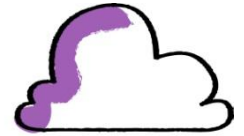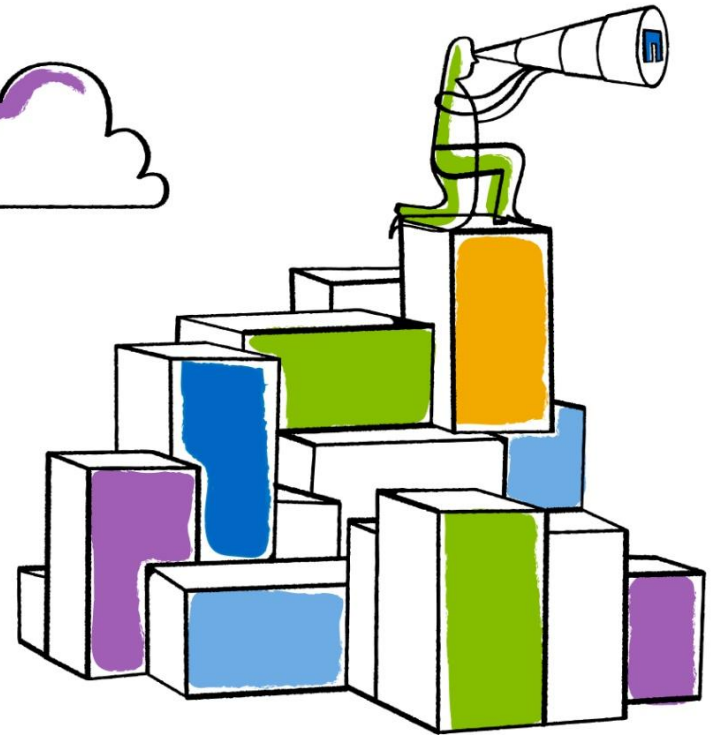Go further, faster®

Big Data – Infrastructure as a Chance to provide agile Cloud Services
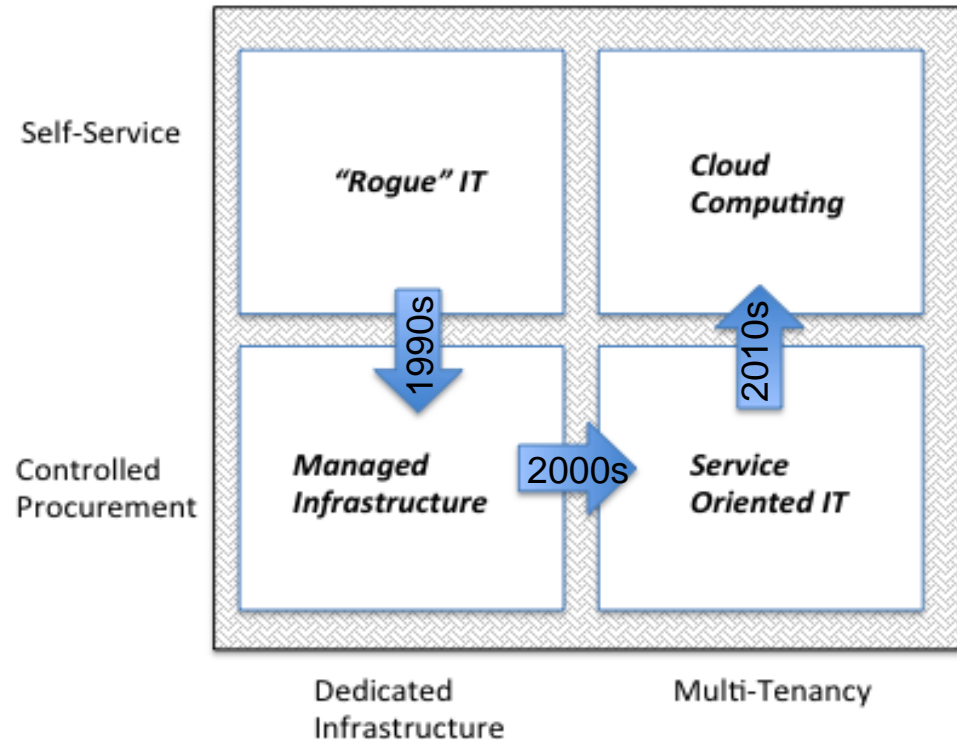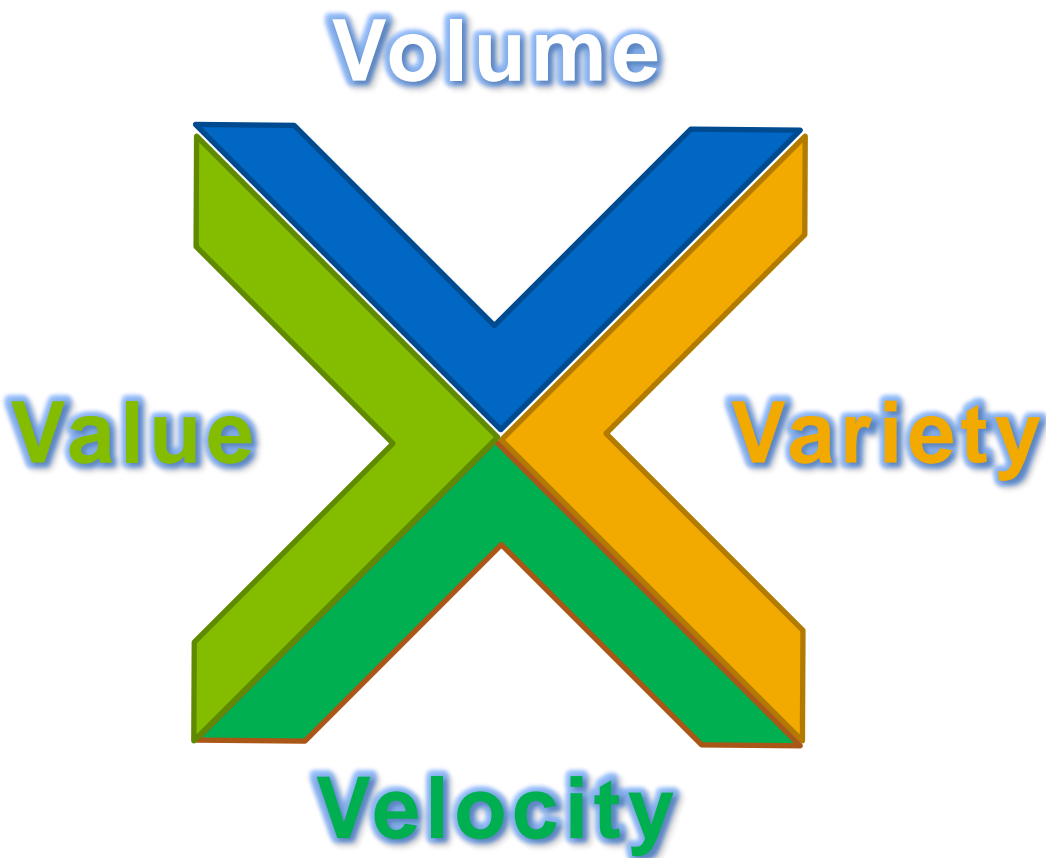
Gunther.Thiel@netapp.com

Server Virtualization and Cloud Computing are driving IT Transformation

- Global server virtualization software market to reach $5.6 Billion by 2015

- Global cloud computing market to reach $55 Billion by 2014 (IDC)

- According to recent IDC survey results, almost half of respondents, 44%, are considering private clouds

- In 2010, 70% of worldwide cloud system management software purchases were deployed in private cloud environments.

What is Big Data – as defined by IDC?

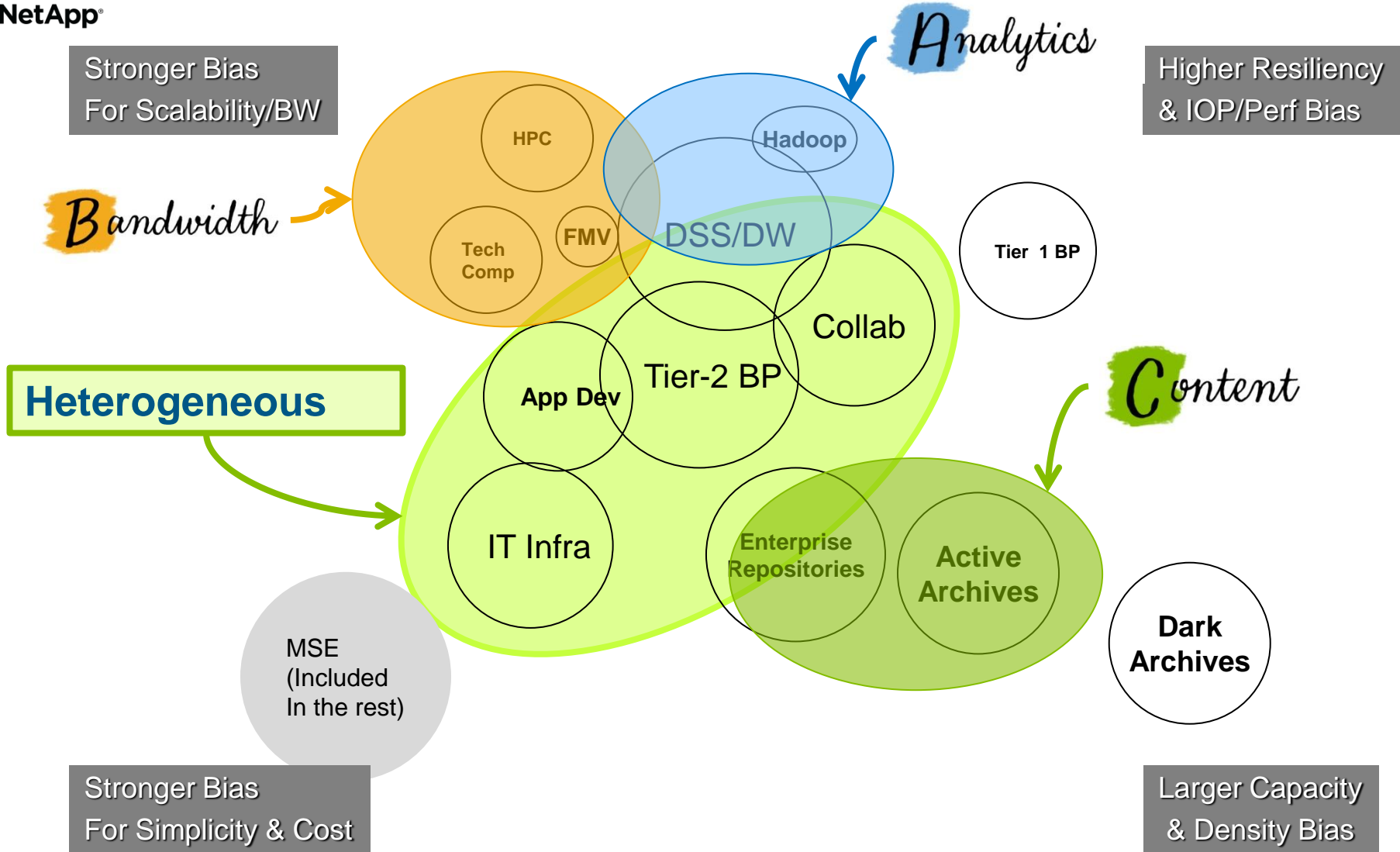**Volume**

Value

Variety

Velocity

Big Data technologies describe a **new** generation of technologies and architectures, designed to **economically** extract **value** from very large **volumes** of a wide **variety** of data, by enabling high **velocity** capture, discovery and/or analysis

Two Workload Categories

Stronger Bias
For Scalability/BW

Analytics

Higher Resiliency
& IOP/Perf Bias

Bandwidth

HPC

Hadoop

Tech Comp

FMV

DSS/DW

Tier 1 BP

Heterogeneous

Collab

Tier-2 BP

Content

App Dev

IT Infra

Enterprise Repositories

Active Archives

Dark Archives

MSE
(Included
In the rest)

Stronger Bias
For Simplicity & Cost

Larger Capacity
& Density Bias
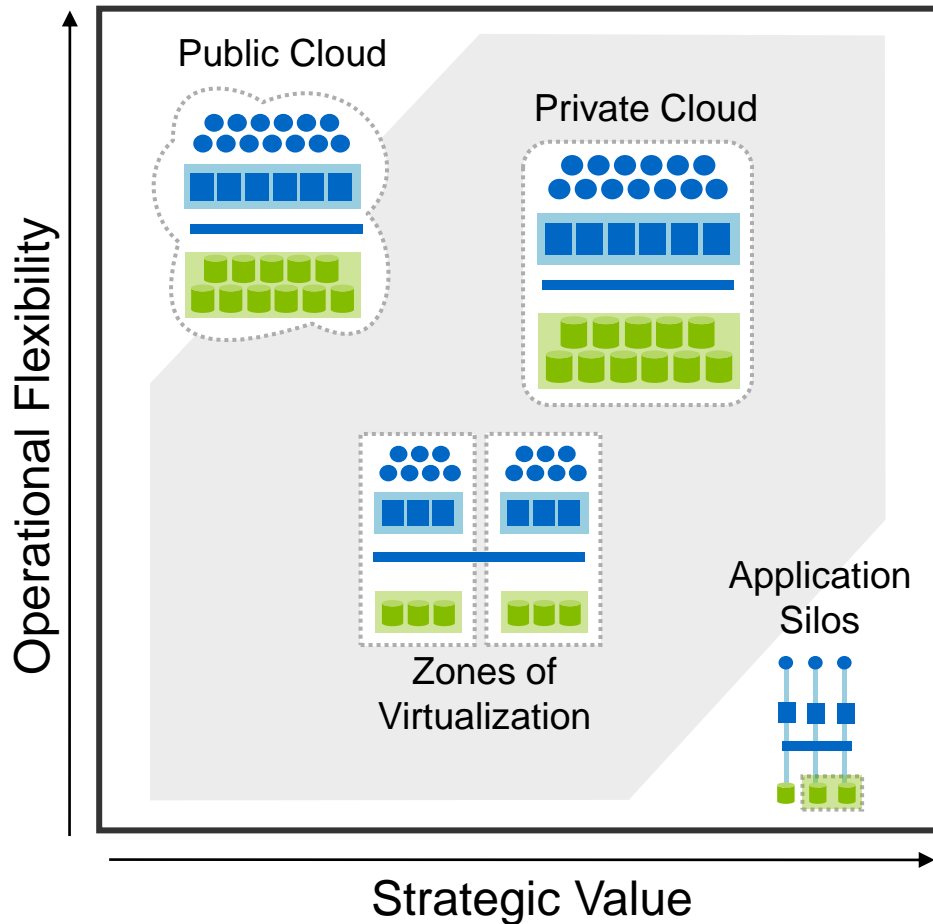
Your Strategy Starts With Applications

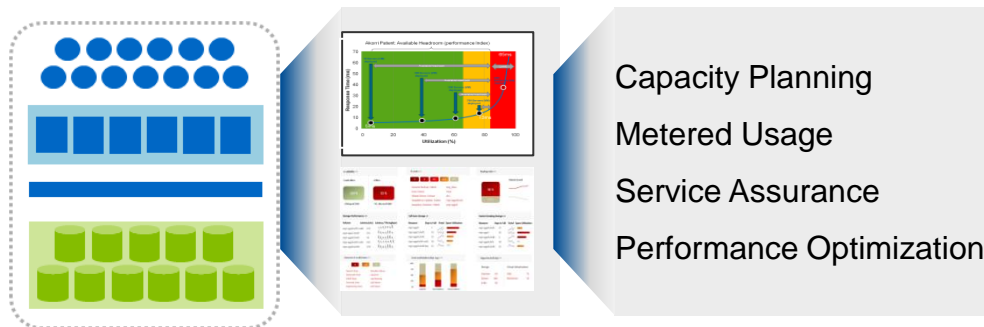## Categorize requirements based on business needs

Example:

- Operational Flexibility
  - Responsive to changing business needs?
  - Adaptable to variable workloads?

- Strategic Value
  - Core to the business?
  - Key to business differentiation?

Fundamental Element: Service Analytics

Only OnCommand™ Insight provides visibility and actionable knowledge for optimizing your virtual IT infrastructure

NetApp® OnCommand Insight

Capacity Planning

Metered Usage

Service Assurance

Performance Optimization

OnCommand Insight provides a consolidated view of heterogeneous storage environment in terms of capacity, connectivity, configurations, and performance, enabling 24/7/365 service availability.

- Large Information Services Provider

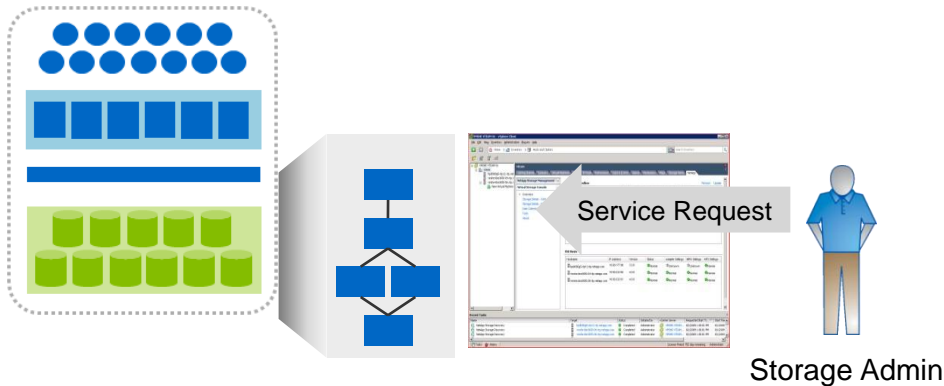## Optimize your services

- Answer key questions to delivering business value
  - What do we have and where is it?
  - What's causing my performance problem?
  - What's the impact of change?
- Understand what services are being used by who
  - Show utilization metrics back to your users
  - Enable showback or chargeback

Fundamental Element: Automation

Only OnCommand™ allows you to move virtual machines or data within the cloud and automatically have the policy follow

NetApp® OnCommand

Service Request

Storage Admin

Accelerated resource provisioning from weeks to minutes; launched new QA system in a matter of hours.
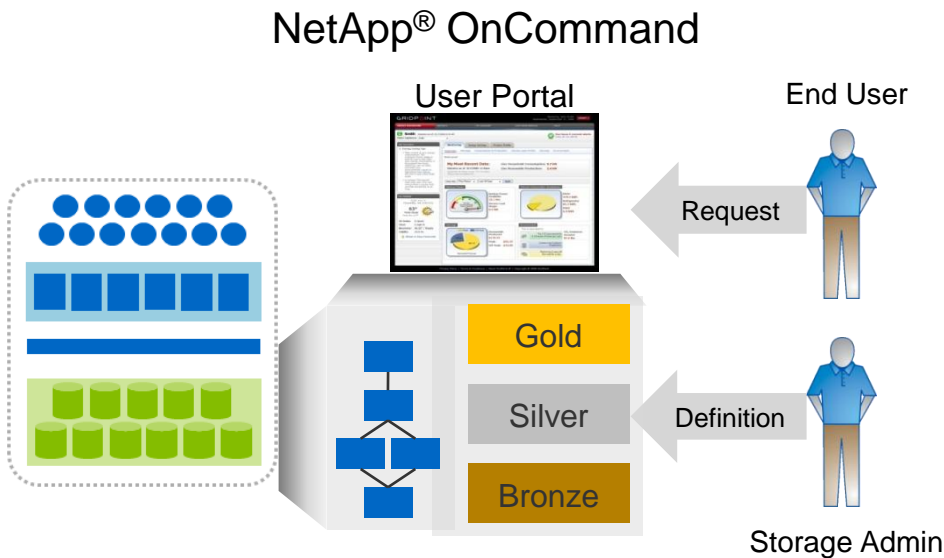
- Leading Liability Insurer

Rapidly deploy your services

- Policy-based provisioning and data protection

- Integrated with popular management platforms

- Empower admins to manage storage using familiar tools
  - VMware® vCenter™
  - Microsoft® System Center
  - Oracle®
  - SAP®
  - MS Apps (Exchange, SharePoint®, SQL Server®)

Fundamental Element: Self-Service

OnCommand™ enables simple and fast creation of self-service portals

NetApp® OnCommand

On demand, self-service access to computing resources reduced planned customer support resources by as much as 40%.

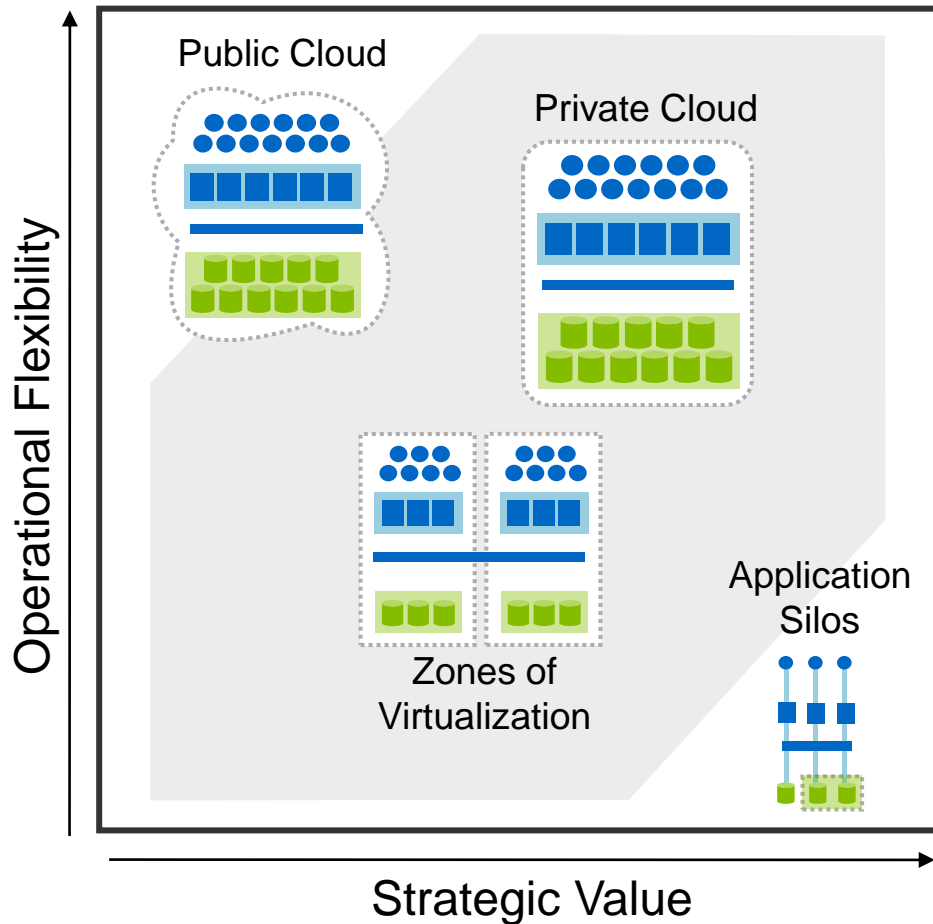- Disaster Recovery Services Provider

Empower IT and your end-users

- Self-service portals allow end-users choice

- Service offerings integrated with end user workflows

- Simplifies service request processing

- IT can focus on innovation instead of end-user requests

Your Strategy Starts With Applications

Categorize requirements based on business needs

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Current Big Data Solutions

Analytics *Bandwidth* *Content*

2600 & FAS BASED

NetApp Open Solution For Hadoop — A

Increase competitive advantage with insights from your own data

HPC: Seismic Processing — B

Accelerate time to results with scalable bandwidth, unmatched density, and proven reliability

5400 BASED

5400 BASED

Full Motion Video — B

Ingest, Exploit and Disseminate life saving information faster

HPC: Lustre — B

Massively scalable solution for large scale cluster computing

5400 BASED

5400 BASED

Media Content Management — B

Improve your media workflows to better monetize your content

StorageGRID — C

Make informed decisions by leveraging more data from longer periods of time

2600 BASED

Benefitting from the Cloud Lessons

Top Barriers:

- Multiple hardware architectures

- Big Data Solutions missing

- Lack of integrated management

- No single vendor can realistically do it all

- Lots of hype, lack of substance

Why NetApp:

- Single future-ready architecture for heterogenous workloads

- Single future-ready architecture for Big Data workloads

- OnCommand™ integrated management

- Partner ecosystem for choice without compromise

- Field-proven, practical implementations

Over 1 Billion End Users Receive Cloud Services Built on NetApp