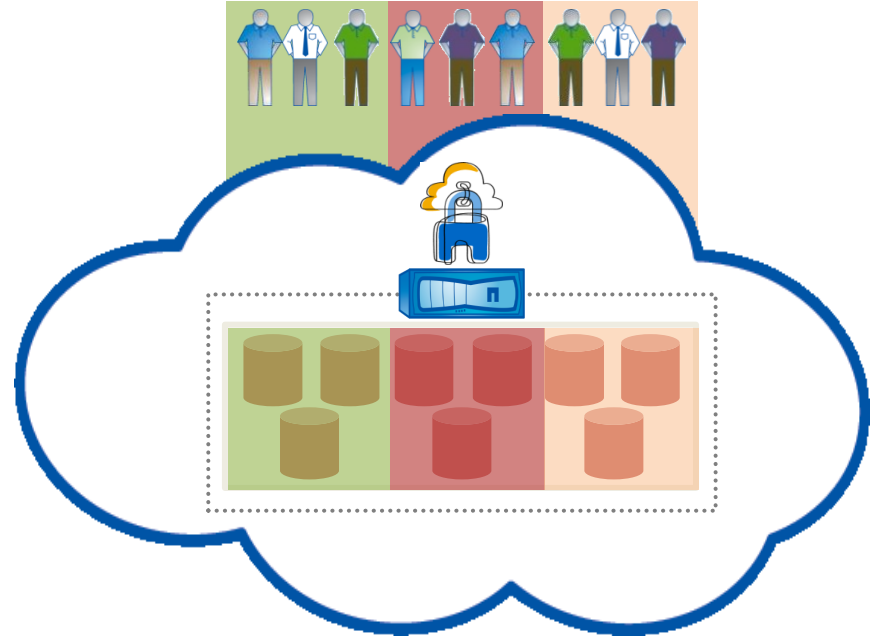
IDC (Carla Arend – Program Manager European Infrastructure Software)





# Secure Multi-Tenancy

- Many users
- One system
- All secure
- In the cloud



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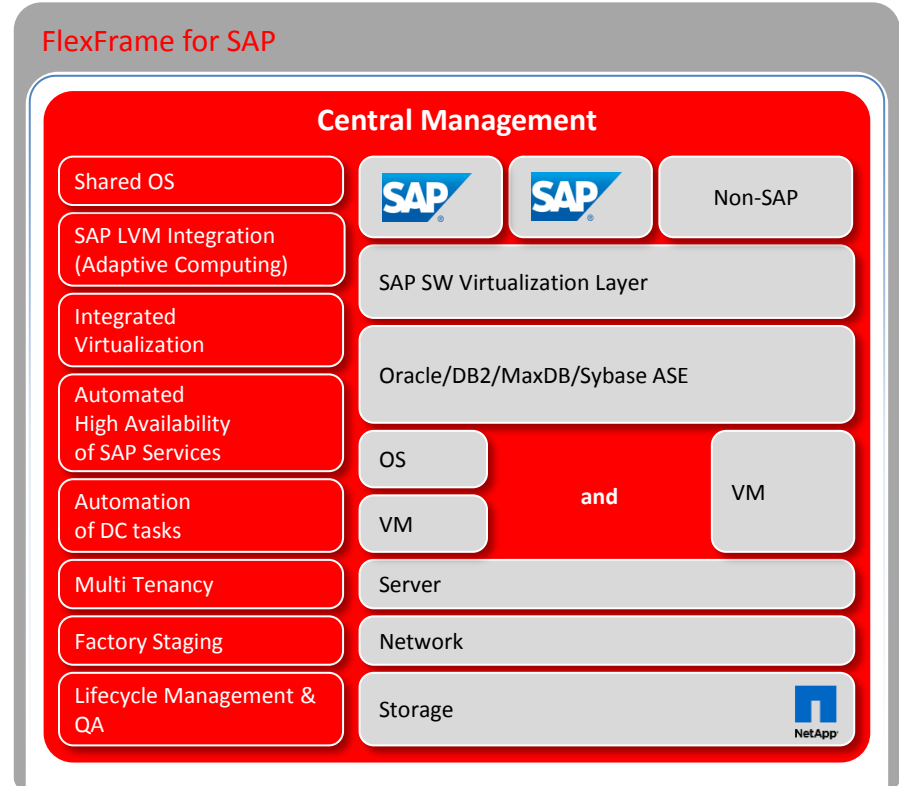
First and only solution with complete—data, network, server—logical data isolation for cloud security





# FlexFrame for SAP

- **NetApp Value-add**
  - ✓ Utilizes Industry Standard NFS protocol
  - ✓ Start small and grow to match customer needs
  - ✓ Reduced complexity for Test and Development
  - ✓ Application consistent snapshots
  - ✓ Secure Multi Tenancy to protect individual workloads / customers





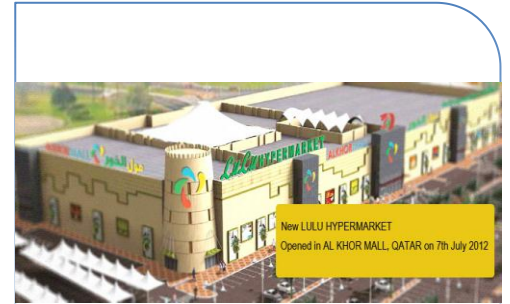
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# EMKE Business Requirements



- Looking to upgrade their existing SAP infrastructure and looking for better TCO
- Faster Data Loads which help to get a real picture of operational issues at the store level almost in real time
- Faster performance of the reports gives EMKE the ability to respond quicker to the business challenges and better adoption of changes at the organizational level

*EMKE Group alias LuLu Group is a highly diversified entity with operations spanning a vast geographical landscape. Spearheaded by the retail division of has always been known as a trend setter of the retail industry in the Gulf region. The group has furthermore interests in Import & Exports, Trading, Shipping, Travel & Tourism and Education.*





# EMKE Solution Design

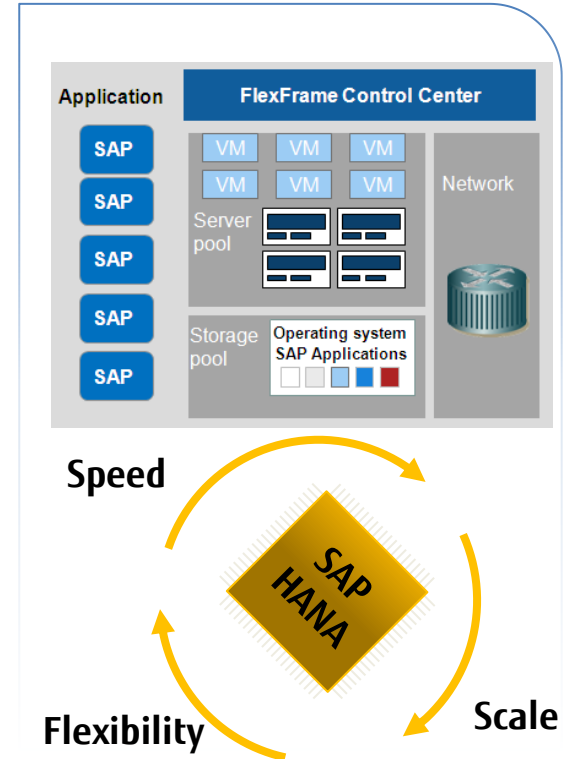


## ■ Solution

- FlexFrame for SAP Application
- SAP HANA for BW

## ■ Advantage

- Simplifies operation for SAP
- Flexible to run any application on any server at any time (virtual or physical)
- Single vendor to support storage network, Server and SAP
- NetApp Snapshot for protection
- FlexClone and SnapManger for SAP for cloning SAP systems





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# High impact innovation



Efficiency



Save over **50%**  
on operational  
expenditure

Automation



Bring applications  
and products to  
market quicker

NDO



No disruptions for  
upgrades or  
replacements,  
scale as required

Accurate  
measurement of  
Storage value



NetApp®

Go further, faster®

# Thank you

