



The Impact of Digital Infrastructure on the Enterprise

Chris Hazelton
Research Director

Encouraging Signs of Economic Recovery

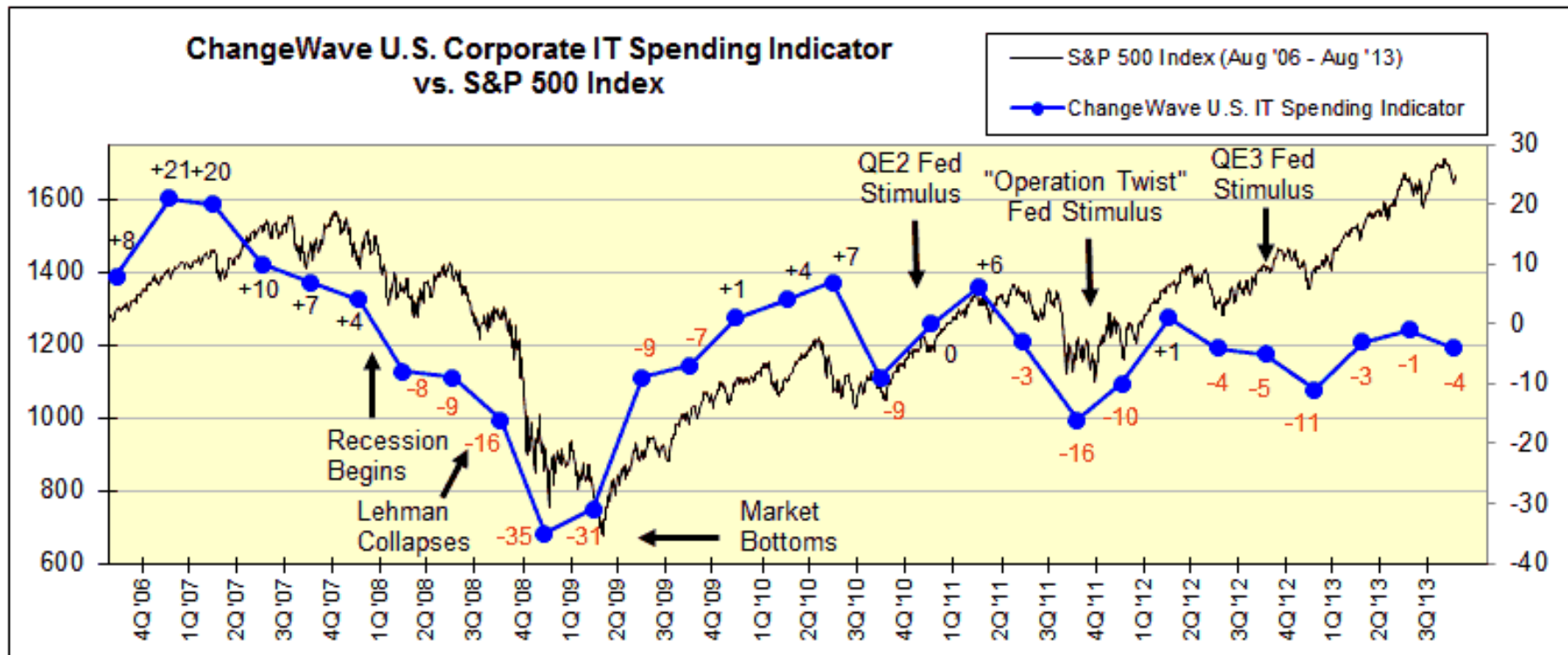
Business Metrics Trend Upward and Consumers are Cautiously Optimistic

- GDP Growth
- Jobs Growth
- Low Inflation
- Housing Prices
- Consumer Spending
- Low Cost of Capital



IT Spending Has Stabilized, Yet Growth is Inconsistent

U.S. Corporate IT Spending Indicator vs. S&P 500 Index



Source: 451 Research ChangeWave, Q313

Roadblocks to Pre-recession Growth

Cash Rich/Innovation Poor Corporations

- Cash hoarding
Cash: Assets → 1995=6%; 2012=12%
- Bloated balance sheets
- Limited long-term investments
Projects with 3-6 month ROI
- Executive careers built cost-cutting,
not innovation
- Efficiency projects vastly exceed
new business projects



NYSE 11 Wall Street Building

- “Fabled Floor” is rentable for events

Algorithmic trading, High-frequency trading

- Electronic only exchanges
- NYSE matching engines now in Mahwah NJ
- Low latency trading requirements makes NYSE colocation a “sell-out”

Footmisthis.....



\$135 billion transactions annually
\$15 Trillion processed annually

Analytics for Fraud Identification

Mobile Devices are the new access point

- Tablet POS systems with retailers
- SmartPhone payments and Smart Wallets set to disrupt
 - Square
 - Dwolla
 - Google
 - Apple
- Banks are investing in P2P payments

Potential disintermediation of network providers

Analytics to identify new programs for Merchants



Industry Changes Remain Transformative *Healthcare Sector*

Electronic Medical Records

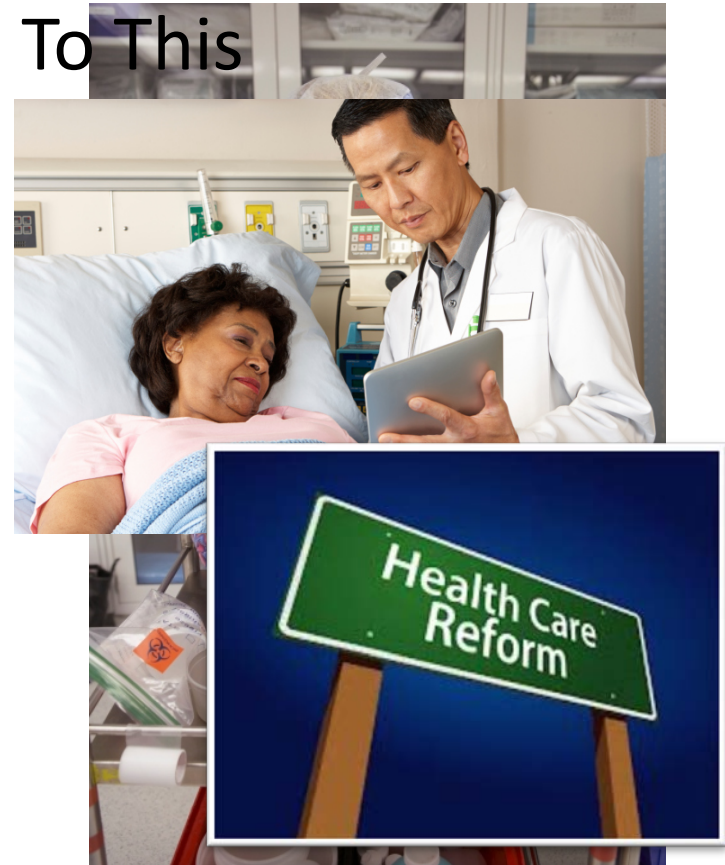
- Foundation for new tech innovation
- Mobile devices in hospitals /clinics
- Mobile patient records at the core of improved outcomes
- Privacy remains an ongoing challenge

Patient Protection Affordable Care Act in US:

- Patient quality/experience
- Measured health of the population
- Reduction in per capita health costs
 - Health exchanges open October 1, 2013
 - Consumers can compare health costs

Social Media and data sharing among patients

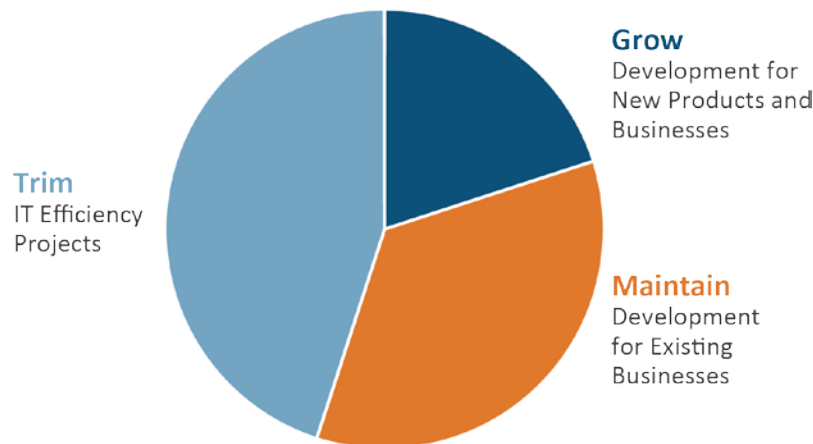
- Forming disease communities
- <http://www.patientslikeme.com/>



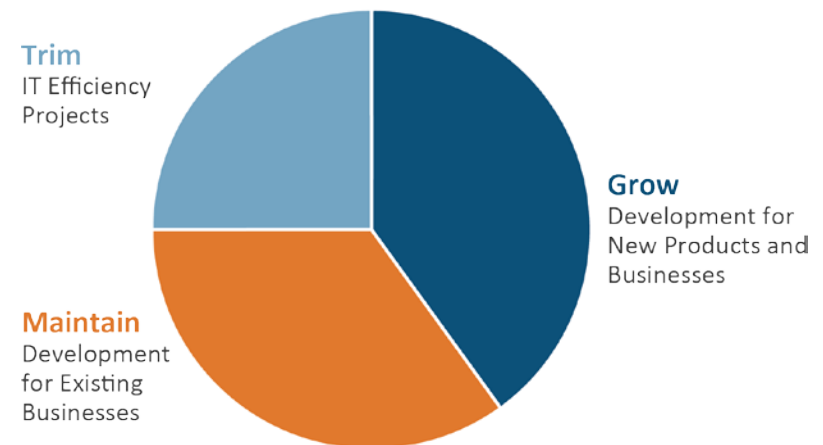
How Business Behavior Impacts Technology Decisions

- Cost of capital is at an all time low
 - Yields on long term investments start to look better than short term investments
 - Investments in efficiency when cash is abundant opens the door for faster moving competitors
- Products for the few have limited long term value and payoff
- Products for the masses by definition create extensive value and will be the cornerstone of the next wave of application development

IT Project Portfolio Today



IT Project Portfolio for Business Growth



How Hosters are Helping Solve Business Problems

Cut Costs

- Reduce spending on systems hardware
- Reduce staff time on IT maintenance
- Minimize software licensing costs
- Reduce IT Complexity
- Improve security of data & applications
- Scale IT resources as business demands change
- Automate the provisioning of IT resources
- Modernize or refresh our technology
- Reduce the datacenter space we manage
- Pay as we go pricing

Grow Business

- Get new products or services to market faster
- Regional or global expansion of our business
- Support development of new types of applications
- Improve the availability of our applications

Importance of **Cost Cutting** vs. **Grow Business**

Move Resources
to Off-premise
Datacenters

6x

Increase
Satisfaction

1.5x

Meet 2-year
Business Goals

1.5x

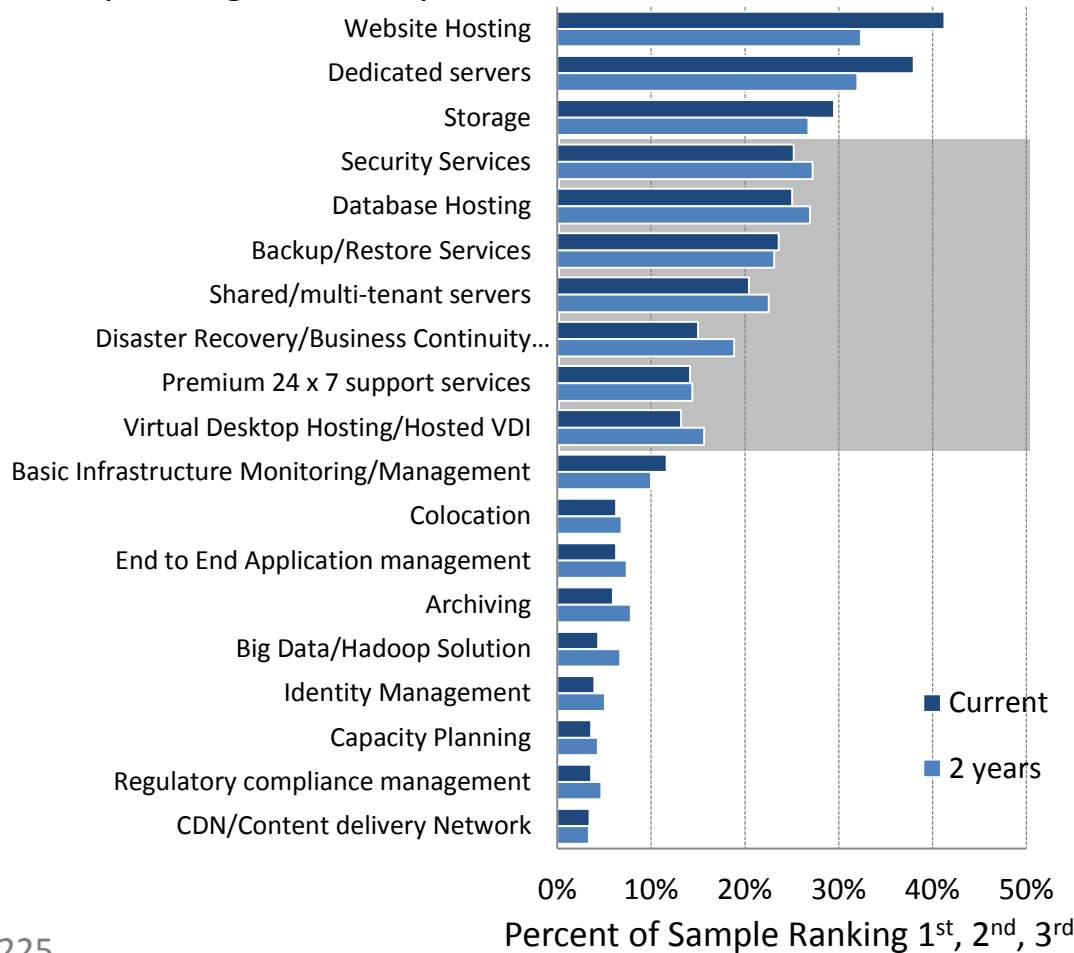
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Hosted Services Adoption Increases Dramatically as Customers Define “Their Cloud”

Top 3 Services Ranked by Spending

Q. Rank the top three hosted infrastructure services that you procure today in terms of spending. And in 2 years?



Growth in hosting will increasingly come from non-core services

- More than 50% of customers are already paying for security services
- Security and database are most prominent with security spending exceeding that of storage
- Backup, shared servers, DR and VDI are outpacing current adoption

The requirement for “full-service” grows as the size and importance of the off-premise application portfolio grows

Average Number Services Currently Purchased = 9

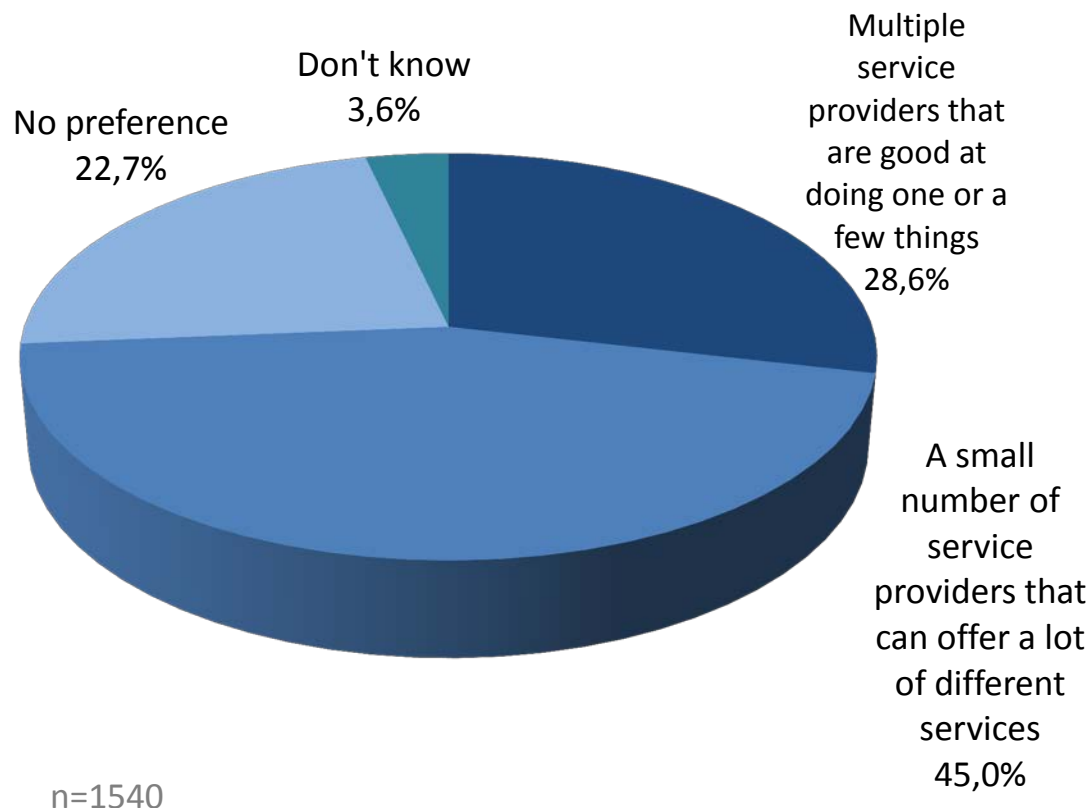
30% of respondents currently purchase 10 or more services

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Providers that offer full service capabilities have distinct market advantage

Q. Moving forward, is the preference to use:

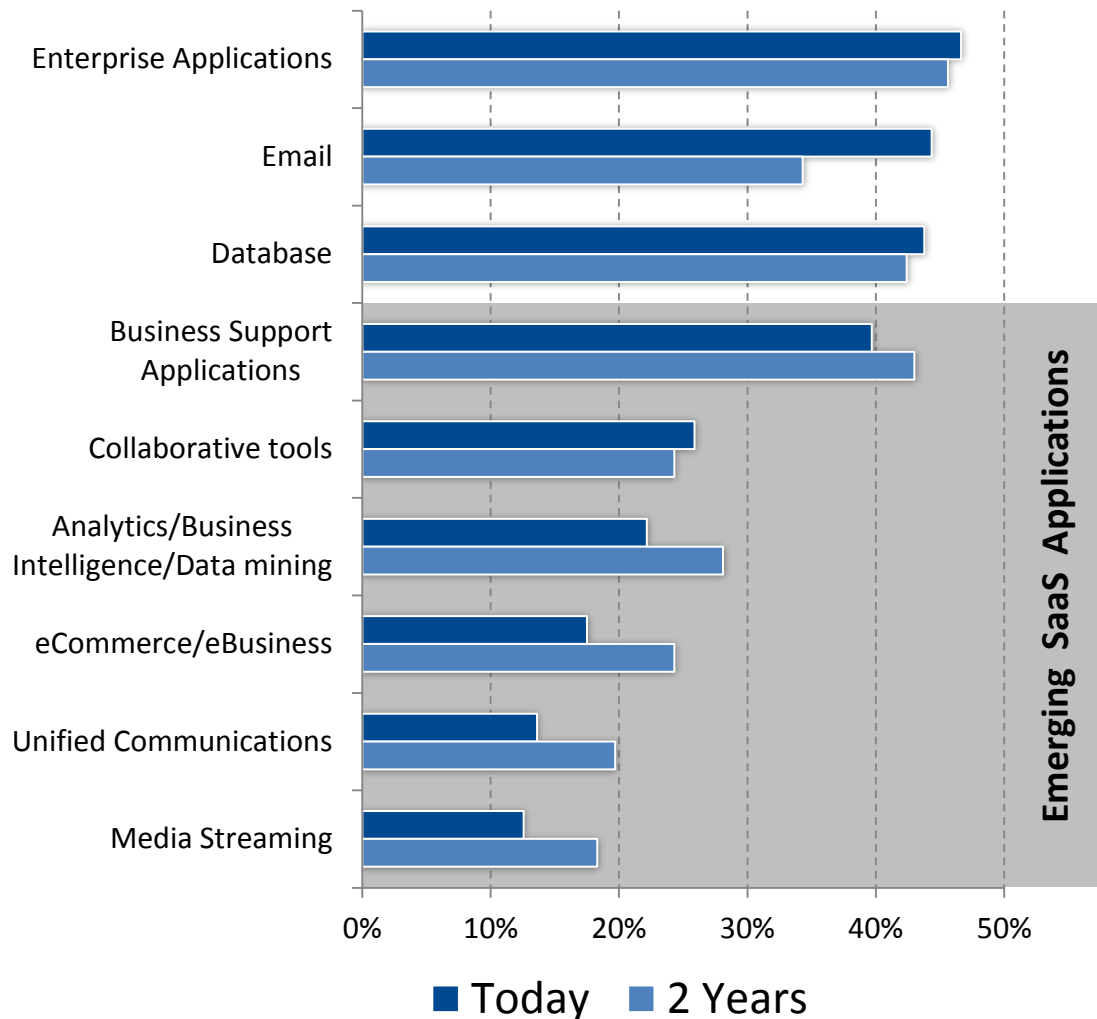


While customers report that they are likely to increase the number of providers they work with over the next 2 years, the preference is to reduce the number of contracts and partners and work with providers that offer multiple services

Median Today:	2 Providers
Median 2 years:	3 Providers

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SaaS Applications – Top 3 Ranked by Spending



Core applications remain important in SaaS markets

Growth in spending will come from analytics, ecommerce, UC and media streaming

These applications will be “cloud native” for many customers with implications for underlying infrastructure and datacenters

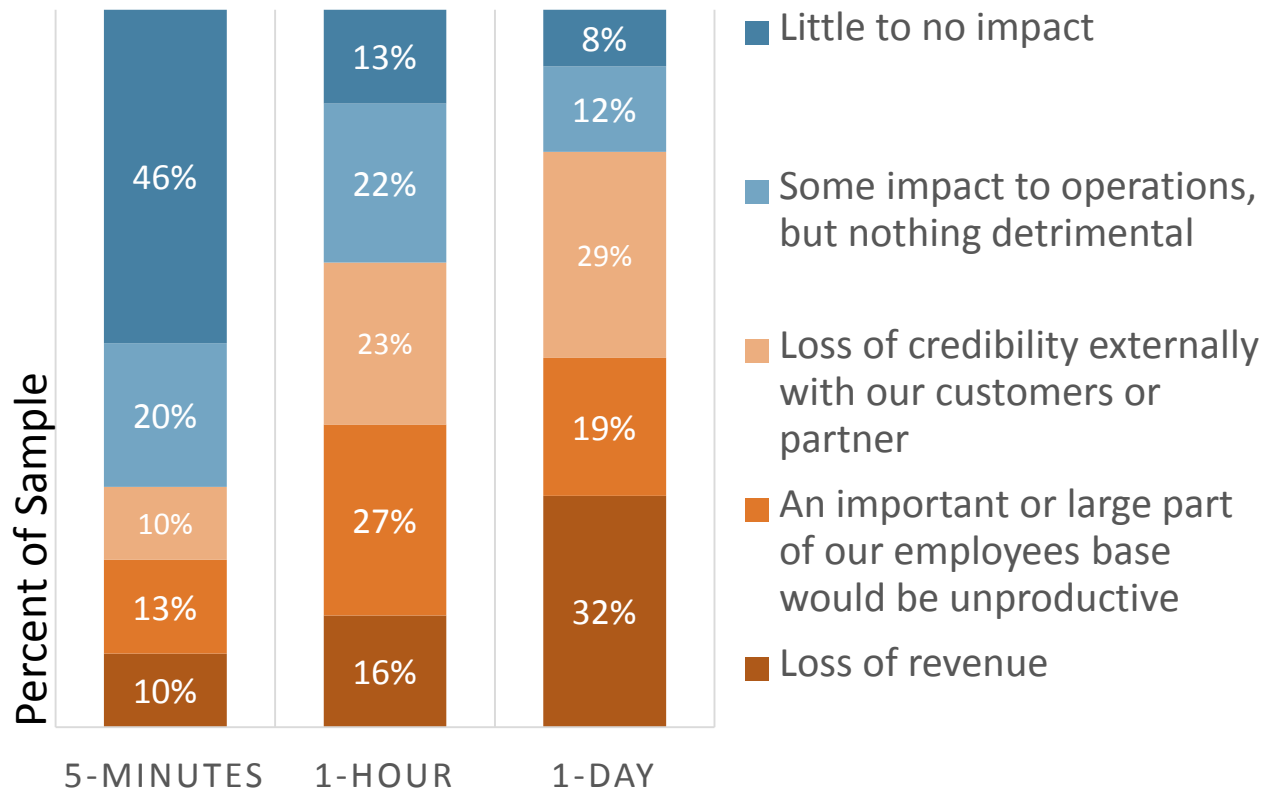
Shared infrastructure grows with increased adoption of these new applications

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Applications are already business critical in Hosting & Cloud

Impact of Service Provider Outage by Time

Q. Thinking about the applications that are installed with your Hosted Infrastructure Providers, what would be the PRIMARY impact to your business if these applications were unavailable for:



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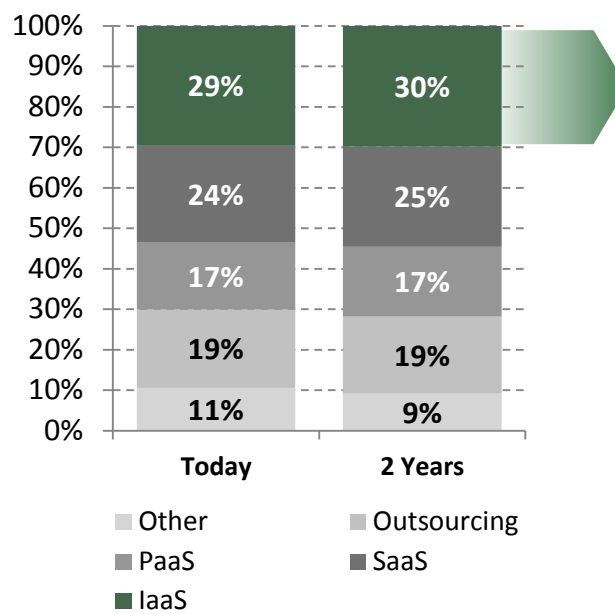
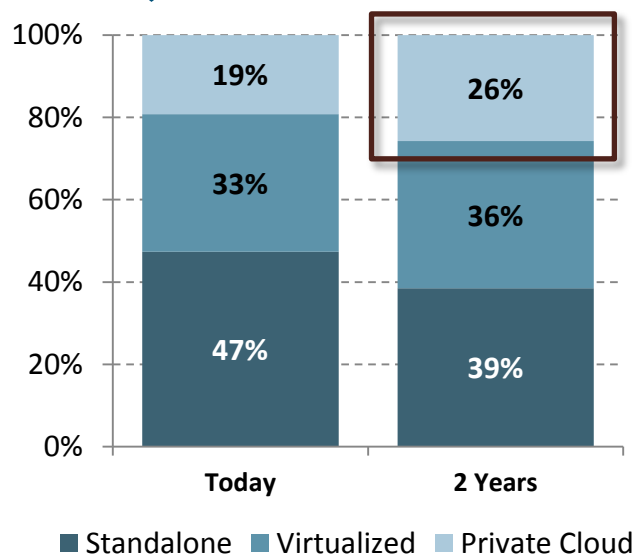
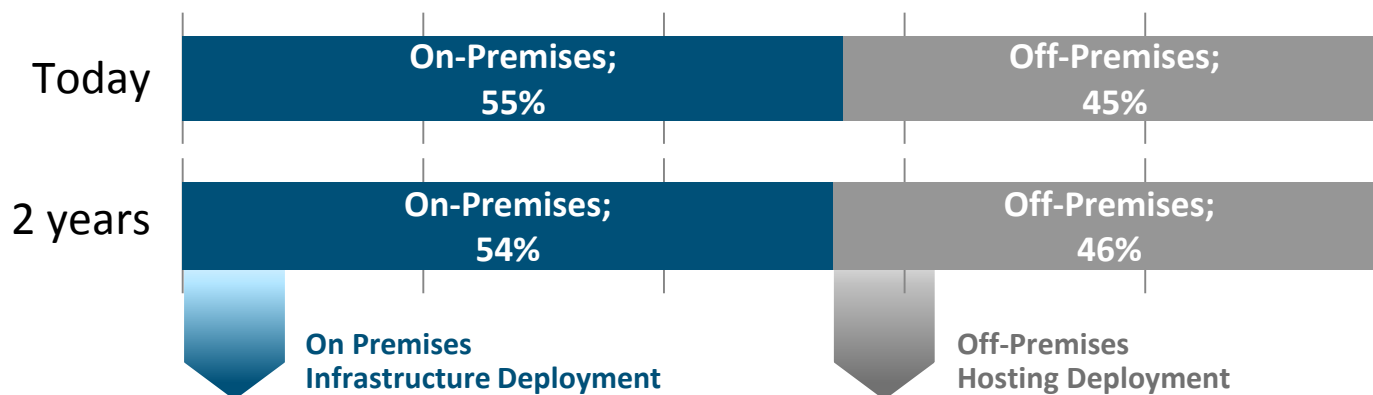
Cloud based applications are already business critical – 80% would experience a severe business impact after 1-day

Security and availability are tablestakes, not nice to have

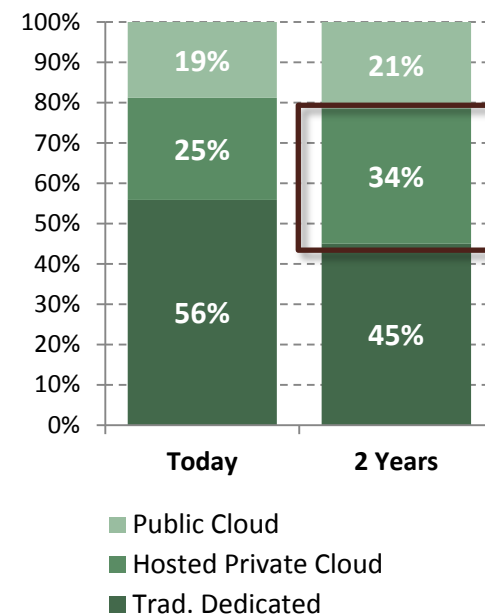
Customers expect full-service to support business requirements

The Next Two Years will be Adoption of Private Cloud as an On-ramp to Public Cloud

IT Budget Allocations



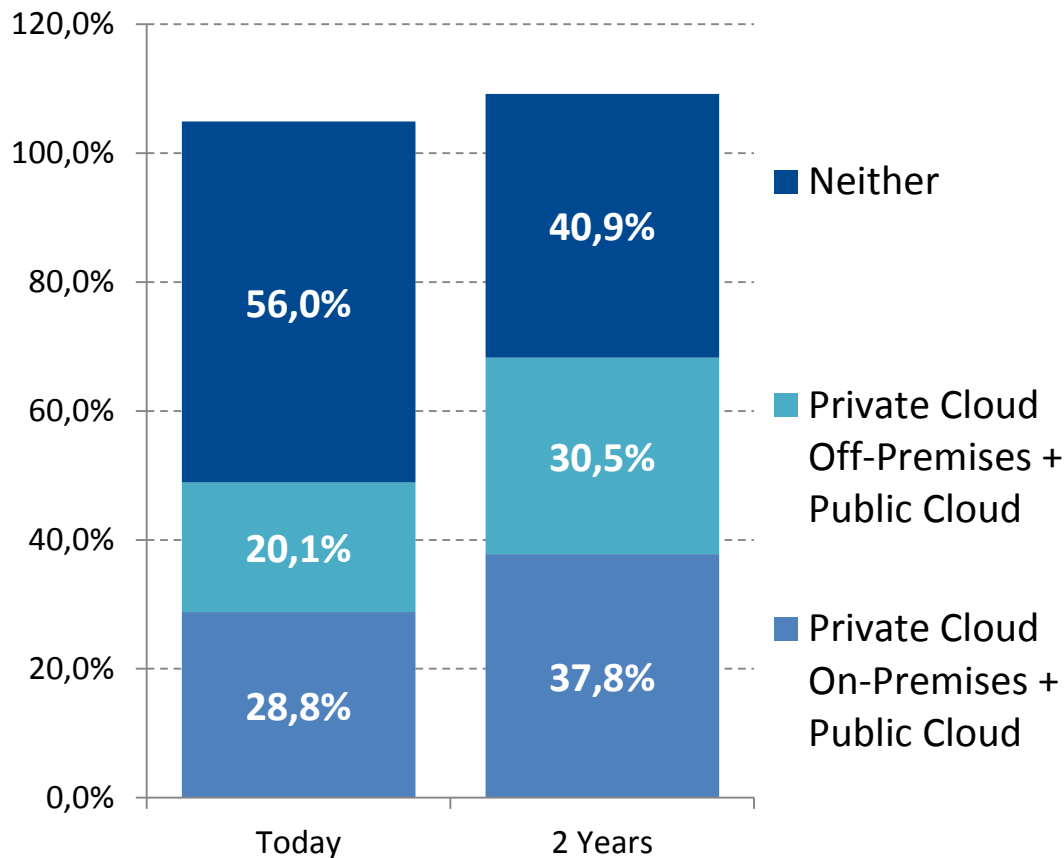
Infrastructure Deployment



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Hybrid Cloud Models – A New Era of Computing

Q. Has your organization adopted either of these hybrid cloud models? In 2 years?



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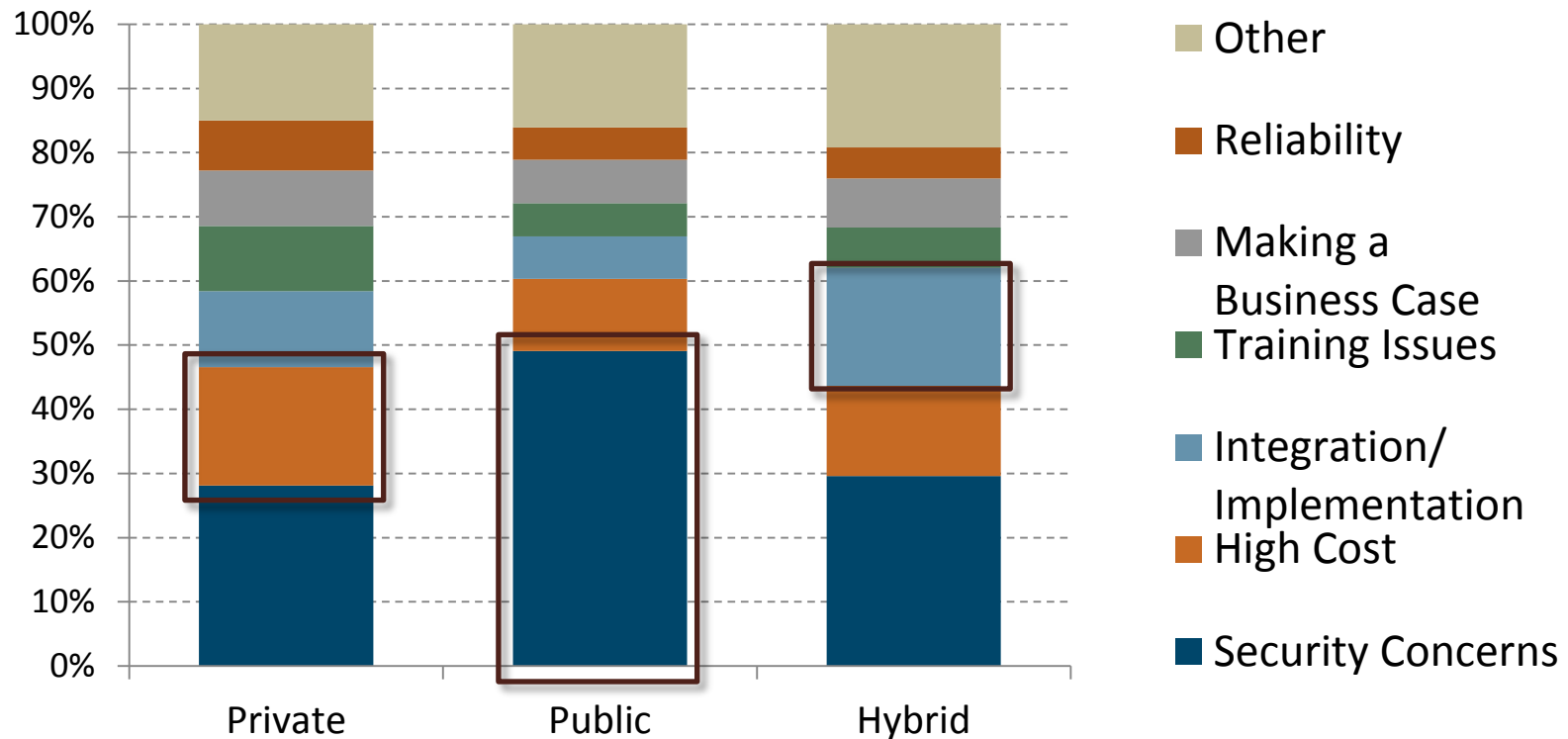
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The anticipated adoption of hybrid clouds models in 2 years is strong

- Both on-premises and off-premises private clouds with public clouds
- We expect that the adoption of security services and hosted private clouds POC is a major driver and is laying the ground work for future architectures

Security is a necessary investment to make Cloud a Reality, no matter what type of cloud customers build

Q. What is the single biggest challenge for your organization to adopt a **cloud** model?

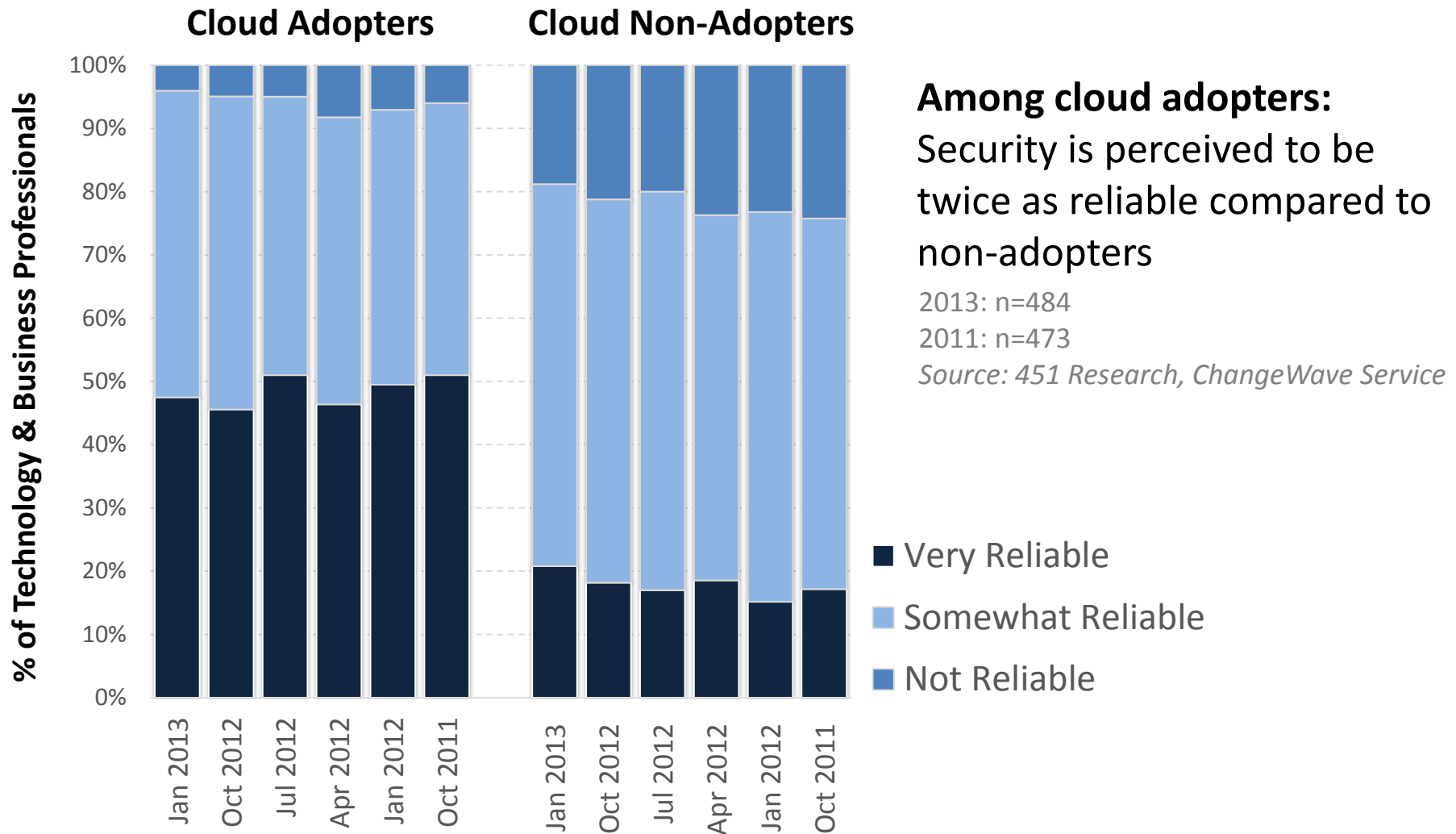


Security is a necessary investment to make cloud a reality, no matter what type of cloud customers choose to build

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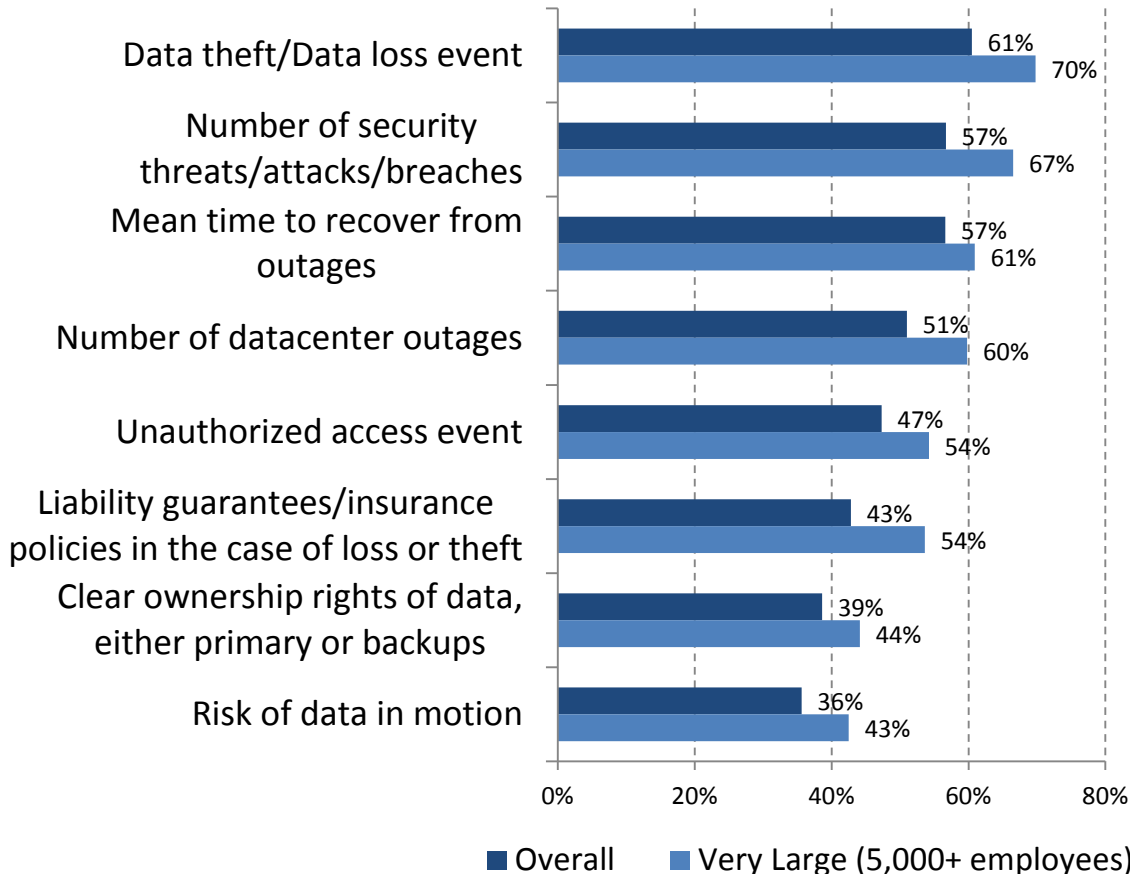
Security is a Differentiator in the Cloud

Public Cloud Computing Security Perception by Quarter



Transparency is Critical to Differentiate

Q. Other than SLAs, are there any other metrics or service terms that you think service providers should report about their overall service quality among their customer base? CHECK ALL THAT APPLY



Data theft and Security Attacks and Time to Recover from Outages are top concerns for hosting customers

SPs with rigorous and successful business practices should report these additional metrics

- To differentiate from competitors
- To challenge internal IT departments capabilities
- To set a new standard for customer support and trust
- To attract Very Large organizations (5000+ employees)
- To Change the Game

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My Cloud, My Way

Customers will go to cloud when they are in the drivers seat

- Data locality
- Security
- Recovery
- Transparency

Source: 451 TIP Research, 2013



Q: What could the vendor/service provider community be doing to increase confidence and trust?

Transparency:

- Publicizing SLAs and track record of failures.
- Defining SLAs in a way that we are comfortable.
- Right to audit and review... People will look at their track records.
- Transparent with how they can offer an SLA – how can they offer the SLA and why will they meet it.
- Open the kimono. Every bit of it seems a little bit too cryptic and hidden.

Security

- Encrypt your data, become compliant and more transparent.
- More on security. We are hearing way too many horror stories.
- Minimizing Data Leakage and Security Breaches and Improve Reliability.
- Not showing in news reports as being broken into.

Availability

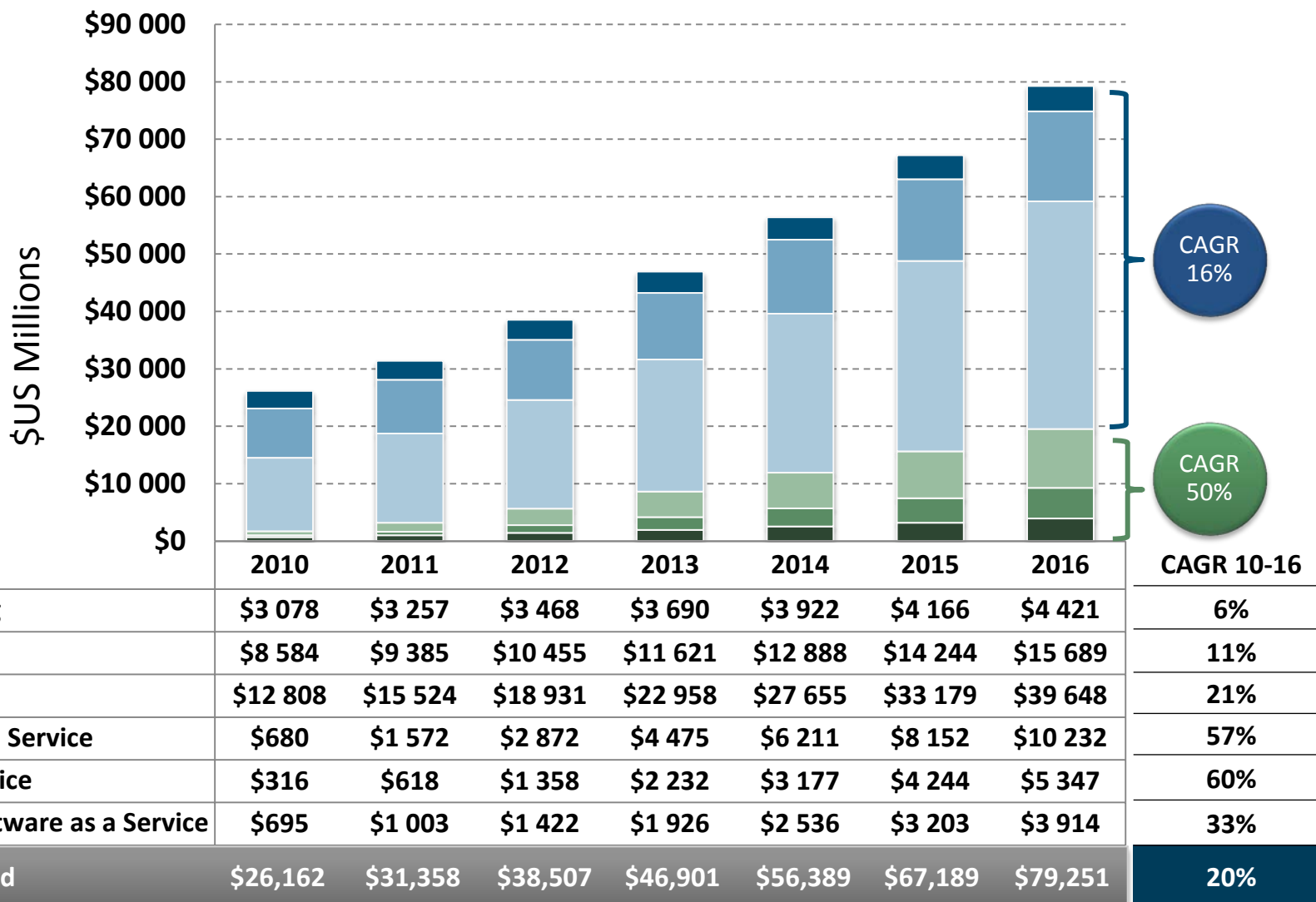
- Provide insurance in the event of service disruption.
- Not make it to the newspapers at least once a week. The problem is the number of service outages.
- A lot more open. Amazon had an outage a month ago. Losing power is not an excuse for loss of service.

Build a Trusted Relationship – Demonstrate Competence

- Provide case studies of success cases. I would like to see a greater level of transparency as well.
- Do what they say and follow through – deliver on promises.
- Think product maturity. Reference-able examples of maturity.

Worldwide Hosting & Cloud Market Size, 2010 – 2016

Cloud Share Increases from 6.9% to 24.6%





Analyzing the Business of Enterprise IT Innovation

Chris Hazelton
chris.hazelton@451research.com
[@chris451mobile](#)