Hosting + Cloud Strategies = Software-Defined Data Center Disruption

In association with 451 Research's Hosting + Cloud Transformation Summit, Las Vegas, NV

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Tuesday, September 20th 2016

nexenta®

Global Leader in Software-Defined Storage.

100% Software. Total Freedom. All Love.

Questions?

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or @nexenta

Al Sadowski
Research VP, Infrastructure Services
451 Research
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Agenda

1. Digital Transformation Drivers
2. Cloud Adoption Trends
3. Enterprise IT Spending Plans
4. Service Provider Opportunity

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Digital Revolution

1. It’s happening to businesses (not just consumers)
2. Its impact on business is uneven
3. Cloud services are the underpinning of the revolution

What is 'The Cloud'?

"Hyperscale" Cloud	Public Cloud	Private/Hybrid Cloud
• Amazon Web Services • Microsoft Azure • Google Compute Platform	• Rackspace • Digital Ocean • IBM SoftLayer • Oracle Cloud	• VMware vSphere • OpenStack • Datapipe • Regional hosting providers
More like a developer platform – build apps out of API-based services; **DIY**	On-demand compute & storage for virtual servers; **low/no touch**	On-demand compute & storage for virtual servers; **high touch**, **managed services**

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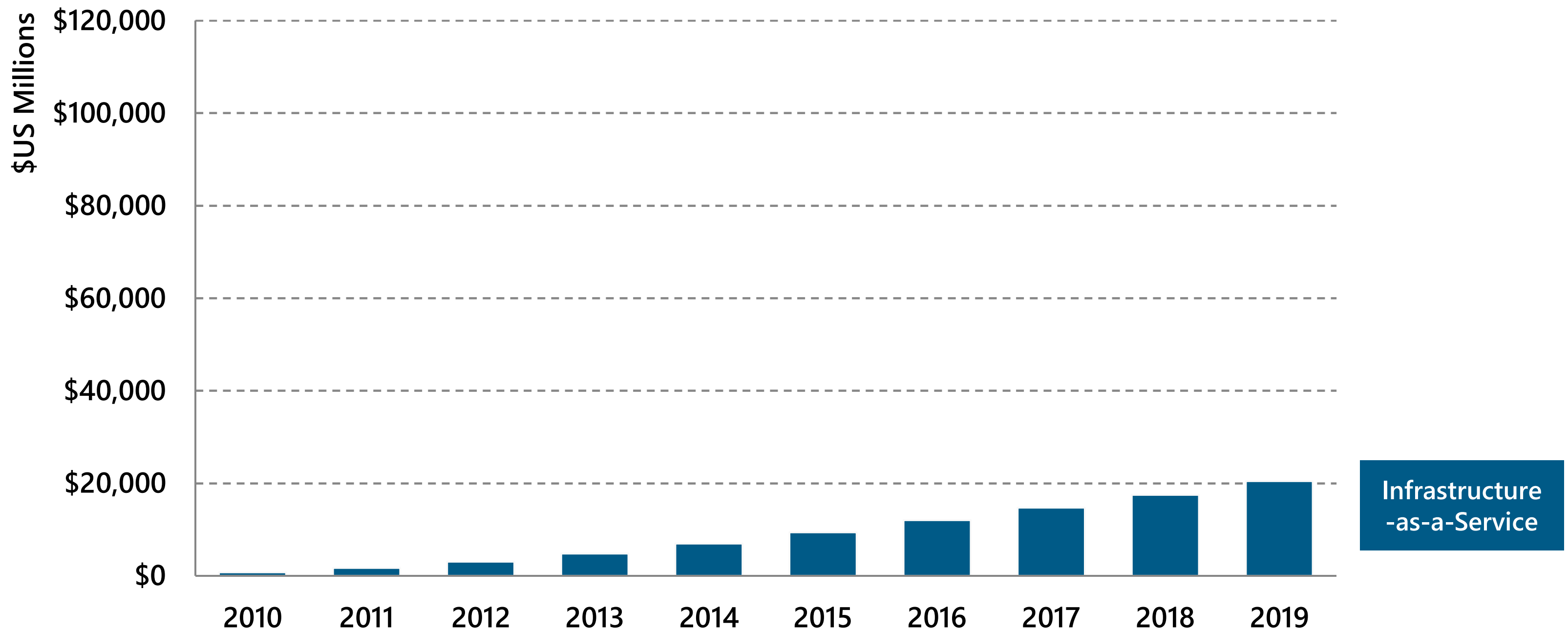
Worldwide Cloud Market Size, 2010 – 2019

Source: 451 Research Market Monitor, Cloud Computing



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Why cloud, why now?

Economic Motivation	Transformational Change
Minimize high system and running costs	Develop, deploy and scale up applications and services quickly, efficiency and securely
Eliminate ongoing service support and maintenance	Raise the standards of service delivery to both external and internal stakeholders
Maintain systems at current levels with fewer resources and a reduced budget	Increase the scope of e-services, which in turn boosts competitiveness
Shift IT investment from capex to opex; use subscription-based model with no strings attached	Nurture creative thinking and innovation

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Transform or die

“Our busiest branch… is the 7:01 from Reading to Paddington.”

- *Ross McEwan, CEO*

RBS

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The "new" competitive framework

Dramatic growth of non-traditional competitors	Software Defined Data Center
Monetization strategies diversify	
Competition becomes nuanced	
Responsiveness and agility are competitive requirements	
Customer intelligence becomes crucial	

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This competitive framework has implications for storage

'Old Style' Storage	'New Style' Storage
Hardware-defined	Software-defined
On-prem storage	Cloud storage/StaaS
Storage Silos	Converged/Integrated Infrastructure
Disk-based Primary Storage	Hybrid/All-Flash Arrays
Tape/disk-based backup	Cloud/Backup-as-a-Service

Software-Defined Storage Key Value Propositions

Cost Savings	Innovation	Management Savings
▪ Target lower tiers and avoid Tier 1 storage bias ▪ Pay-as-you-go pricing models ▪ Highlight value of industry standard hardware	▪ Introduce new technology without a forklift upgrade ▪ Object storage is a developing market with no market leader	▪ Automate provisioning ▪ Reduce time spent on maintenance

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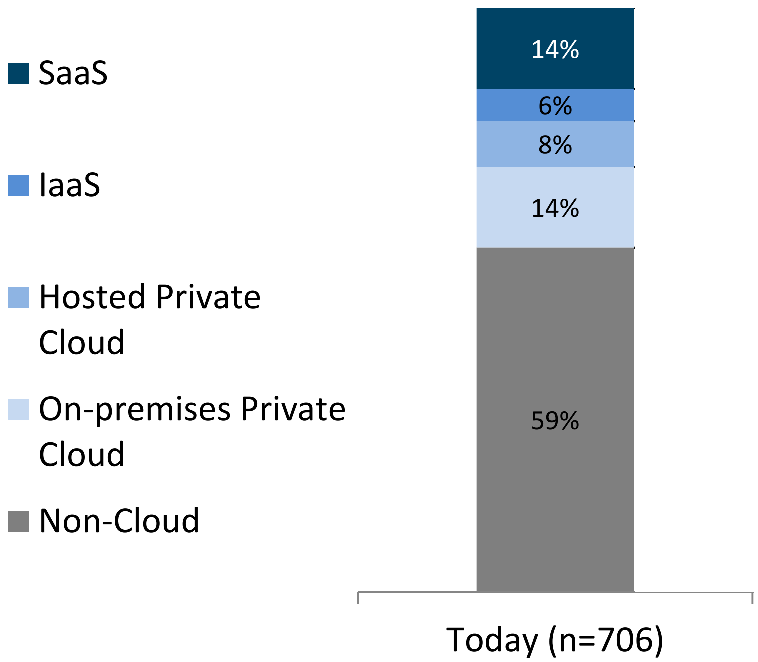
% of Workloads Running in Cloud– *Cloud Familiar Respondents*



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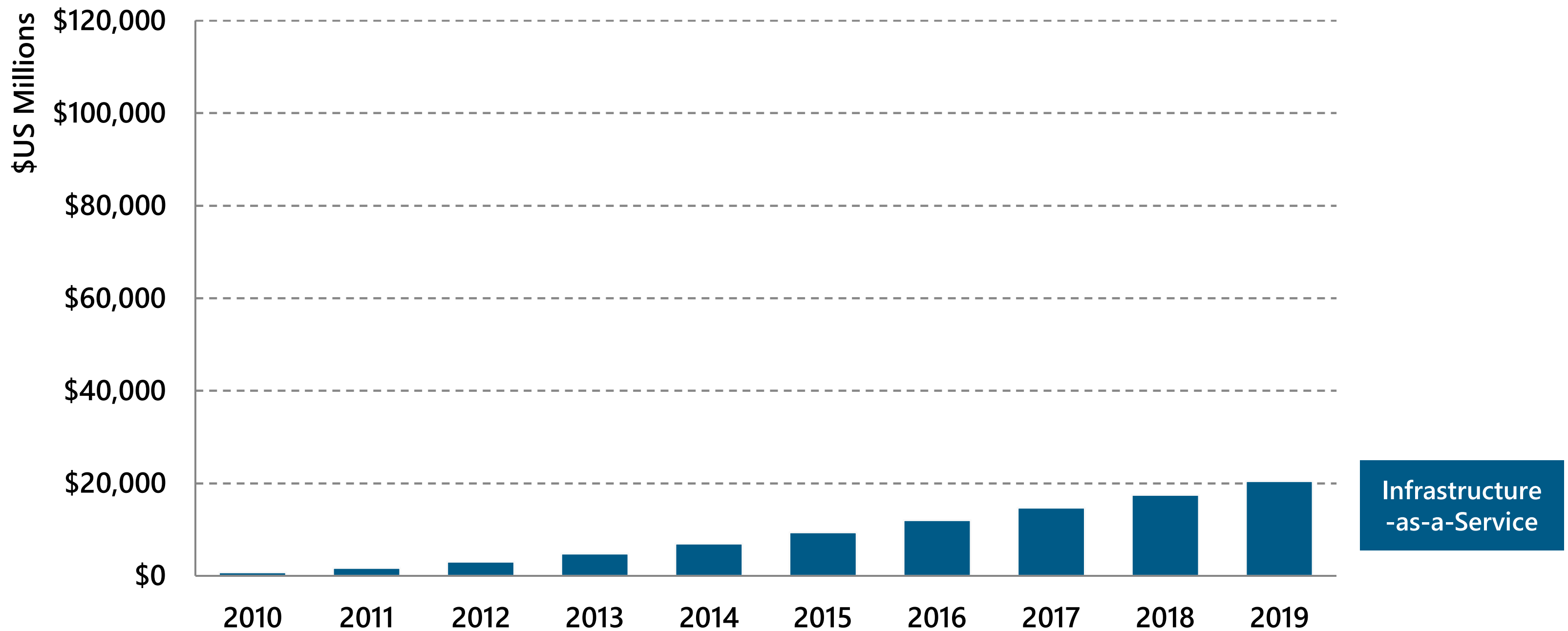
Worldwide Cloud Market Size, 2010 – 2019

Source: 451 Research Market Monitor, Cloud Computing



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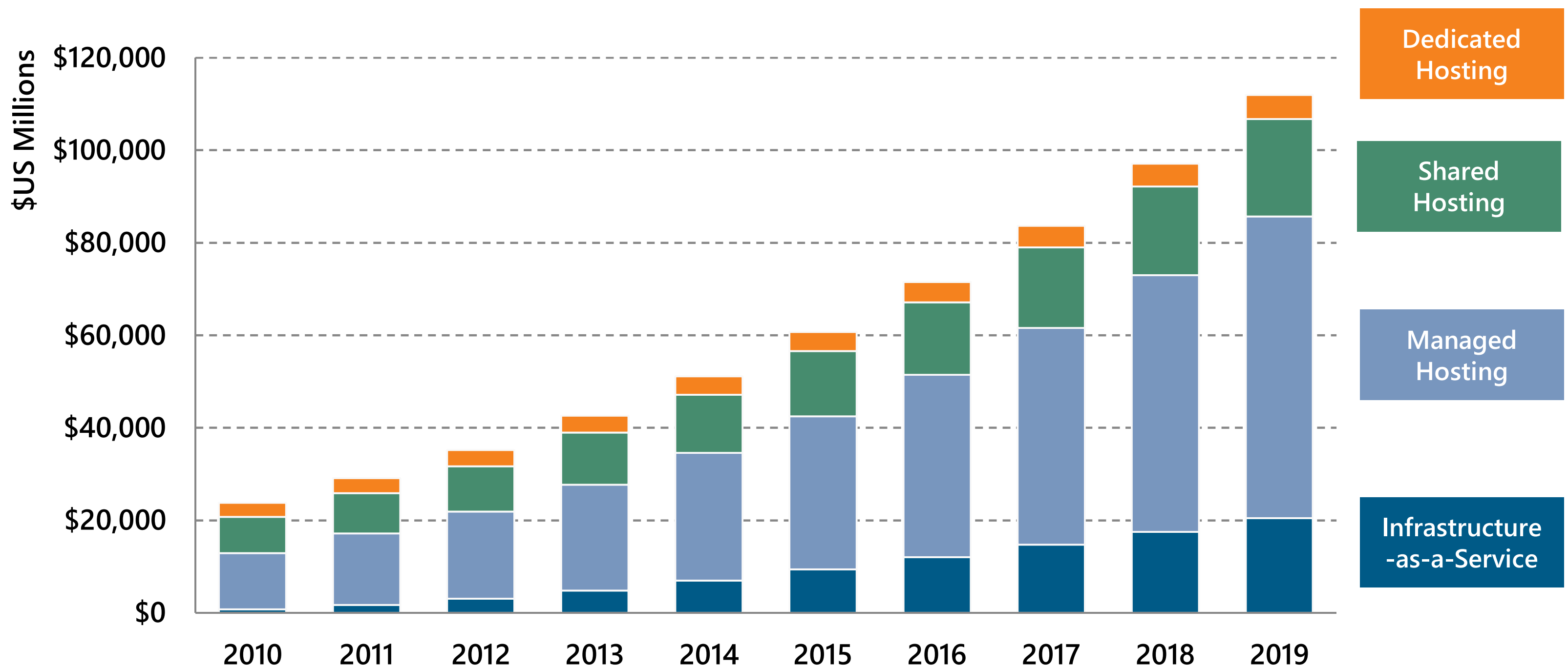
Worldwide Hosting & Cloud Market Size, 2010 – 2019

Source: 451 Research Market Monitor, Cloud Computing



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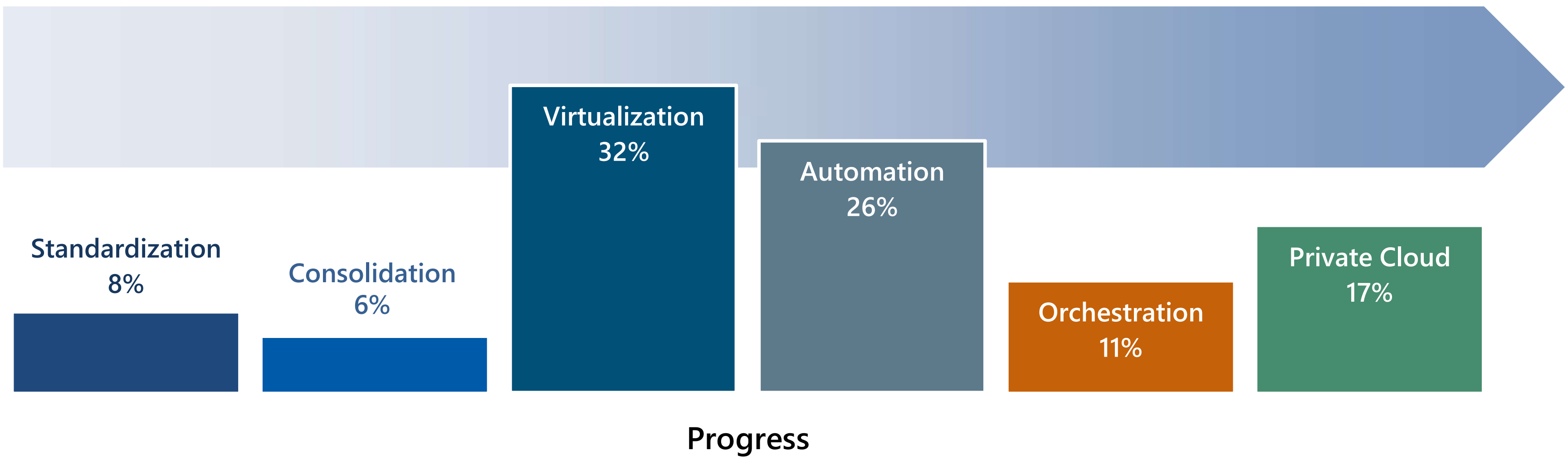
The Enterprise Journey to Cloud-ready Infrastructure

Q. In what phase are you in evolving your internal infrastructure (i.e., cloud-enabling) environment?

Source: Voice of the Enterprise, Cloud Computing



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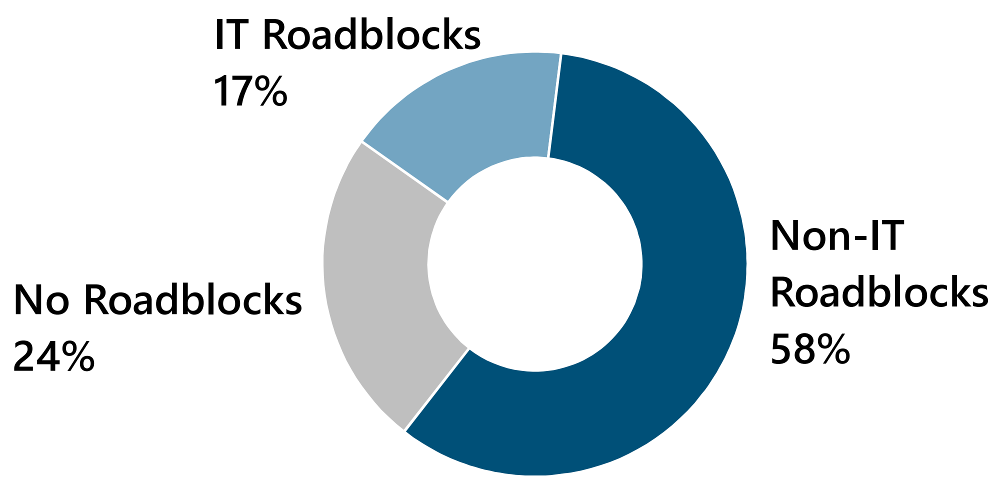
Cloud evolution roadblocks are typically not IT-based

Q: What roadblocks are inhibiting you from reaching the next phase of your cloud computing initiatives?
Source: Voice of the Enterprise, Cloud Computing



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Cloud is NOT suitable for everything/everyone

Q. What are your two biggest IT related pain points that are currently impacting your ability to get to the next phase?

Source: Voice of the Enterprise, Cloud Computing

■ Low Impact (0-4) ■ Moderate Impact (5-7) ■ Significant Impact (8-10)

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Cloud Computing
Q4 2015

Top 3 Factors in Business Case for Cloud Types

What are the key factors in building a business case for X cloud at your organization?

Source: 451 Research, Voice of the Enterprise: Cloud Computing Q4 2015

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On-Premises Private Cloud

1. Improved Security
2. Hardware Cost Savings
3. Improved Availability/Uptime

Hosted Private Cloud

1. Hardware Cost Savings
2. Less to Manage Internally
3. Scalability for Peak Demand

IaaS

1. Scalability for Peak Demand
2. Hardware Cost Savings
3. Speed/Time to Market

SaaS

1. Less to Manage Internally
2. Staff Savings
3. New Functionality

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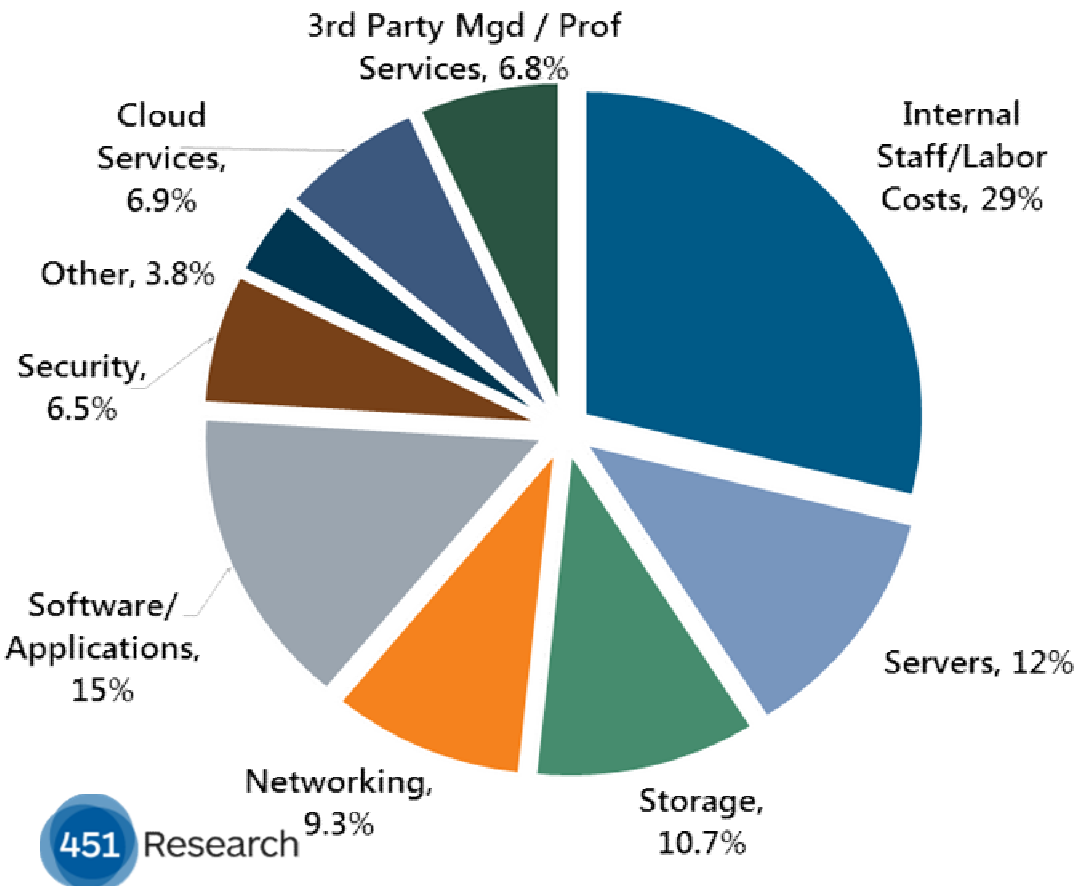
Overall IT Budget Allocation

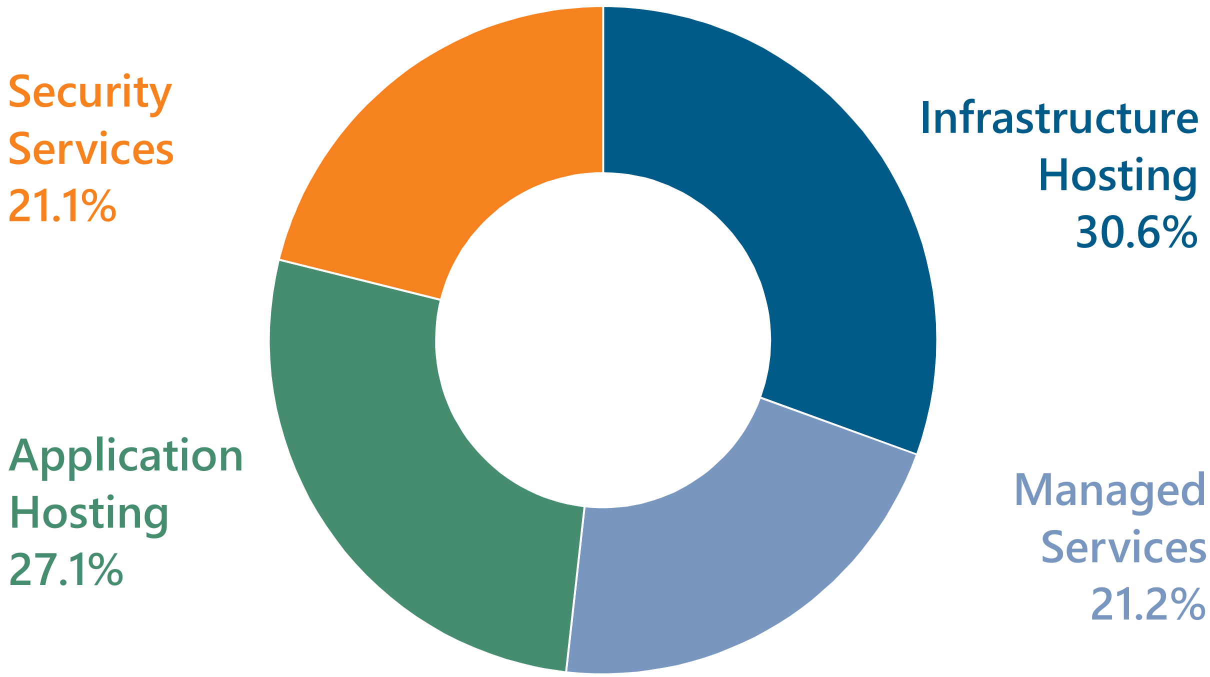


Source: 451 Research, Voice of the Enterprise: Servers & Converged Infrastructure, Q4 2015

Budget survey highlights

- 47% have IT budgets over $5M
- 64% will increase IT budgets in 2016
- 54% expect to increase Cloud Services in 2016

Budget allocation for hosting and cloud services



Almost 70% of cloud spending is now beyond Infrastructure services

Even in 2 years!

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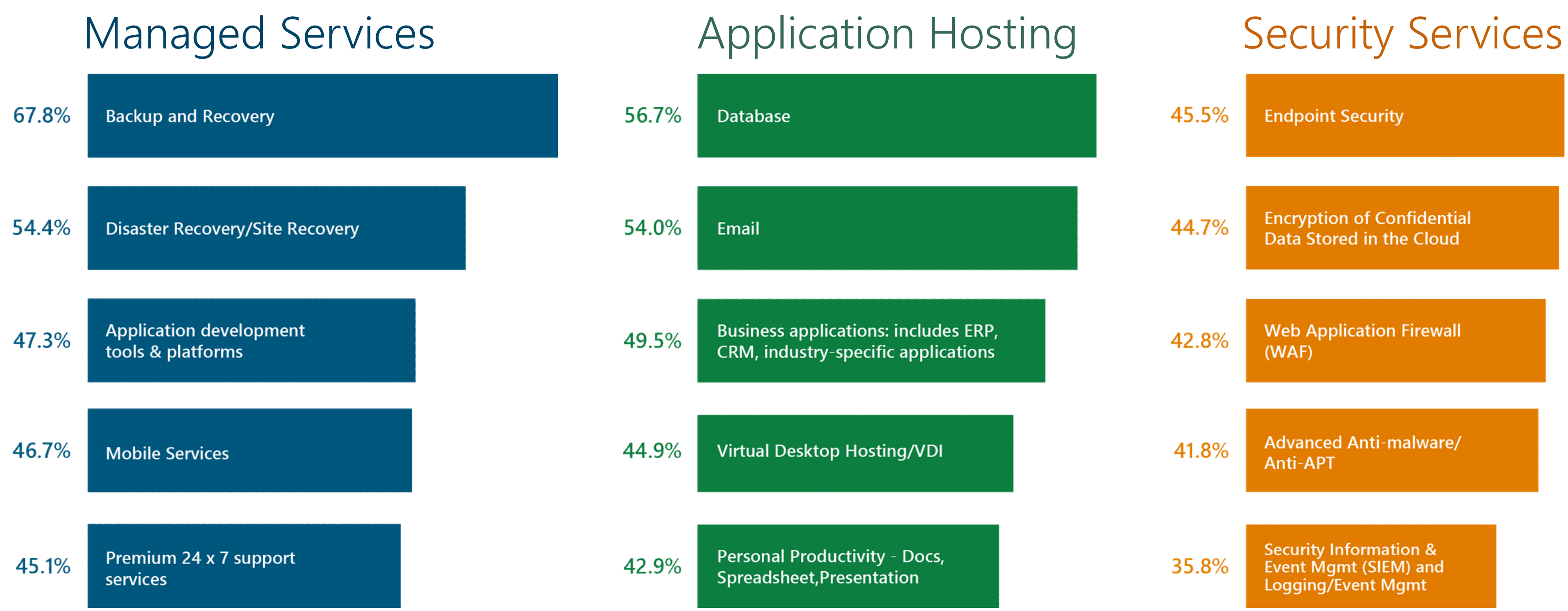
Commissioned by Microsoft (N=1600)

Enterprises want more than Compute and Storage from SPs



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Commissioned by Microsoft (N=1600)

Cloud Computing
Q4 2015

Top Cloud Projects

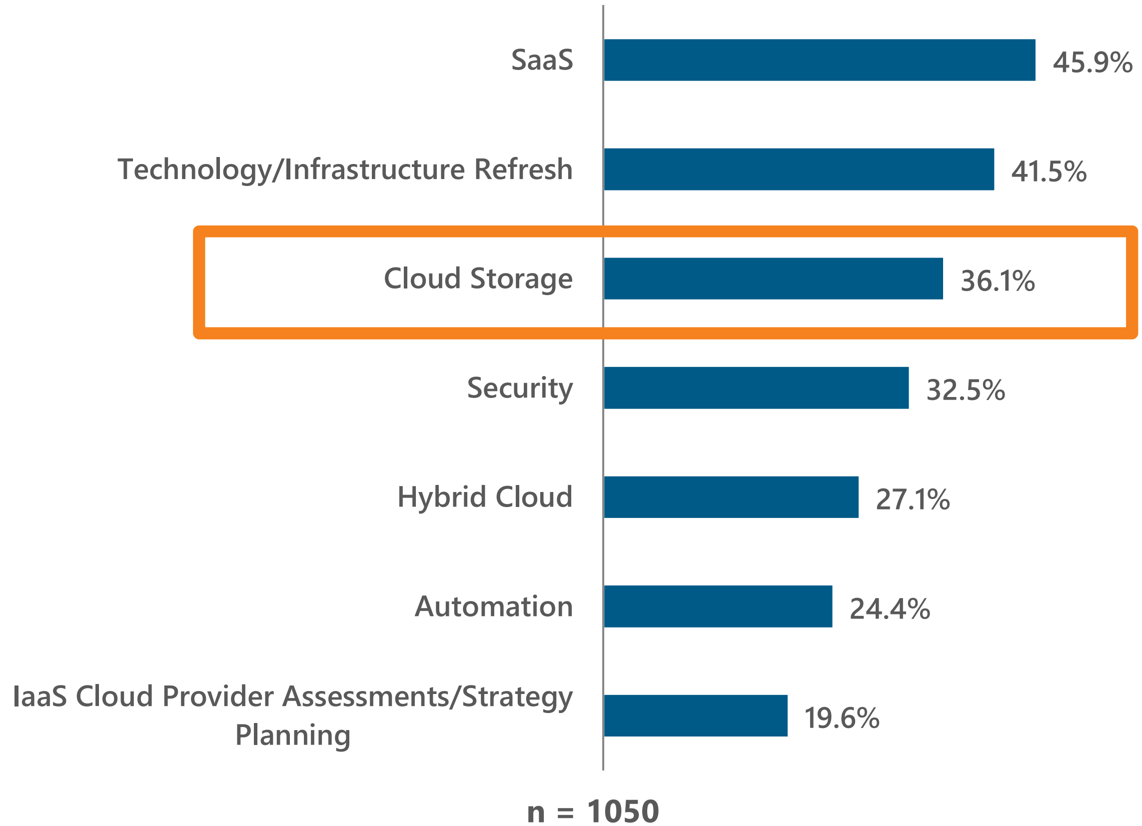
Cloud Respondents

What are your organization's top cloud computing-related projects in the next 12 months?

Respondent may select up to three.

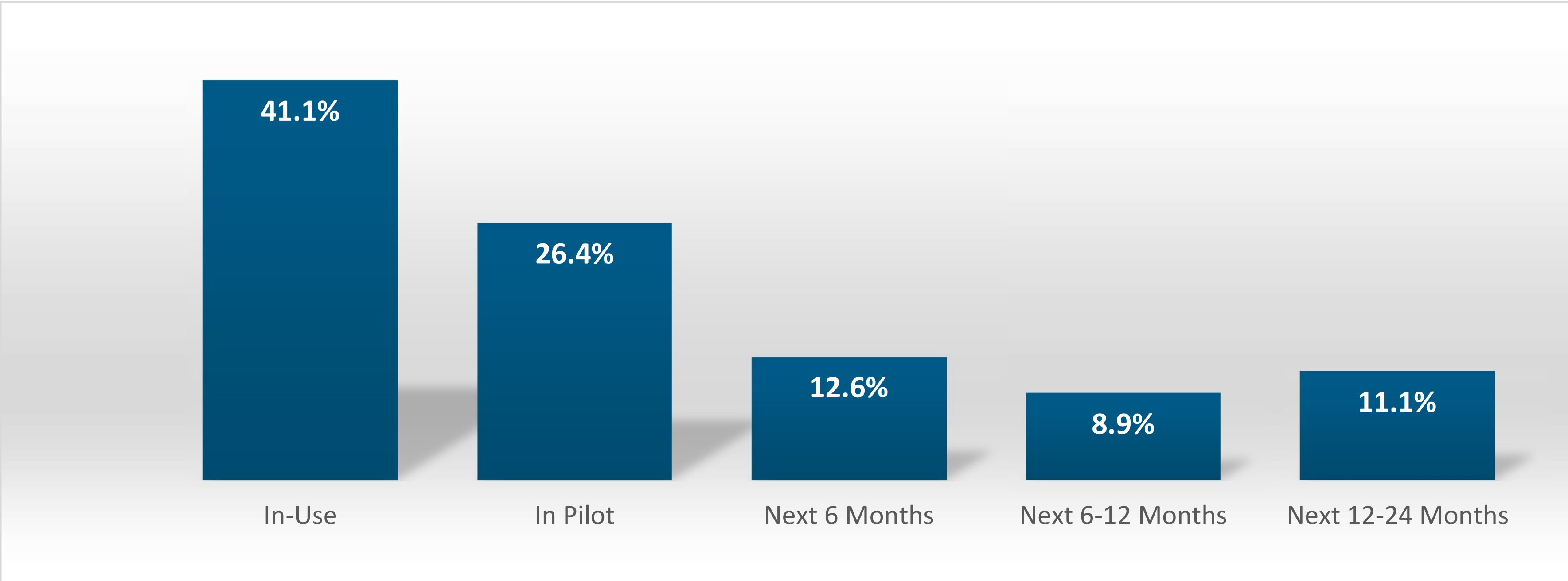
Source: 451 Research, Voice of the Enterprise: Cloud Computing Q4 2015

451 Research | Voice of the Enterprise



Digital Transformation and IoT

Q. Do you have an IoT initiative in use or planned?



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Source: 451 Research, Voice of the Enterprise Internet of Things (IoT) Q1 2016 [N = 533]

IoT Market Drivers

Falling Costs	Improving Tools	Market Forces
▪ Edge computing ▪ Bandwidth	▪ Cloud ▪ Middleware ▪ Analytics	▪ Market education ▪ Competition ▪ Government

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Top 10 IT infrastructure providers

- Amazon Web Services
- IBM
- Rackspace
- Microsoft
- GoDaddy
- Verizon
- NTT
- AT&T
- HPE
- CenturyLink

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4 of the Top 10 are Telcos

- Amazon Web Services
- IBM
- Rackspace
- Microsoft
- GoDaddy
- Verizon
- NTT
- AT&T
- HPE
- CenturyLink

Opportunity Remains

Top 10 control approximately 1/3rd of total revenues.

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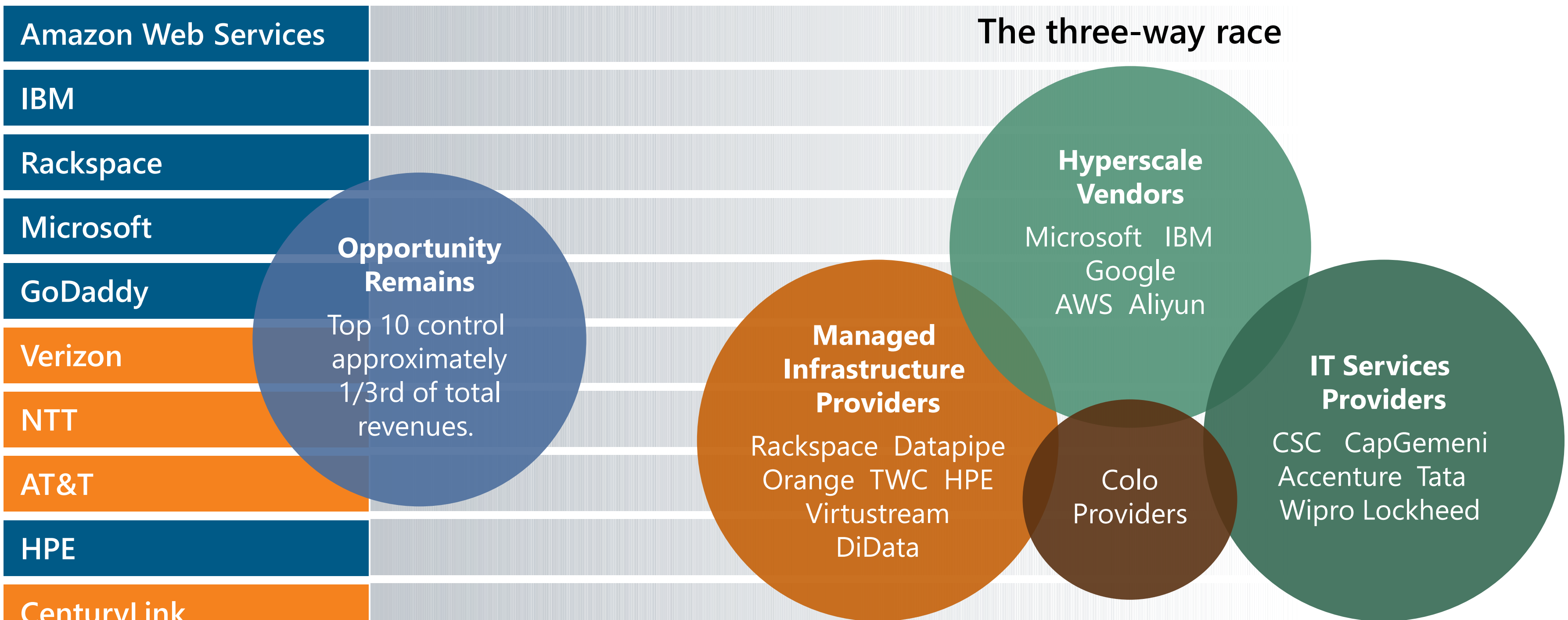
Opportunity is in the long tail



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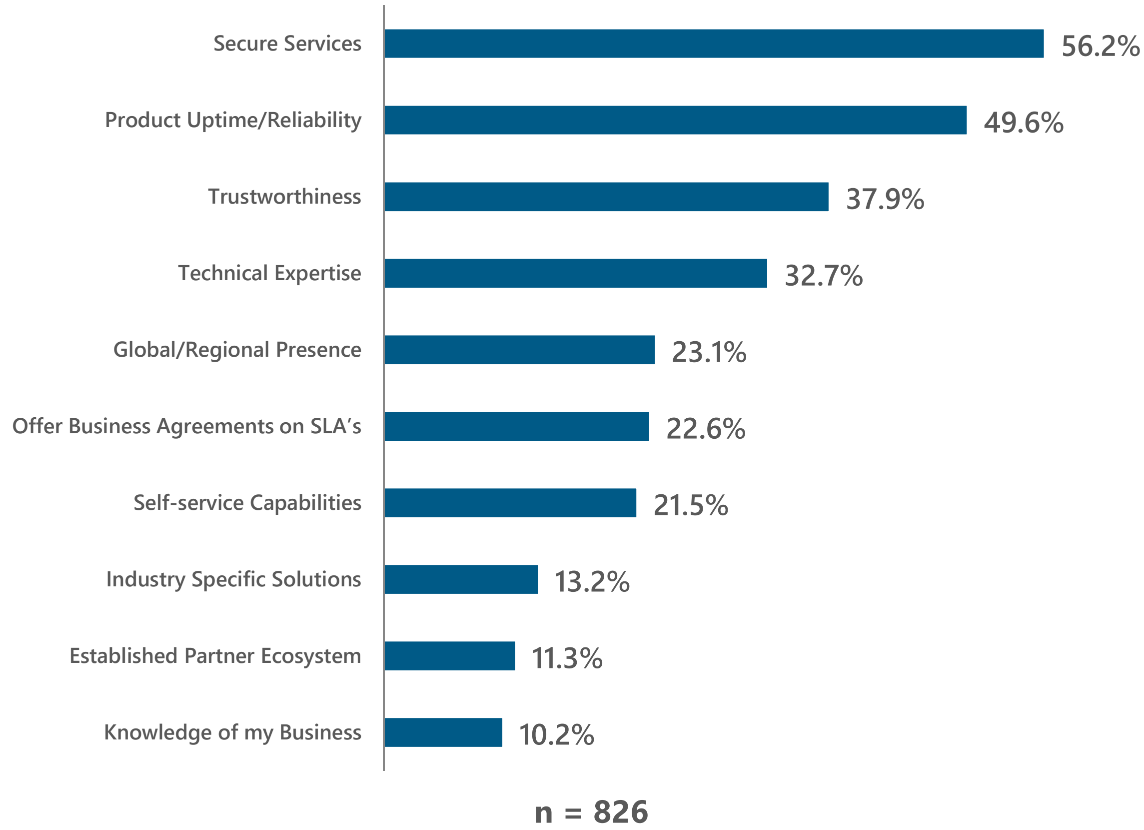
CLOUD COMPUTING
Q2 2015

Vendor Qualities

Cloud Respondents

Which of the following are the three most important qualities when selecting a cloud provider?



Source: 451 Research, Voice of the Enterprise: Cloud Computing Q4 2015

451 Research | Voice of the Enterprise

Service Provider opportunity

- Support growth in demand for multiple cloud types
- Move beyond managed infrastructure toward managed services, application hosting and managed security
- Increase software IQ: expertise in running specific workloads or application tasks - SaaS or hosted business processes (e.g. IoT)
- Adoption = application modernization and transformation, software-defined datacenter

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Chris Orlando

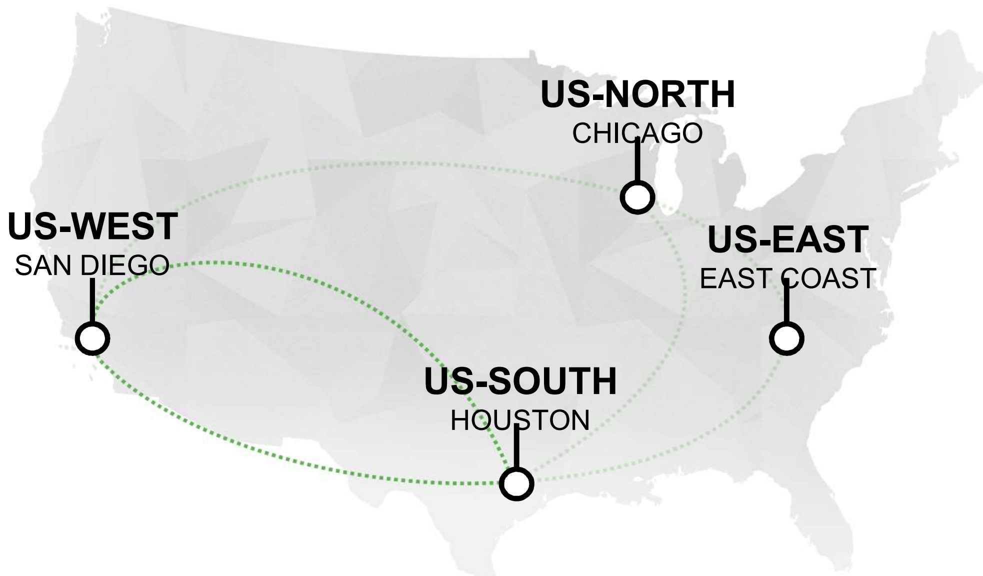
CSMO & Co-Founder

ScaleMatrix

@ChrisOrlandoSMX

SCALEMATRIX Chris Orlando, Co-Founder, CSMO @chrisorlandoSMX

ScaleMatrix – Hybrid Service Provider



ScaleMatrix operates proprietary, custom built, cloud-enabled data centers **designed to deliver unique density capabilities, in addition to a wide portfolio of hybrid services**. As one of the fastest growing U.S. based hybrid service providers, our US-West and US-South locations have each enjoyed rapid adoption in their respective markets. Two additional sites (US-North and US-East) are being developed to support additional geographies and client demand.

SCALEMATRIX

SM Data Centers Support 52kW Per Rack

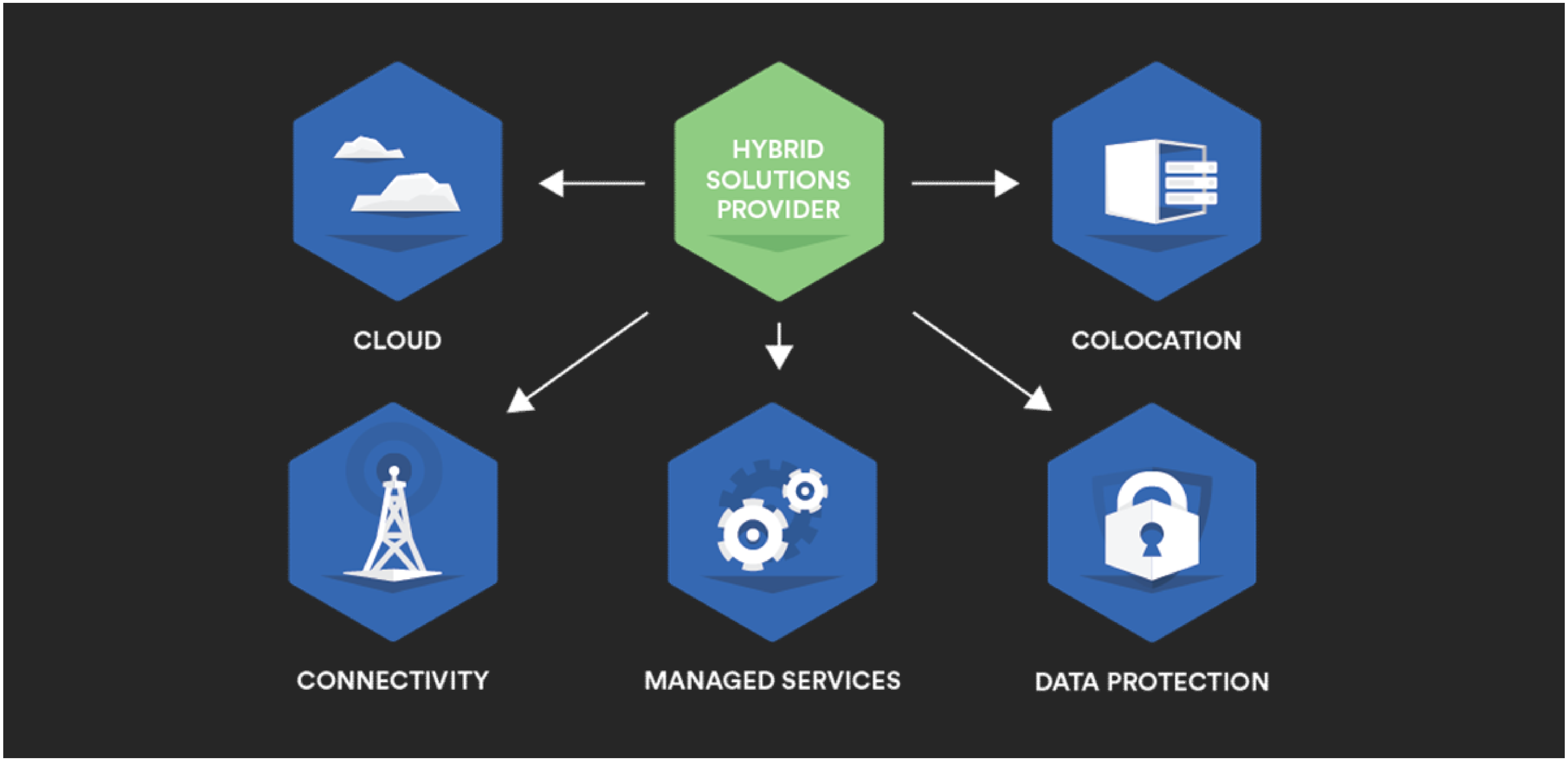
ScaleMatrix – Hybrid Service Offering

- Hybrid Service Areas:
  - High Density Colocation
  - Cloud Services
    - Multi-Tenant (Vmware, HyperV, OpenStack)
    - Private Cloud
    - IaaS
    - HPC-as-a-Service
    - **Storage-as-a-Service**
    - **Backup-as-a-Service**
    - **Disaster Recovery-as-a-Service**
    - Managed Services
    - Connectivity

- 400+ Enterprise Clients
- Data Centers
  - San Diego
  - Houston
    - Pending Deployment
      - Seattle
      - Portland
      - Chicago
      - Richmond

- Deployed Nexenta Storage in 2013
  - Born in the Cloud Era
  - Leveraged Software Defined Storage from Inception – Real Advantage

SM Established in 2011



SCALEMATRIX

Rapid growth fueled by exponential increase in data storage, management, and retention by enterprise clients.

Block and object storage enabled services represent the fastest growing product categories within our portfolio.

Inc. 500

#334

#64

Talkin' Cloud 100
2015
Top 100 Cloud Service Providers

WORLWIDE

SCALEMATRIX

Service Provider Opportunities Exist in Data Management

DATA DRIVEN INDUSTRIES

Manufacturing, Education, Legal

Finance, Technology

LifeScience, BioTech, Informatics

Energy, Healthcare, Data Governance

SCALEMATRIX Enterprise Data Storage Needs Easily Doubling Every Year

Enterprise Drivers & Use Cases

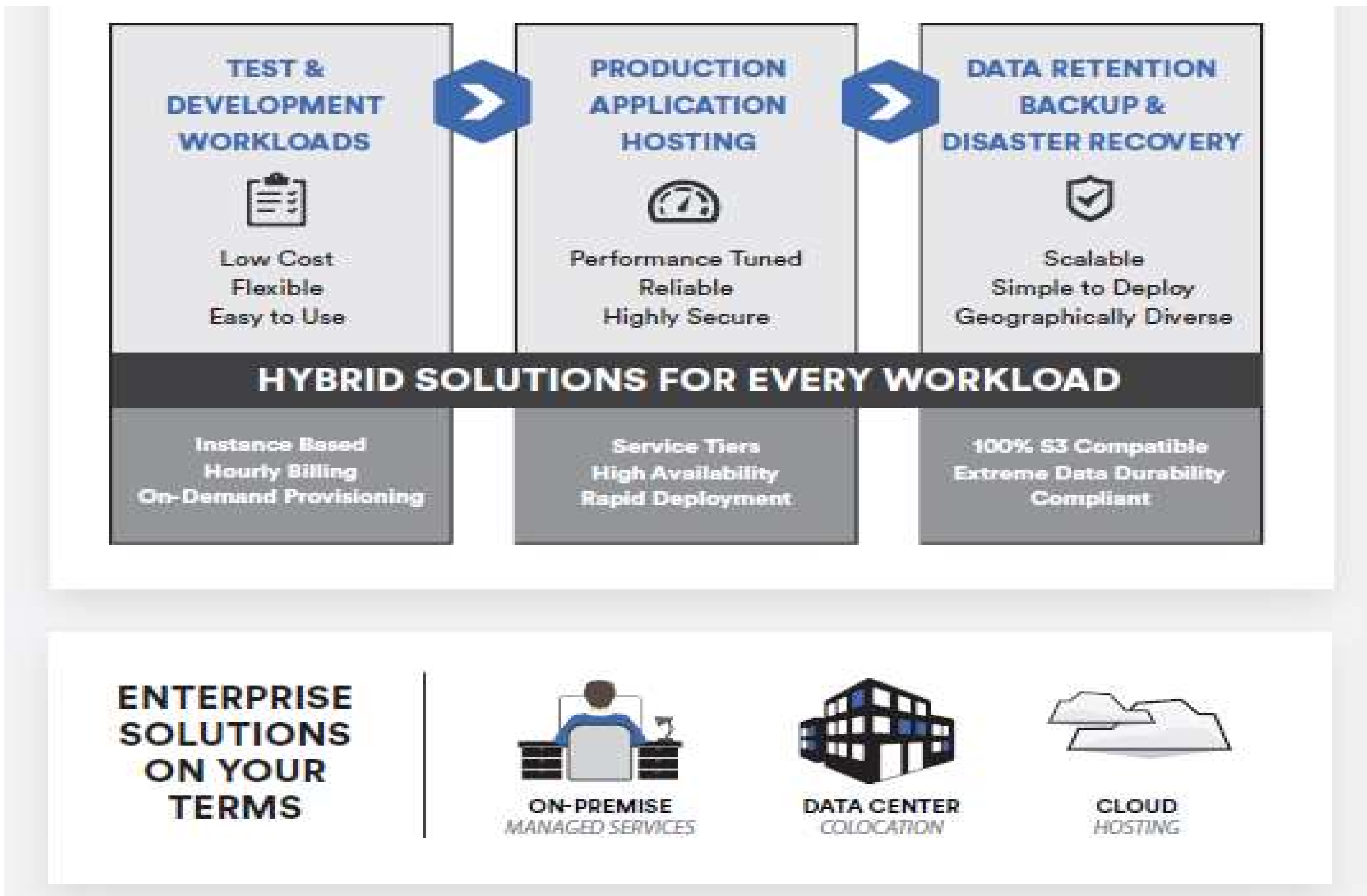
Drivers

- Exponential increase in storage volume (BigData)
- Requirement to maintain data for longer periods (Retention)
- Extensive focus on "leveraging" available data (Analytics)

Use Cases

- Backup
- Disaster Recovery
- File Management / Governance
- Tape Replacement
- Compliance Retention
- Business Intelligence

STORAGE WORKLOAD DEMANDS
Multi-Use Case, Multi-Location - SDS Advantages



Software Defined Disruption

Client and Service Provider Impact

Service Provider Impact
- Better scale-out TCO than traditional storage solutions
- Increase opportunity for revenue generation (Block, Object, Use Case Based)
- Sticky value creation for end users.

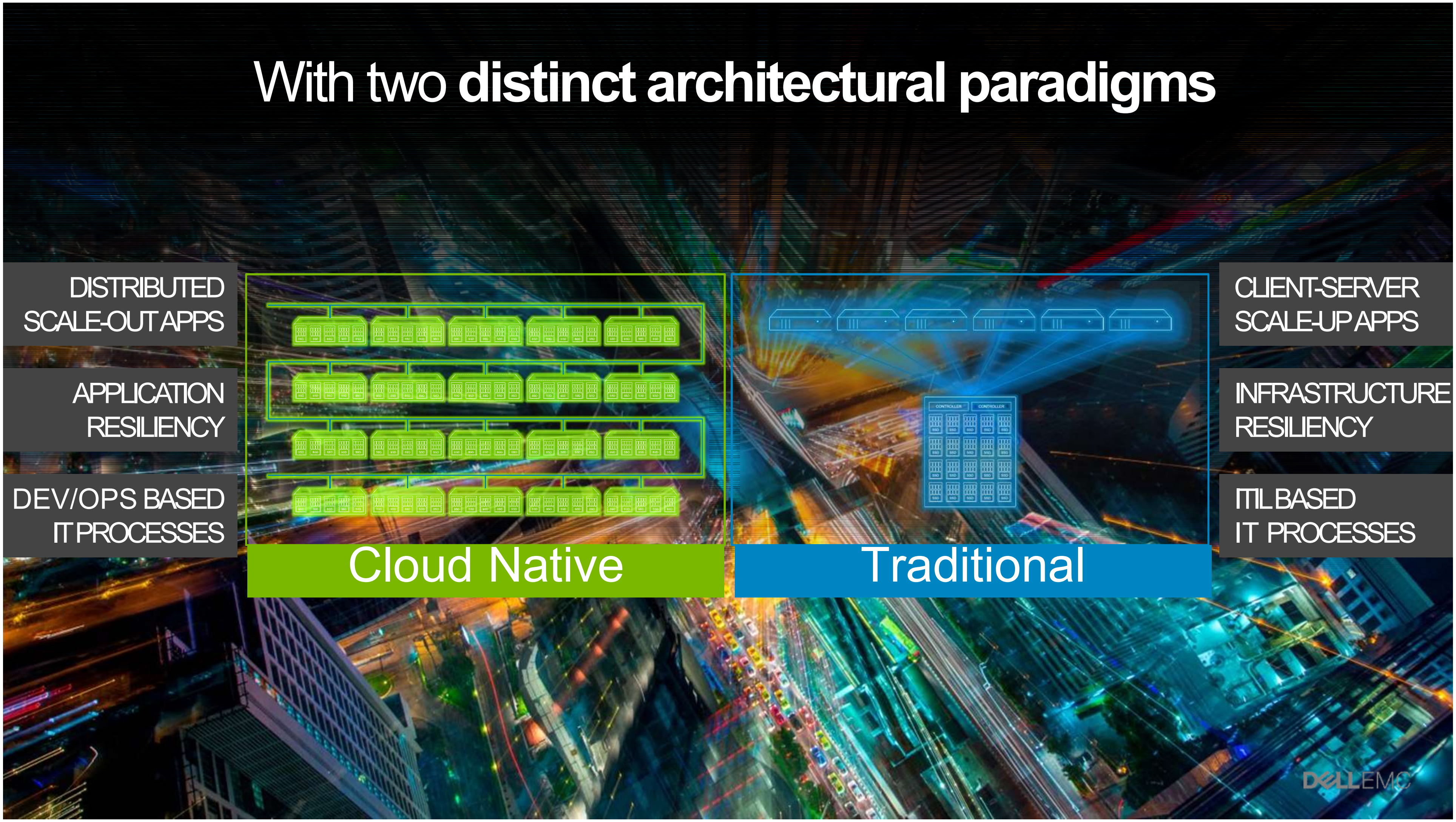
Client Impact
- Better Time to Market
- Scalability on Demand
- Better TCO
- Reduced Overhead / Complexity
- Differentiation

Ganesh Padmanabhan
VP Worldwide Enterprise Solutions
Dell Technologies
@_ganeshp

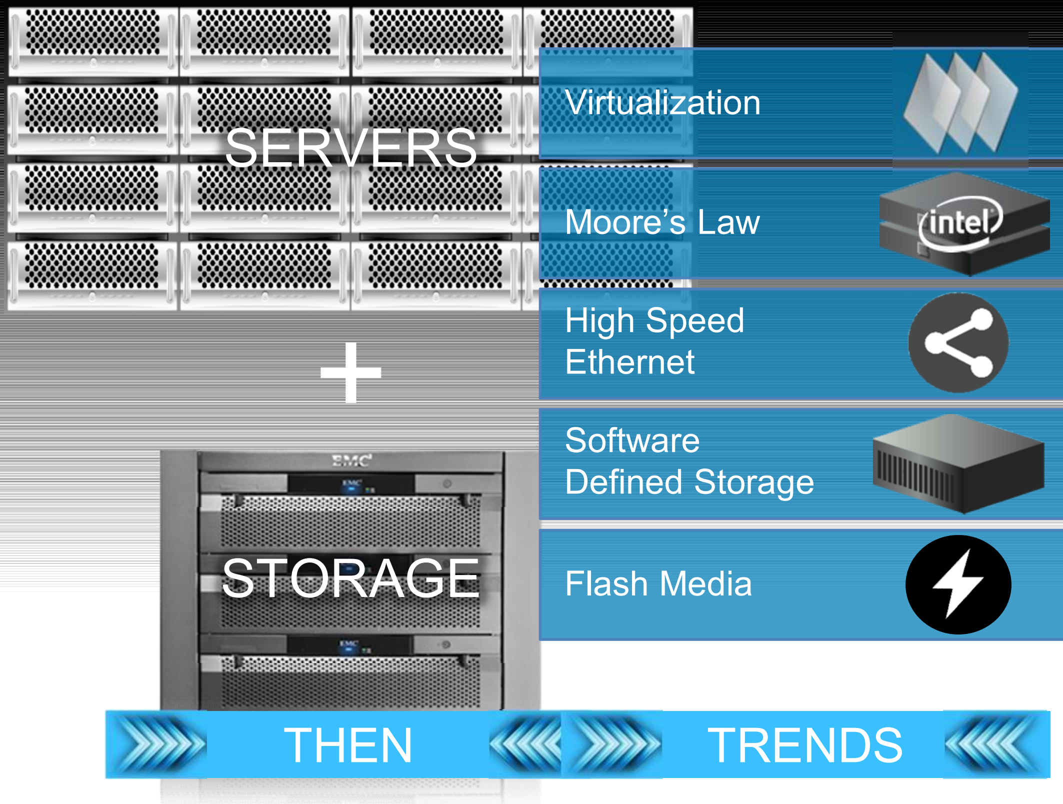

Building the Future Ready Enterprise
Welcome to the software-defined era, where the intersection of traditional and new IT represents unprecedented **change** and vast **new opportunities**.

A wide **variety** of workloads

Systems of Engagement	Systems of Record
Pivotal Cloud Foundry	SAP
PHOTON™	JBoss by Red Hat
RabbitMQ	Boomi
cassandra	ORACLE®
etcd	IBM WebSphere
	Microsoft® BizTalk
Cloud Native	**Traditional**


With two distinct architectural paradigms
DISTRIBUTED SCALE-OUT APPS
APPLICATION RESILIENCY
DEV/OPS BASED IT PROCESSES
Cloud Native
Traditional
CLIENT-SERVER SCALE-UP APPS
INFRASTRUCTURE RESILIENCY
ITIL BASED IT PROCESSES

Systems design shift



Service Providers globally are at the **crossroads**

1. **New architectures and technologies**
   changing the velocity, ease, and economics of service creation and delivery

2. **New services and business models**
   designed to harness the ‘always-on, instant-access’ device experience.

3. **New competitive landscape**
   challenging the status quo of connectivity and service offerings.

Our approach delivers **better results**

The Dell EMC difference

End-to-end solutions

Comprehensive portfolio, better together

Customer Choice

Comprehensive portfolio of choices to best suit your technical and business needs.

Open, standards-based approach

No deliberate lock-in & easy access to latest innovations

Flexible scaling

No forced constraints or rip-and-replace

Unmatched service & support

Single source for global service & support

Superior TCO

Better up-front and ongoing costs, plus flexible financing

Tarkan Maner
Chairman & CEO
Nexenta
@tarkanmaner

Nexenta is #1 in Open Software Defined Storage (OpenSDS): **Executive Summary**

Benefits:

- Lowest TCO
- Freedom of Choice
- Fast time to Market
- Intelligence
- Security

~~Rip-n-Replace~~

Founded in 2008; #1 Pure Player in **OpenSDS**

Open Source Collaboration/**SDS** Innovation

Software-Only SDS Platform on/for **ANY** Infra/Cloud

Smart Scale-UP + Scale-OUT + Orchestration

$6,000+/2,750+ engagements/customers

300+ **strong partner ecosystem;**

50+ Cert-ed RAs; 46 patents

1.5+ exabytes; All Verticals; All Geos;

46K+/100K+ community members/transactions

Drivers:

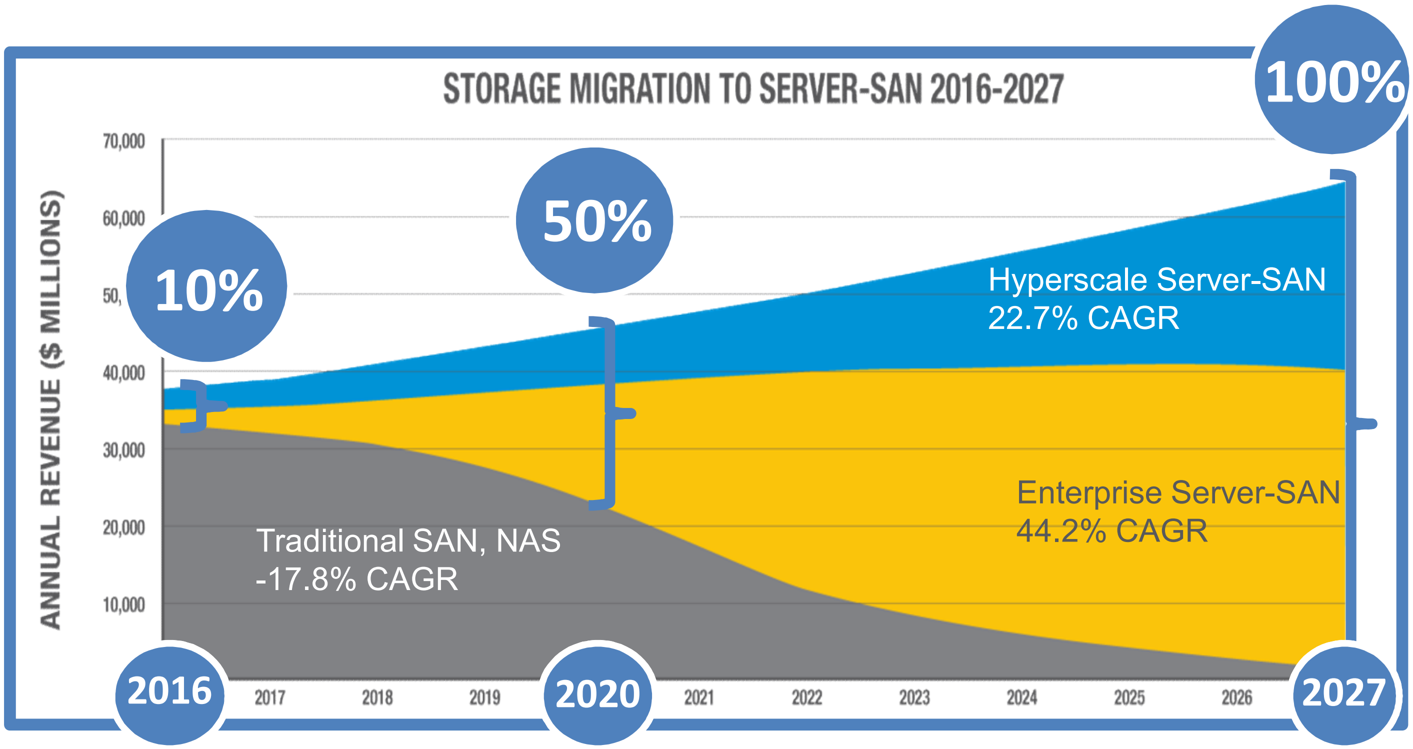
- 2016-2020 – 6ZBs to 60ZBs
- Social Media/Commerce
- Mobility/IoT
- Big Data/Cloud
- Open, SDx, Commodity

~~Bait-n-Switch~~

~~Lock-in~~

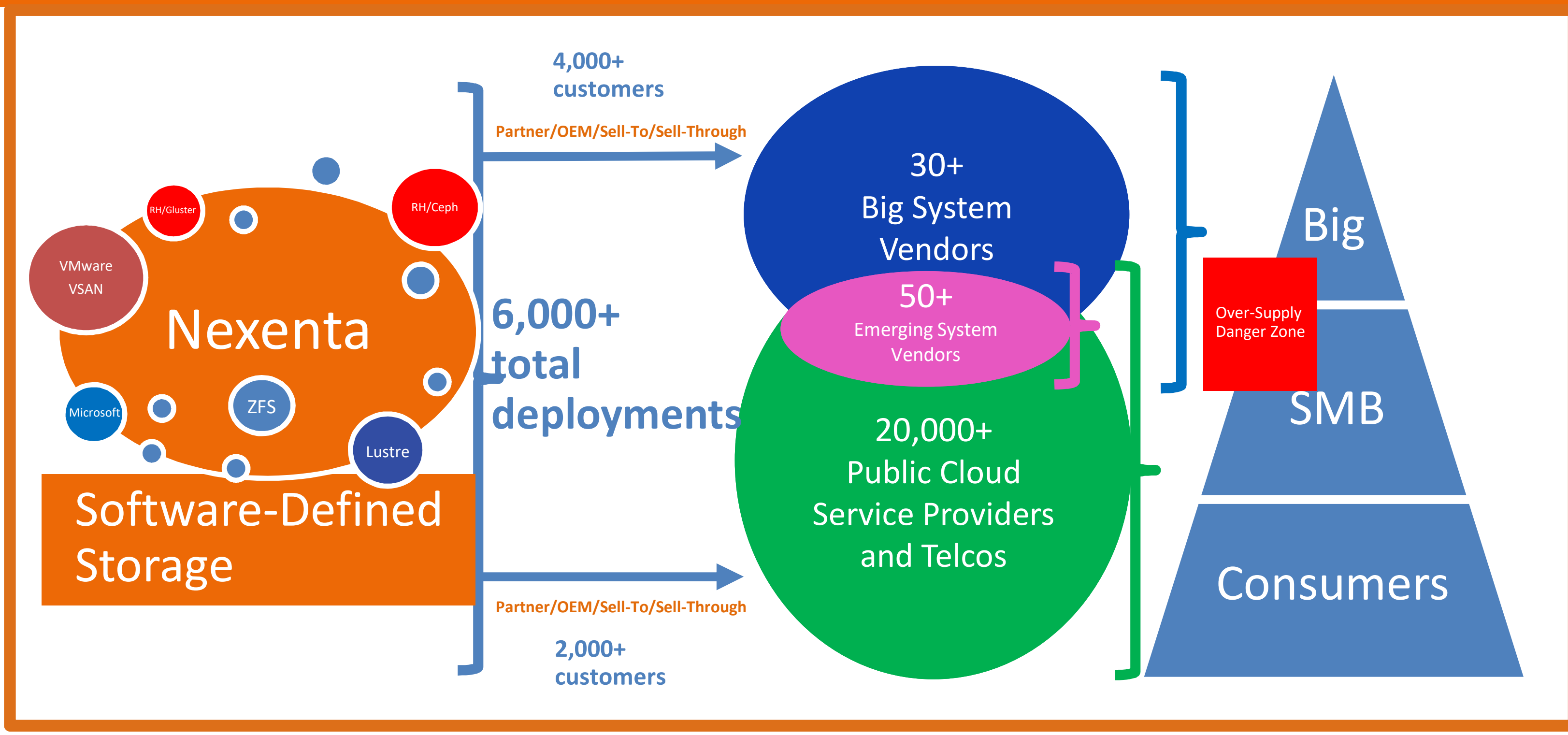
Nexenta is #1 in Open Software Defined Storage (OpenSDS): **Market Disruption**

- The server the primary storage element
- Software Defined Storage from niche to mainstream
- Application Driven, Scale-Up/-Out architecture
- Block, file and object via unified management
- Any app or infrastructure



Source: 2016 – Company, Gartner, IDC and Wall Street research.

Nexenta is #1 in Open Software Defined Storage (OpenSDS): **Market Position/GTM**

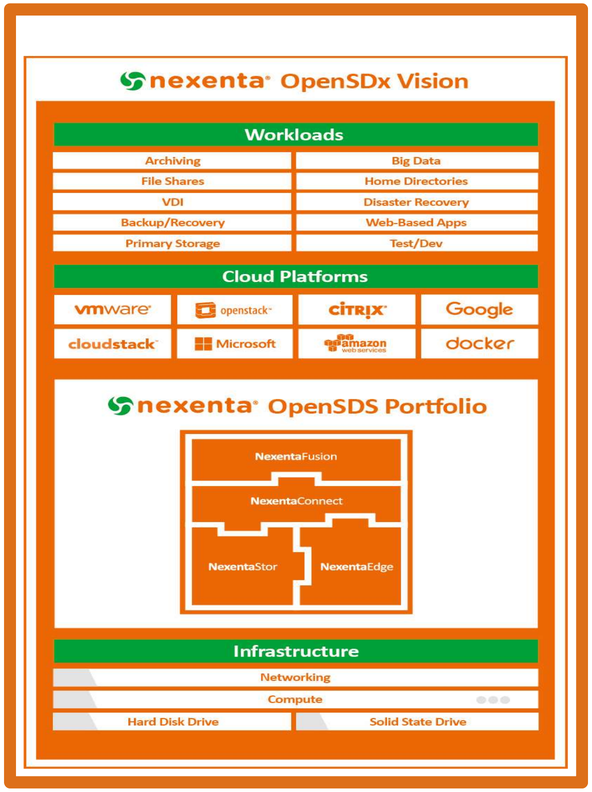


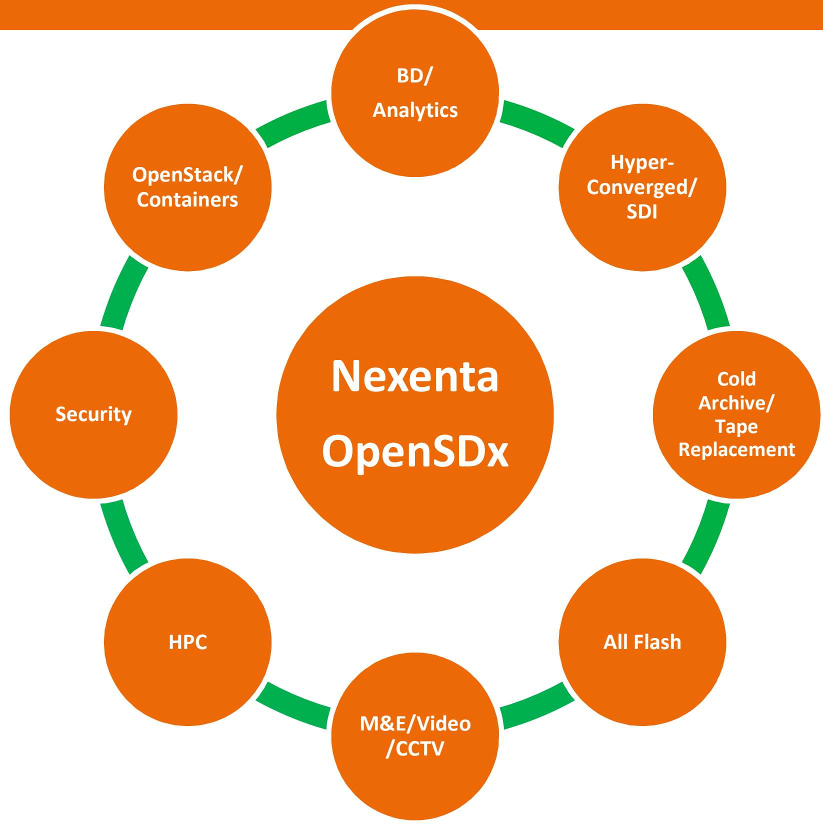
Source: 2016 – Company, Gartner, IDC and Wall Street research.

Nexenta is #1 in Open Software Defined Storage (OpenSDS): **“Any” Vision/Partners**

Any App	
Any Workload	High Performance Computing/HPC; Legacy/Ent/Win/Web Apps (T1-Tn) Storage; VMs/VDI; IoT/ Big Data; Home Directories; File Shares; Backup/ Archive; Cold Archive
Any Stack	
Any Protocol	File - SMB; Block - FC; File – HDFS; Object – S3; File - NFS; Block - iSCSI; Object – Swift
nexenta®	
Any Infrastructure	

Nexenta is #1 in OpenSDS-based AFA Vision: **Big Dream and Future Opportunities**





Nexenta is #1 in Open Software Defined Storage (OpenSDS): **Customer References**

Technology/Hosting

Education & Research

Government

Telcos

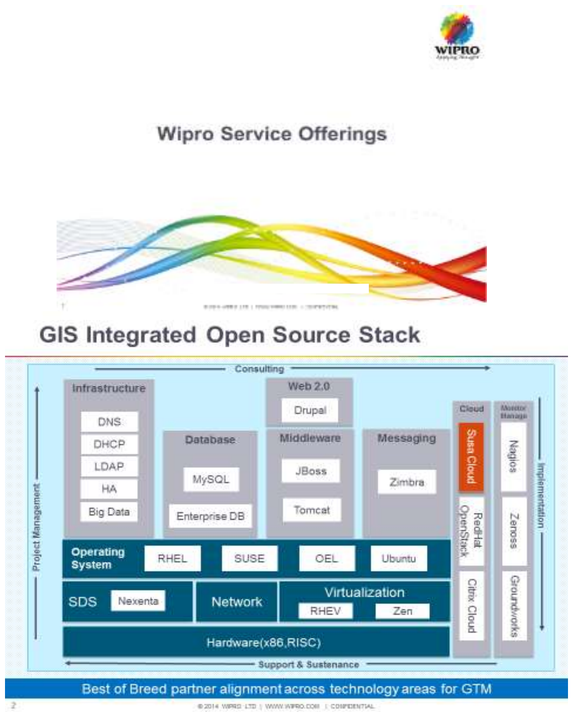
KCH Co.
Ltd

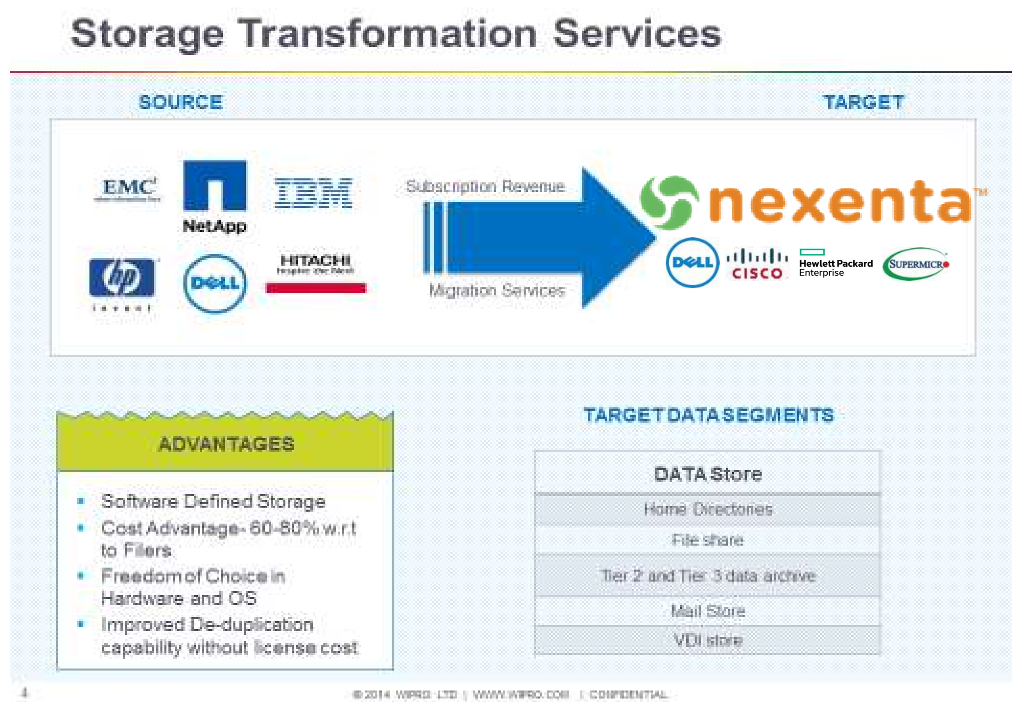
Healthcare

Retail

TMT

Nexenta is #1 in Open Software Defined Storage (OpenSDS): **Wipro Reference**





Source: 2016 – Nexenta, Wipro, Gartner, IDC and Wall Street research.

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nexenta®

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100% Software. Total Freedom. All Love.