CLOUD LEADERSHIP FORUM
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STRATEGIES FOR THE DYNAMIC ENTERPRISE

Beyond the Hype

The Year in Cloud… and Strategic Choices Ahead

Frank Gens, IDC

John Gallant, IDG Enterprise

Looking back, since last we met..

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Cloud = a key budget item…

...and changes the conversation

new

THE BUDGET CONVERSATION

24

The way you spend on IT is changing. So is your relationship with the CFO.

BY BILL BULKELEY

The march of technology is starting to shake up

CLOUD SERVICES

Smart companies plan ahead to avoid gotchas that can blow holes in their budgets.

BOB VIOLINO

THE REAL COSTS OF CLOUD COMPUTING

COVER STORY :: Business Ideas

Market Makers

37

Lynden Tennison is an entrepreneur. He runs several businesses, including one that sells workforce-management software and another that markets telecommunications bandwidth.

Entrepreneurial CIOs at Union Pacific, FedEx and other companies are

Cloud changes how IT works …

COVER STORY

COVER STORY

Self-Service IT

Empowering users with do-it-yourself tools is all the rage in IT these days. What could possibly go wrong? By Tracy Mayor

SELF-SERVICE PROCUREMENT. Self-service business intelligence. Self-service recovery. User provisioning in private clouds. It's a wondrous world for end users today as IT departments roll out tools that hand them the reins to the data and services they desire, whether it's instant access to their employee benefits accounts or a deep dive into corporate data stacks that were once off-limits.

But all this user empowerment raises a question: Are users up to their new role? To be sure, it's been a long time since IT staffers have had to show employees how to use a mouse or check that a desktop PC is plugged in, but there's a big jump between choosing a dental plan from a drop-down menu and applying advanced analytics to large volumes of enterprise data.

Have users really advanced so far that they can roll out their own business intelligence queries or recover from a hard disk failure entirely on their own? Yes and no, say IT managers and industry analysts.

Cloud changes the talent mix…

TALENT WARS

…petitors – and now …d providers — are poaching …best IT staffers and job …idates. BY JULIA KING

AN HERRINGTON says his first inkling of a brewing IT talent war came early this spring, when he noticed that "college kids weren't accepting our offers on the spot."

This was a first for Herrington, who is executive sponsor of college recruiting for IT at USAA, a San Antonio-based Fortune 200 insurer and financial services …been No. 1 on *Computerworld*'s Best …T list for two years in a row.

NEWS ANALYSIS

'Server Huggers' Slow Cloud Adoption

…fear that a move to cloud

run leadership and operational excellence

24

Restaffing for the Cloud

When Steel Technologies outsourced its back-office systems, new IT roles emerged BY STEPHANIE OVERBY

When Jim Honerkamp was hired as CIO of Steel Technologies last summer, he immediately identified a major problem on the company's IT org chart. Of the 34 technology professionals employed by the $1.6 billion processor of flat-rolled steel, nearly half were working in IT infrastructure. The anemic business-analysis group had a staff of three.

"Infrastructure does not differentiate us in any way, shape or form in the marketplace," says Honerkamp. "To be a strategic IT organization, you have to be delivering value in technology tools either to strengthen customer relationships or to be used as weapons against the competition. All the IT value-add is on the business-analysis side."

One way to flip those staffing numbers was to move to an infrastructure-as-a-service (IaaS) model. And it was the perfect time to consider divestiture. Steel Technologies' hardware assets were ▸▸

...and relations with end users

COVER STORY :: IT Strategy

Embrace Rogue IT

32

You may not control all of a company's tec
but you still have to manage risk and sav

BY STEPHANIE OVERBY

The CEO has fallen head
shop on every soci
purchased its ow
VP of operation
the cloud that
The whole
And why
unrelenting
can't bypass IT for te
has dubbed this the
and greater role in
a long-term trend.
Mark Schwartz
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FROM THE EDITOR | JOHN DIX

Build a cloud service review board

End run: *To bypass an impediment often by deceit or trickery.*

Like it or not, the arrival of cloud means IT isn't the only game in town anymore. It is increasingly easy for corporate denizens to simply bypass IT to get what they want. The deceit? They simply don't tell you about the services acquired.

Some 60% of 573 executives in a recent survey by business technology service provider Avanade say they worry about so-called cloud sprawl, the unauthorized acquisition of cloud services. Heck, one in five of this same group say they have "purchased a cloud service without the IT department's knowledge." No wonder they're worried.

Presumably most of these services are low-end and personal in nature, say something like Dropbox, a Web service that replicates files from a folder on your computer to other devices of your choosing and to the Dropbox website, ensuring you always have

COVER STORY :: Consumerization

the B.Y.O.T. BUZZ

24

Your users want the freedom to **bring their own technology.** Here's what you should know before you make a move.

BY KIM S. NASH

BYOT, or bring your own technology, is more than code for "my CEO bought an iPad." BYOT refers to a strategy for letting employees choose and purchase the devices they want to use to do their jobs—everything from PCs and laptops to smartphones and tablets. The machines belong to

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...and how government works

CLOUD::cover

run 32

Government IT's 'Perfect Storm'

Budgetary concerns and cloud computing have combined to make sharing services across government agencies a reality BY KENNETH CORBIN

Federal tech chiefs have long envisioned an environment in which agencies' storage and applications are hosted and shared throughout the government. But now officials are laying the policy foundation for a major cloud migration over the next several years, according to David McClure, the associate administrator of the General Services Administration's Office of Citizen Services and Innovative Technologies.

"We've been trying this for the last couple decades," McClure said in remarks at the Software and Information Industry Association's annual Cloud/Gov conference.

"I think we now have a perfect storm. We have a budget crisis, a new wave of technology and a new generation of CIO and IT leadership in the federal government that is very open to this," he said.

McClure is one of the driving forces behind FedRAMP, the federal government's program to develop a uniform framework for federal cloud solutions, dealing with the security, assessment, privacy and procurement considerations of new deployments.

FedRAMP, with its "do once, use many times" mantra, is in the pre-launch phase. The initial phased rollout is scheduled to begin in June.

Several government bodies are collaborating to develop the initiative, including the Departments of Defense and Homeland Security, the CIO Council and the National Institute of Standards and Technology (NIST).

McClure says developing a common set of controls for cloud services across departments and agencies is FedRAMP's first priority, though the project is not seeking to rewrite the security standards stipulated by NIST and the Federal Information Security Management Act (FISMA).

Instead, FedRAMP aims to put an end to the current situation in which each agency contorts the existing standards to suit its own ends, thereby achieving compliance but falling short of the common IT security framework that NIST and FISMA attempted to create.

The push to migrate to the cl
comes with an ambitious effo
consolidate federal data ce
reducing the government's IT
and operating expenses whi
the technology apparatus
ronmentally friendly.

FedRAMP will also
lish a group of third-
ment organizations th
cloud solutions sla
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will be subject t
Department of

Kenneth Corbi
based in Was

Amazon Cuts Cloud Prices to Stay Co

Amazon Web Services (AWS) has cut its prices for the 19th time in
years in a bid
off competi
m the likes of

demand pricing will see a mi
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e costs of new
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FEDS BEGIN Race TO THE CLOUD

Agencies are now grappling with the hard realities of making the 'cloud first' policy work. BY MARY K. PRATT

THE GOVERNMENT SECTOR is on a fast march to the cloud, but Robert Rosen wants to pause for a breath.

"I've been looking at the cloud for a long time, and it's not as simple as all the vendors want to make it seem," says Rosen, CIO of the National Institute of Arthritis, Musculoskeletal and Skin Diseases at the National Institutes of Health in Bethesda, Md. "The federal government isn't this uniform user of IT. So there's no one-size-fits-all. There are places it fits fine, others where it doesn't, and

Continued on page 34

IT wrestles with cloud at 'scale'

CASE STUDY

Integration in the Cloud

Mohawk Fine Papers saves millions by using the cloud as a central integration point for all its B2B transactions. BY ROBERT L. MITCHELL

JUST TWO WEEKS after Mohawk Fine Papers made the decision to sell its products on Amazon.com, things were looking good for the company: Integration work was complete, connections to its ERP system had lit up and sales were rolling in. "Amazon generated tens of thousands of dollars in revenue immediately," says Paul Stamas, vice president of IT at the $300 million, 725-employee manufacturer of premium papers. Best of all, the data integration project, which cost less than $1,000 to get off the ground, required no in-house investment in integration tools or staff resources.

Instead, cloud-services provider Liaison Technologies performed the integration work and then set up — and currently manages — the connections through its cloud-based service.

Two years ago, a project like this would have been handled as just another point-to-point EDI integration. But the Amazon deal and the 100-plus other business-to-business con-

COVER STO

Big SaaS DONE RIGHT

GUARDIAN LIFE INSURANCE isn't about to take big risks when making IT investments, and CIO Frank Wander will be the first to tell you that he doesn't have a cloud computing strategy, per se.

But over the past five years, the $10 billion financial services company has moved 18 applications into the cloud. It shut down a compute grid and moved its actuarial modeling application into an Amazon EC2 cloud. And it's now in the process of broadly deploying two major software-as-a-service suites.

... and growing complexity

ENTERPRISE CLOUD SERVICES \\\ CLOUD MANAGEMENT

MANAGING CLOUD COMPLEXITY

MANAGEMENT IN THE CLOUD CREATES HEAVY LIFTING FOR

BY BETH SCHULTZ

Managing cloud infrastructure and services is similar to traditi
— only bigger, badder and more complex. It's
two strategic outsourcers, in the cl
cloud service pro
loads
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they ne
So how
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Sounds simp
Beth Cohen, se
at Cloud Techn
sulting firm.
Most compani
ogy in data recon
cloud applications
be as basic as storin

SPECIAL FOCUS

Identity management in the cloud emerges as hot-button issue for CIOs

BY CAROLYN DUFFY MARSAN

AS SALLIE Mae migrates some of its most important applications to the cloud, the nation's largest provider of college loans is keeping an eye on compliance.

Sallie Mae uses identity management software from SailPoint to ensure that its 6,100 employees have appropriate levels of access to data and applications — regardless of whether it's stored in the cloud or at one of its data centers.

"All of our cloud-based services — all of that access is controlled," says Jerry Archer, CSO for Sallie Mae, which uses hosted applications such as Workday for human resources functions, "SailPoint keeps track of roles, access and other workflow processes."

Sallie Mae is in good company. A growing number of organizations including CUNA Mutual Group and the American Red Cross have upgraded their identity and access management tools to bolster their cloud-based

5 signs that you've lost control over your cloud apps

End users start sticking Post-it notes all over their computers listing user names and passwords for cloud-based applications.

Employees leave the company, but their access to cloud-based applications isn't removed, resulting in a proliferation of so-called "orphan accounts."

Managers are **no longer approving data access** for new employees.

Nobody is monitoring cloud-based applications to make sure access is current.

You're losing accounts to the new employer of a salesperson who left your company.

the company. IAM tools also help
the constant churn of employees be
and fired by an organization and its
partners.
"When you put an application in t
you don't have mechanisms for pro
users in the cloud automatically
says. "When you terminate an em
the employee changes jobs, some
to manually go into these cloud-ba
cations and take them out. We're
connectors to applications that all
to automate onboarding and offbo
individuals."
The latest development is the ava
IAM as a hosted service from such co
as Courion and Lighthouse Securit
Only a handful of pioneering organiz
such as Cintas Corp. and Molson Co
ing Co., have chosen a hosted IAM
For example, Cintas is going into pr
mode with the hosted CourionLive
with the hosted CourionLive
30,000 users in March.
Sallie Mae, however, isn't ready to
identity management system into t
"We're not at the point where we're
Active Directory into the cloud
ensure

Toolbox

TOOLS, TECHNOLOGIES AND TACTICS

By Robert L. Scheier

Before Moving to Cloud, Think It Through

Management tools ease, don't end, cloud security jitters

Many enterprises are reluctant to move critical cloud applications out of their own data centers and into the public cloud due to security concerns. Yet the same automated, consistent provisioning that is essential to managing either public or private clouds (as well as to the process of thinking through a cloud deployment) can also offer the fringe benefit of improving security.

Of course, not all cloud management tools work equally well with all cloud providers, nor do they all allow customers to integrate their internal and external clouds into a single unit. Infrastructure-as-a-service (IaaS) providers such as Amazon, for example, typically don't allow customers to tweak the network and storage infrastructure beneath the operating system

Frameworks, standards emerge

Nimble and fast, open-source frameworks can simplify application deployment in the cloud. But they're not for everyone.

SPOTLIGHT | OPEN SOURCE

PLUGGING IN to the Open Cloud

BY ROBERT L. SCHEIER

HEADS CONSULTANCY OpenCredo

FROM THE EDITOR | JOHN DIX

Push your cloud supplier to participate in CSA STAR

Security is a top concern for potential cloud users so the formation of the Cloud Security Alliance was welcome news when the organization emerged in 2009. And while many vendors have since joined CSA, precious few service providers have stepped up to take part in its Security, Trust and Assurance Registry.

The CSA STAR registry, rolled out last August, is "designed to index the security features of cloud providers using a 170-point questionnaire that end users are then able to peruse" (see story, page 14).

Of the big guns that professed intentions to lay it on the line, only Microsoft has followed through to date. Kudos to them. Now it is time for enterprise buyers to pressure other suppliers to follow suit.

Survey after survey, after all, show security issues are holding cloud back. The [illegible] results released last month by European managed service [illegible] lack of security" as the top barrier to

CLOUD COMPUTING

The Race to Cloud Standards Gets Crowded

Are there too many groups on the same track? BY PATRICK THIBODEAU

standards. What is less clear is whether multiple efforts will make the standards push more effective or result in conflicting approaches that lead to a wreck.

The various cloud standards groups do share a key attribute: They all enjoy business buy-in. For instance, Cisco Systems, Citigroup, Costco Wholesale and Deere & Co. standards organization formed last year, includes BMW, Deutsche Bank, JPMorgan Chase, Marriott International, Shell and Disney Internet Labs. Overseas companies with seats on the alliance's steering committee include China Life, a Beijing-based insurance company, and China Unicom, a government-owned telecommunications company.

Meanwhile, the **Cloud Security Alliance** membership list includes Coca-Cola and eBay.

"Our intention is to be extremely collaborative with all the various organizations that spawn out there," says Marvin Wheeler, chief strategy officer at cloud vendor Terremark and chairman of the Open Data Center Alliance.

Wheeler says the push for standards by the multiple groups shouldn't be competitive, but complementary. The multiple efforts, in the end, may help all the groups achieve their respective goals, he says.

Clout With Vendors

The Open Data Center Alliance is counting on brute force to change the cloud computing market. The alliance says its membership represents more than $100 billion in annual IT spending power, some of which will go toward cloud computing.

The alliance is developing "usage models" that IT managers can employ when negotiating with cloud vendors. The usage models address many of the issues that annoy users or keep them from adopting cloud technologies.

For example, one usage model aims to fix problems caused by the lack of an agreed-upon method for creating and deactivating virtual machines

Cloud reshapes the IT industry

...with plenty of big cloud deals

TREND ANALYSIS

Carriers make their play in the cloud

BY BRANDON BUTLER

THE WAVE started last year when Time Warner Cable, the telecommunications company serving much of the Eastern United States, spent $230 million to purchase NaviSite, a provider of cloud services for businesses.

Two months later, in April, CenturyLink, the southern telecom, bought Qwest for $12.2 billion worth of stock. That same month, Verizon purchased Terremark, the cloud infrastructure-as-a-service (IaaS) provider. CenturyLink followed by purchasing Savvis, another IaaS provider, for $2.5 billion.

It's been a busy past 18 months for domestic telecommunication companies that have aggressively entered the crowded cloud marketplace. But do they really have a chance of competing against industry leaders?

"[The telecoms'] core business is changing around them, and the cloud is a very natural place for them to go," says Terremark's Chris Drumgoole.

As telecoms iron out their cloud strategy, experts say they need to move quickly. Revenues from their traditional voice offerings are eroding and competitors are moving swiftly to diversify their offerings and attract new customers. Amazon Web Services (AWS), Microsoft Azure and Google have all reduced prices on their cloud offerings in the past month.

Telecoms do offer some advantages — namely, they already have a large nationwide network infrastructure. But some experts believe telecoms don't have a chance to compete against market leaders AWS, IBM and HP, and that telecoms instead need to focus on new value-add services.

The carriers are "gobbling up data centers," which in a sense amounts to a game of catch-up. IaaS competitors already own massive IT infrastructures that telecoms are now trying to build up, says Bob Rosenberg, an independent analyst. But there is one area where telecoms have an edge: "They have the wires," he says.

Armed with their newly acquired data centers, Rosenberg says the natural move is to play up the security and network infrastructure [illegible] wired

There has been a wave of M&A activity by telecommunications companies during the past 18 months. Here are details from a few of the biggest deals:

BUYER Time Warner Cable
ACQUISITION NaviSite
WHEN February 2011
PRICE $230 million
WHY Time Warner Cable expanded its managed services, cloud computing and hosting services for enterprises with the purchase of NaviSite. Within a year, NaviSite released a cloud-based Desktop as a Service offering.

BUYER CenturyLink
ACQUISITION Qwest and Savvis
WHEN August 2011
PRICE $14 billion of stock and cash
WHY CenturyLink has significantly expanded its data center reach.

BUYER Verizon
ACQUISITION Terremark and CloudSwitch
WHEN April 2011
PRICE $1.4 billion
WHY Verizon immediately became a player in the Infrastructure-as-a-Service market when it purchased public cloud vendor Terremark, which has a worldwide presence of data centers. A few months later, Verizon bought CloudSwitch, a company that specializes in helping enterprises migrate to cloud environments.

Bieler believes the best play [illegible] telecoms is to offer a platf[illegible] ware programs on their [illegible] could include ERP and Cl[illegible] additional complimentar[illegible] connectivity between m[illegible] transfer security and softwa[illegible] on top of that.

For example, a telecomm[illegible] pany could offer to host a[illegible] or SAP offering on its d[illegible] can create a whole bundle o[illegible] connectivity, applicatio[illegible] and including device mana[illegible] a range of offerings," he s[illegible] Oracles and SAPs of the[illegible] incentive to work with[illegible] because it spreads their[illegible] the market further, he sa[illegible] have to invest in the infrast[illegible] applications on site, and c[illegible] of the efficiencies the clou[illegible]

On an ever broader sc[illegible] able to provide an entir[illegible] tion platform. Bieler sug[illegible] enterprises an opportunity[illegible] munications systems, and[illegible] infrastructure to conne[illegible] from phones to mobile d[illegible]

Some telecoms have[illegible] the opportunity. John Fo[illegible] of-as-a-service solutions la[illegible] solutions division, says AT[illegible] tion developers to write pa[illegible] AT&T's network.

"There is an opportuni[illegible] to work with us, on our p[illegible] out toolsets and capabiliti[illegible] robust application," Potter[illegible] making it easier for ente[illegible] to connect into the AT&T[illegible] announced that enterpri[illegible] running VMware can mo[illegible] with the company's publi[illegible]

Drumgoole, the Terre[illegible] IaaS is a natural fit for Ve[illegible] remark is a strong pla[illegible] expects Verizon. Cent[illegible]

Deal Means More SAP Cloud Changes

If his company becomes part of SAP in a $3.4B deal, SuccessFactors CEO Lars Dalgaard will lead the combined firm into the cloud. By Chris Kanaracus

IF ITS $3.4 BILLION BID to buy SuccessFactors is successful, SAP could finally stabilize its cloud computing strategy — which has so far been mostly ineffectual.

The agreement to acquire SuccessFactors, a provider of cloud-based human resources applications, was announced earlier this month. SAP expects it will close in early 2012.

In recent years, SAP hasn't been able to settle on a cloud strategy. The application vendor's cloud-based Business ByDesign ERP suite was pulled back in 2008 and reworked. The much-hyped offering was finally released this year. SAP claimed to have 650 Business ByDesign customers in October and projected reaching 1,000 by year's end.

Along with the ERP services, SAP is developing a series of on-demand applications aimed at specific enterprise functions, some of which appear to significantly overlap with SuccessFactors products.

Analysts said the combined product lines will present a major challenge to SuccessFactors CEO Lars Dalgaard, who's been tapped to lead SAP's overall cloud business once the deal closes. In a statement, SAP said it expects the combined firm "will establish an advanced end-to-end offeri[illegible]oud and on-[illegible]vant hy[illegible]

SuccessFactors CEO Lars Dalgaard will take over SAP's cloud computing business once the $3.4 billion deal to buy his firm closes.

DNA. Before, [SAP] executives were bridging the old world with the new world. This should help a lot."

"There has been a burgeoning number of platforms [at SAP]," added China Martens, an analyst at Forrester Research. "I think they need to start rationalizing, or it won't all hang together."

Martens said SAP's decision on whether to actively sell Business ByDesign, Career OnDemand and other new SAP products or to make SuccessFactors software the focal point should prove very interesting.

In an interview, SAP co-CEO Bill McDermott called the addition of Dalgaard an "adrenaline shot" for SAP's cloud business.

"We think Lars is the best leader in the [cloud] business — by a lot. When Lars gets in there, he'll see what he likes and what he doesn't like, and he'll make the calls," McDermott said.

Wang said that while he agrees that Dalgaard and his team will bring significant cloud know-how to SAP, that knowledge will have to be applied and shared in a much larger and more complex organization.

Wang said SuccessFactors' ability to win and then successfully complete major projects like a 400,000-seat installation at Siemens helped sway SAP's decision to pay $40 per share for the company, a 50% premium over its closing price when the agreement was reached.

Ironically, the Siemens deal is "one of those projects where they successfully blocked out SAP," Wang said.

Whether SAP will face a counteroffer for SuccessFactors from the likes of archrival Oracle remains an open question, analysts said. While not unthinkable, it may be unlikely, because Oracle has made HR software a centerpiece of its new Fusion Applications, Martens said, noting that an Oracle bid for SuccessFactors could therefore send confusing sign[illegible] the m[illegible]

Looking Ahead: Strategic Issues 2012/13

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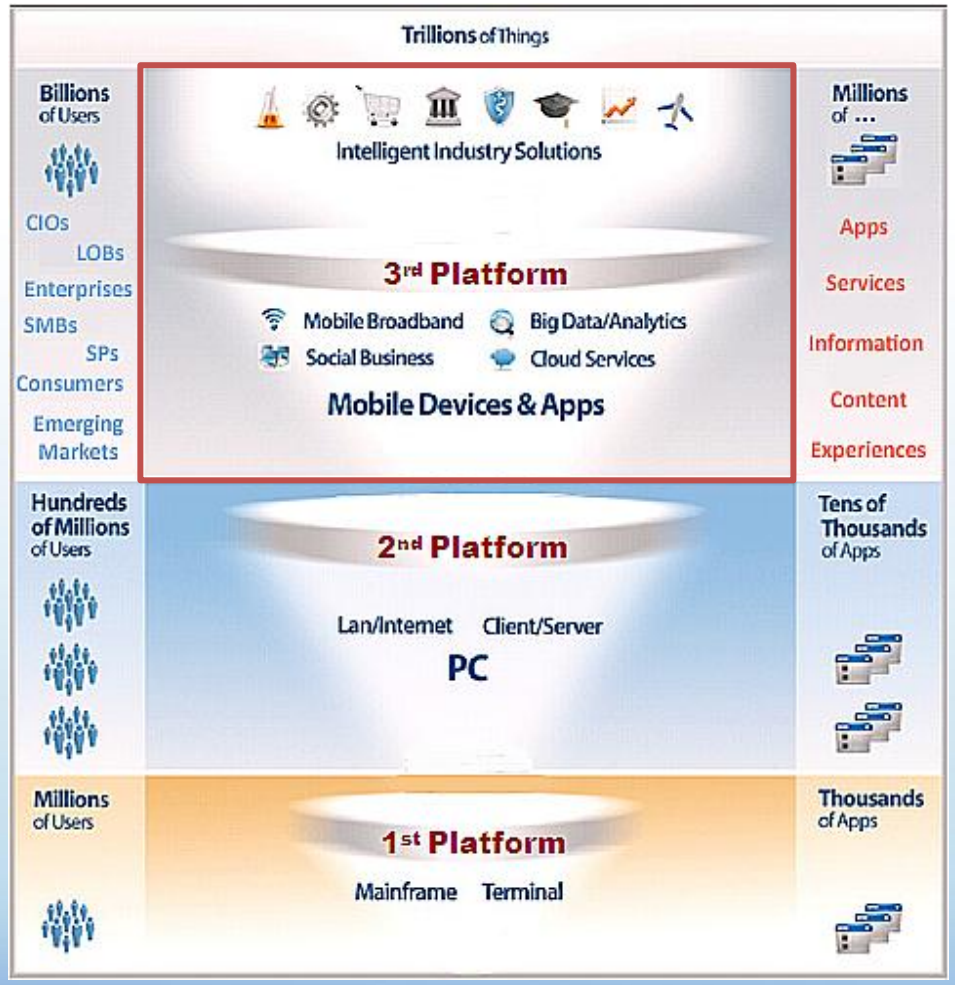
1. The 'Right' Perspective?



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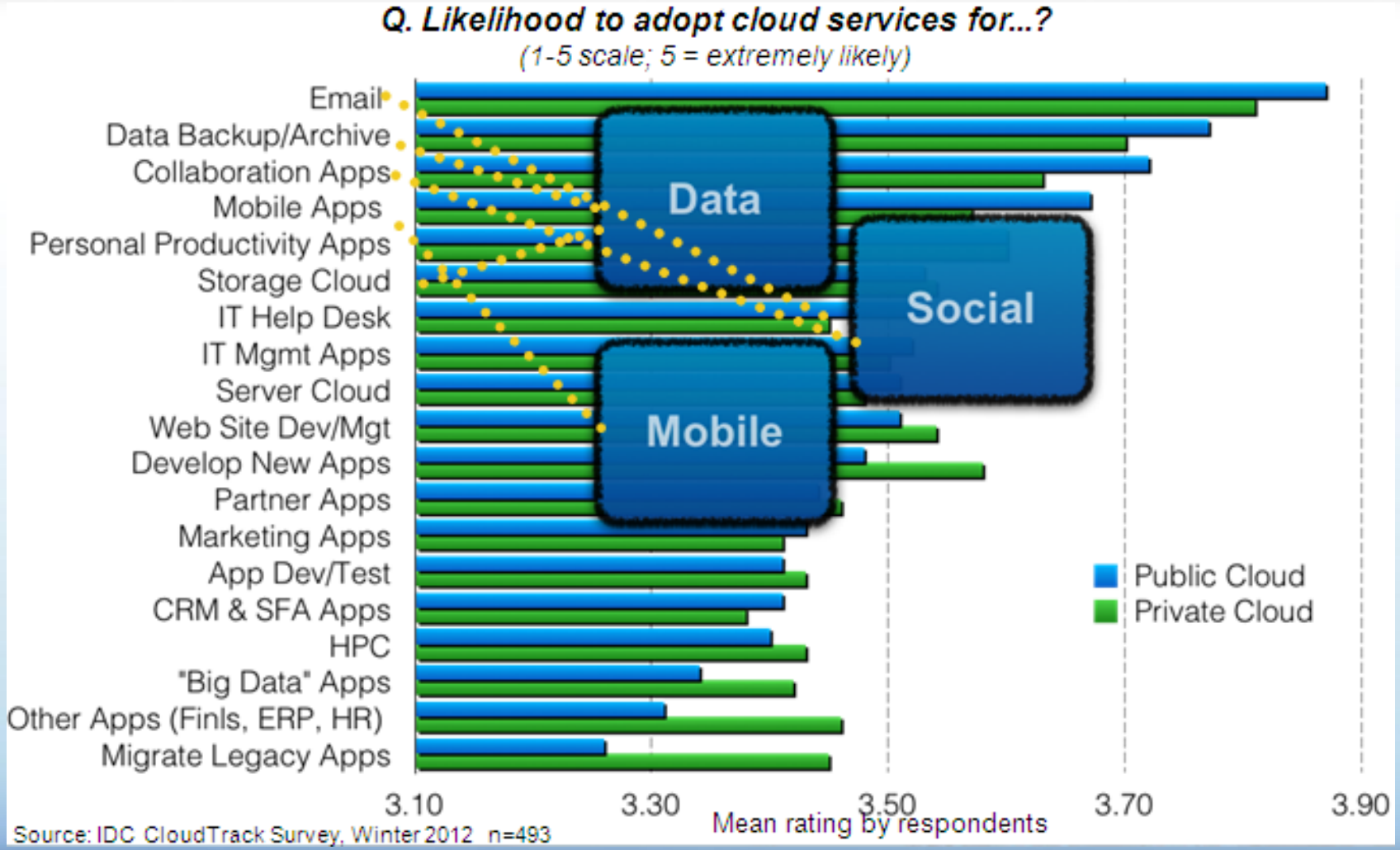
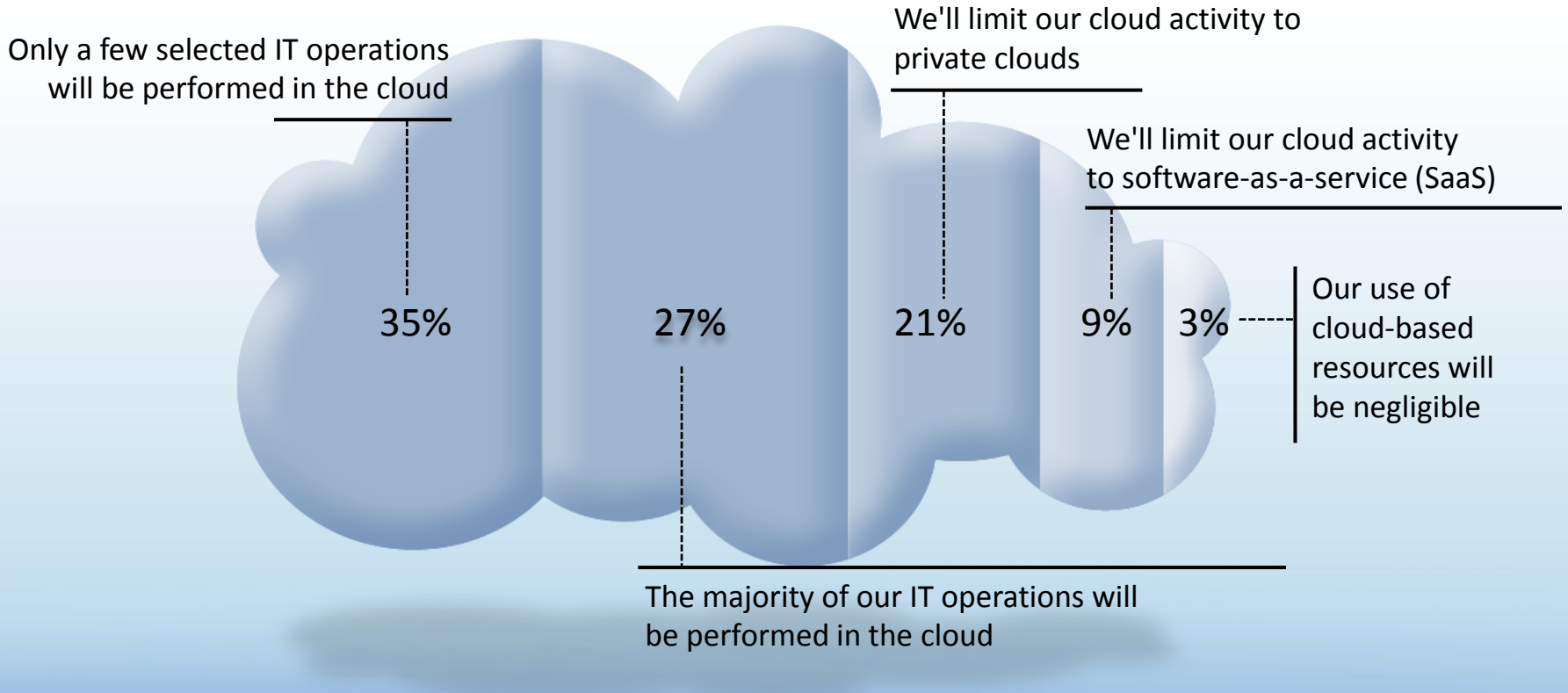
1. The 'Right' Perspective?



2. The 'Right' Pace?

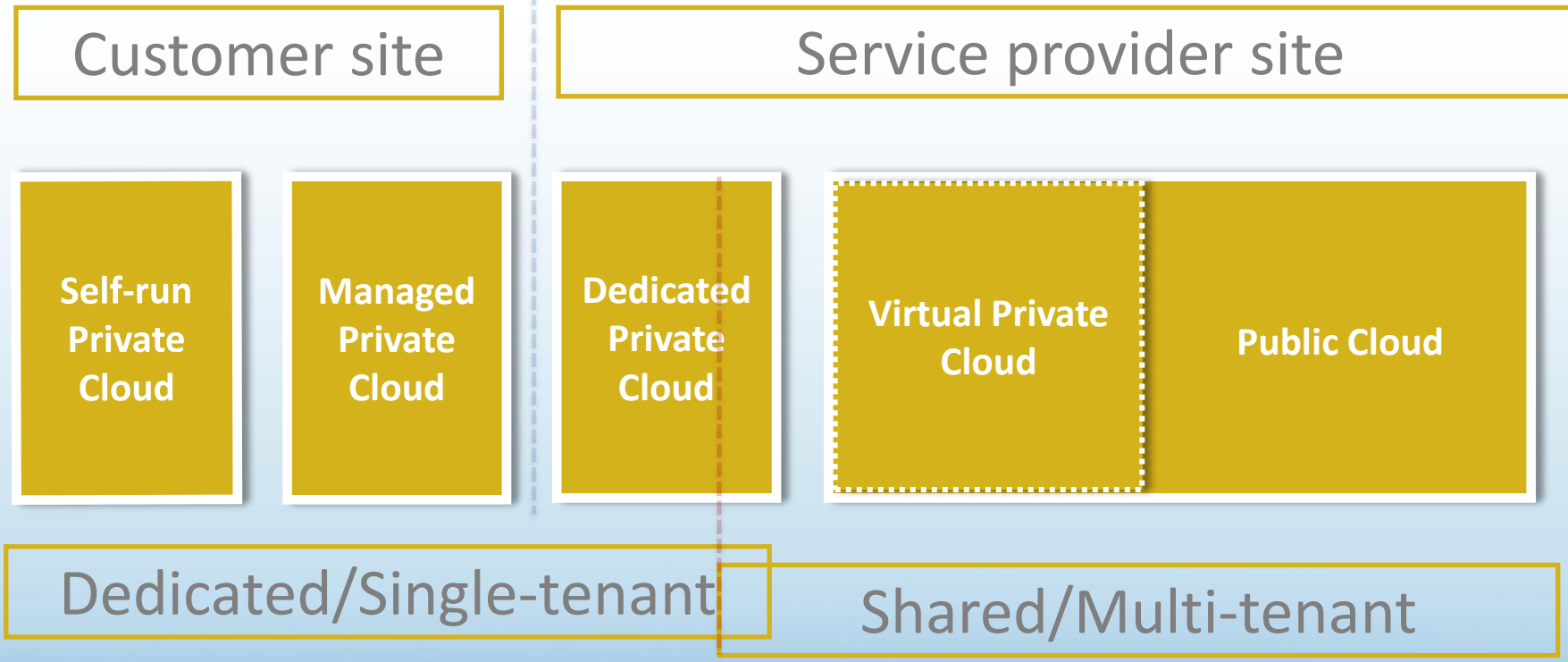
Long-term Outlook Shows One Quarter Will Have Majority of IT Ops in the Cloud



Q. Which of the following best describes your long-term expectations for cloud computing at your organization over the next 5 years?

3. The 'Right' Model?

Cloud Services Deployment Models

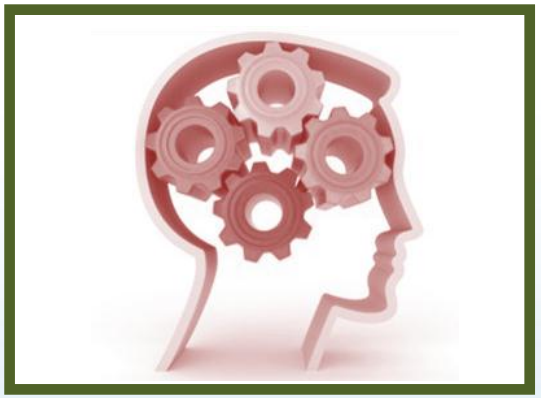


4. The 'Right' Organization?

Cloud is Driving IT Evolution

44%

New roles have been created within IT to help develop and implement cloud computing strategy (rather than responsibility being absorbed into existing roles)



69%

The IT function has had to **rapidly expand its skill set/knowledge** in order to keep up with cloud computing developments

Q. Please rate your level of agreement with the following statements. Percentages reflect Agree/Strongly Agree

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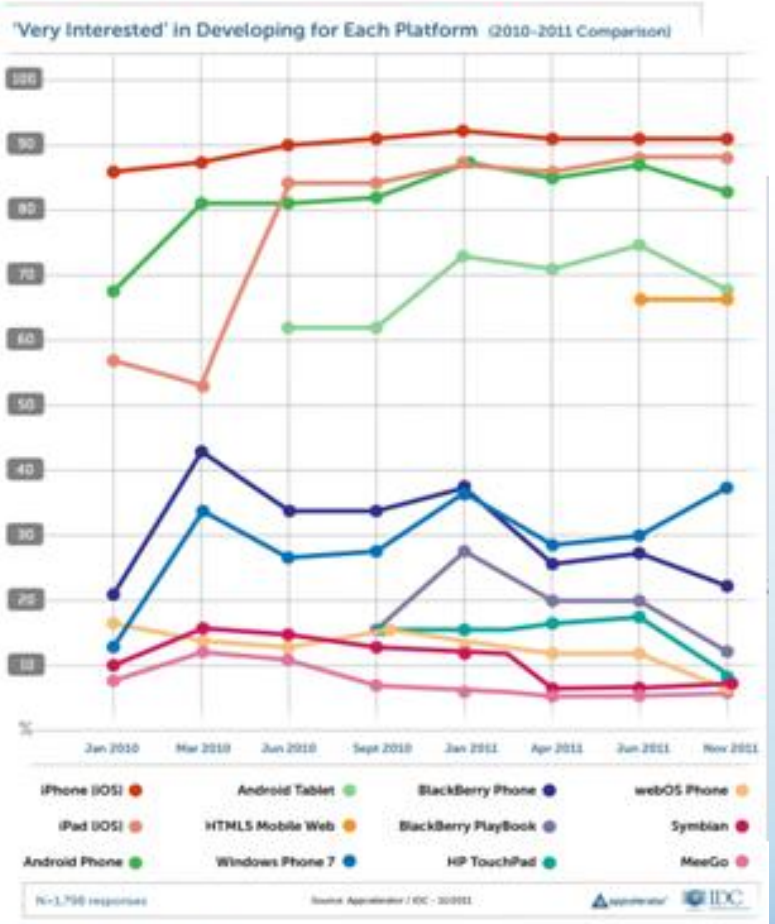
5. The 'Right' Communities?

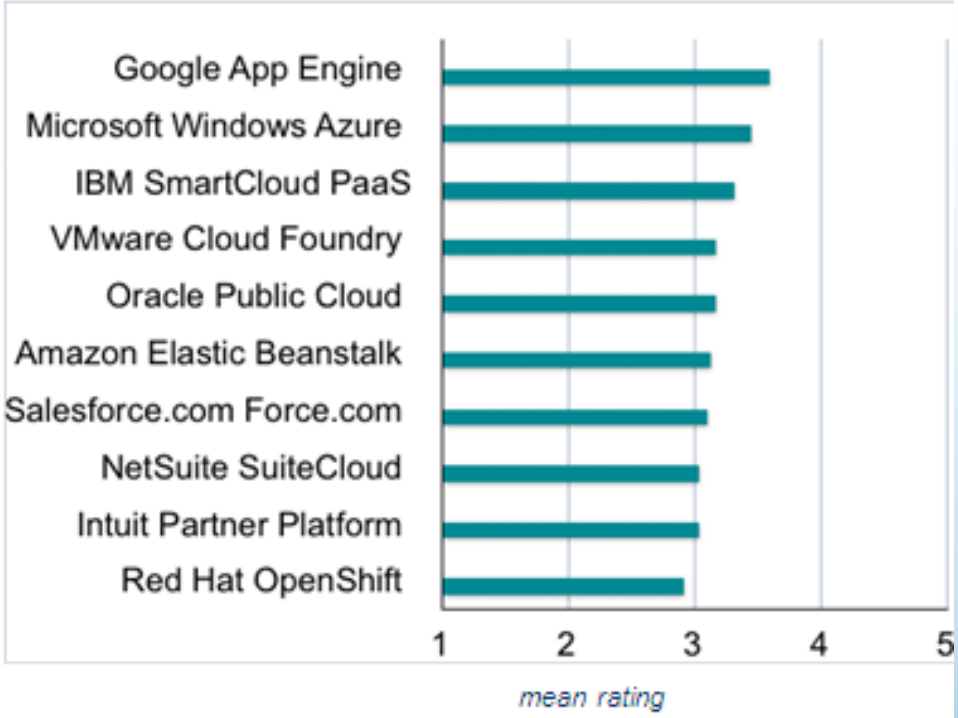
Battles at the new Edge…



Source: IDC 2012

…and at the new Core

Q: How likely is that your enterprise would develop apps on and/or source cloud apps from the following Public Cloud Application Platforms?
(1=not likely at all, 5=extremely likely)



Source: IDC 2012

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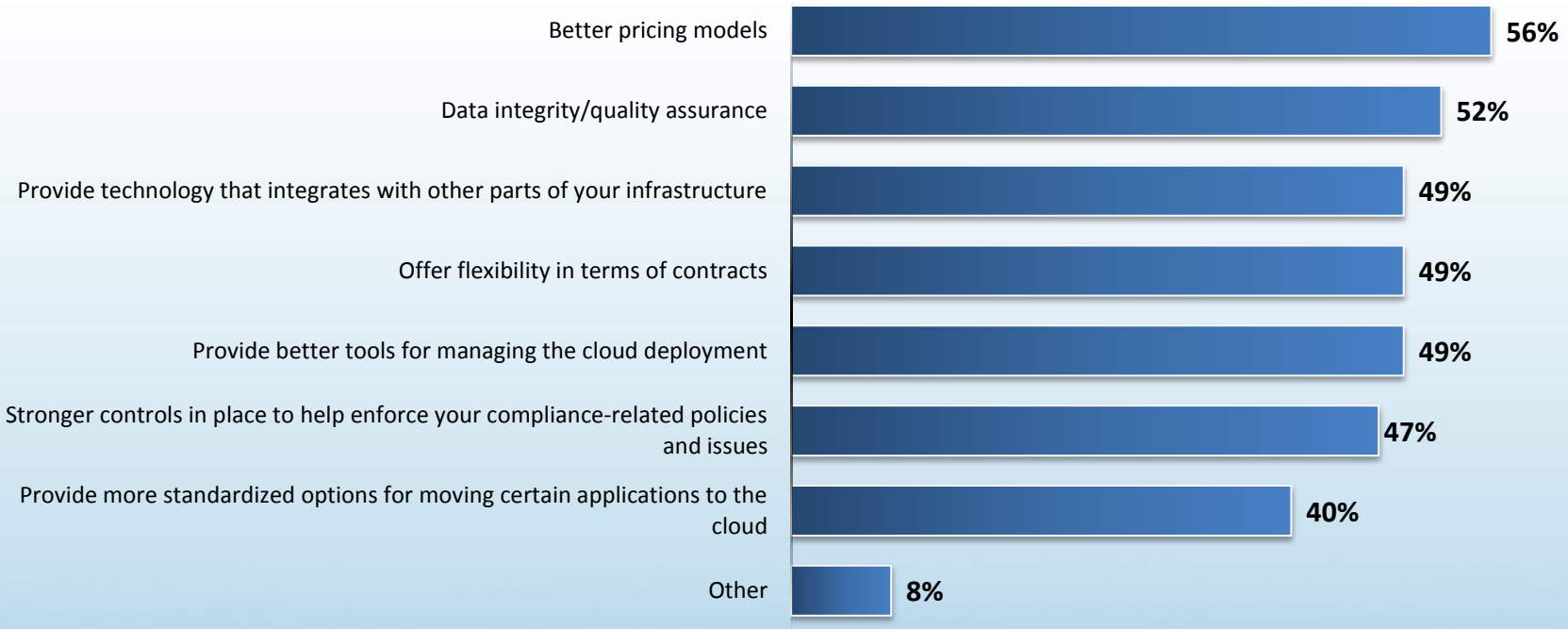
6. The 'Right' Partners?

No Clear Consensus Around Vendor Offering Problem Areas



Q. What can technology vendors do to make cloud computing offerings more attractive?

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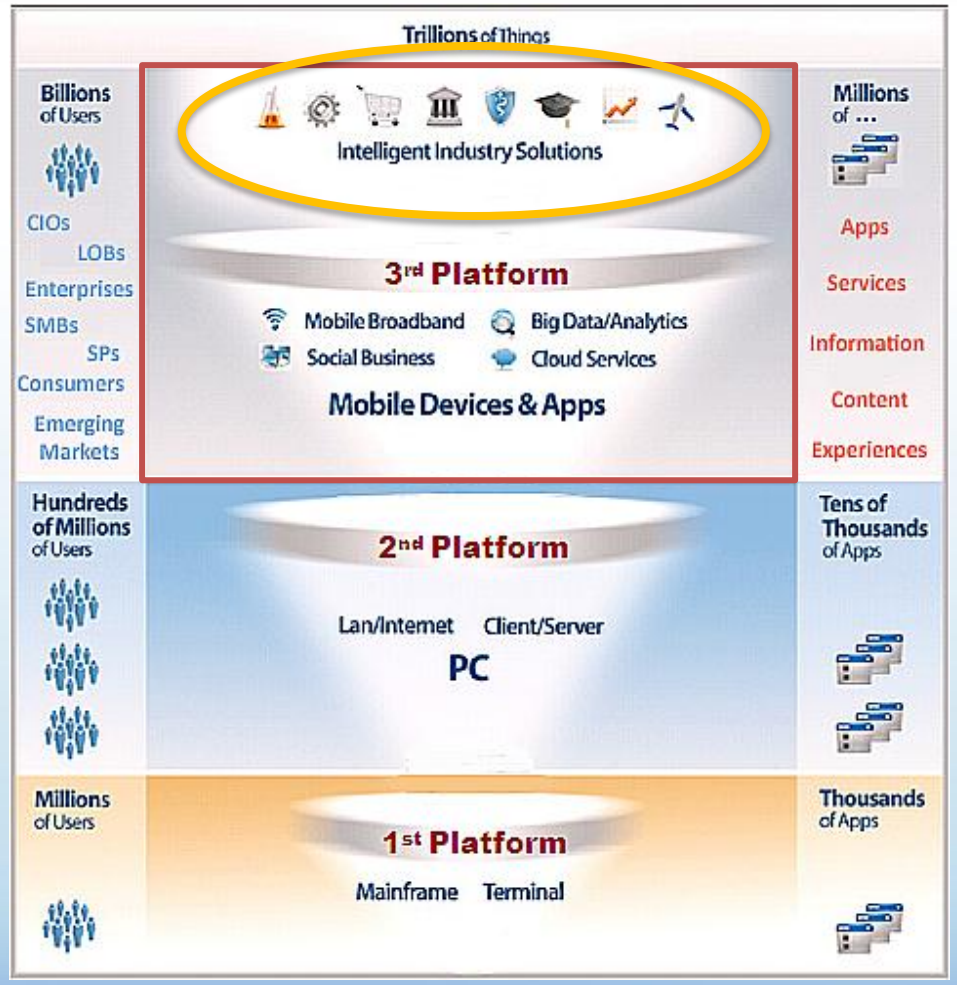
7. The 'Right' Destination?



MetaScale Big Data Made Easy.

PEAKE Healthcare Innovations

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Payment Fraud Management

Connected Health

Medicine Supply Chain

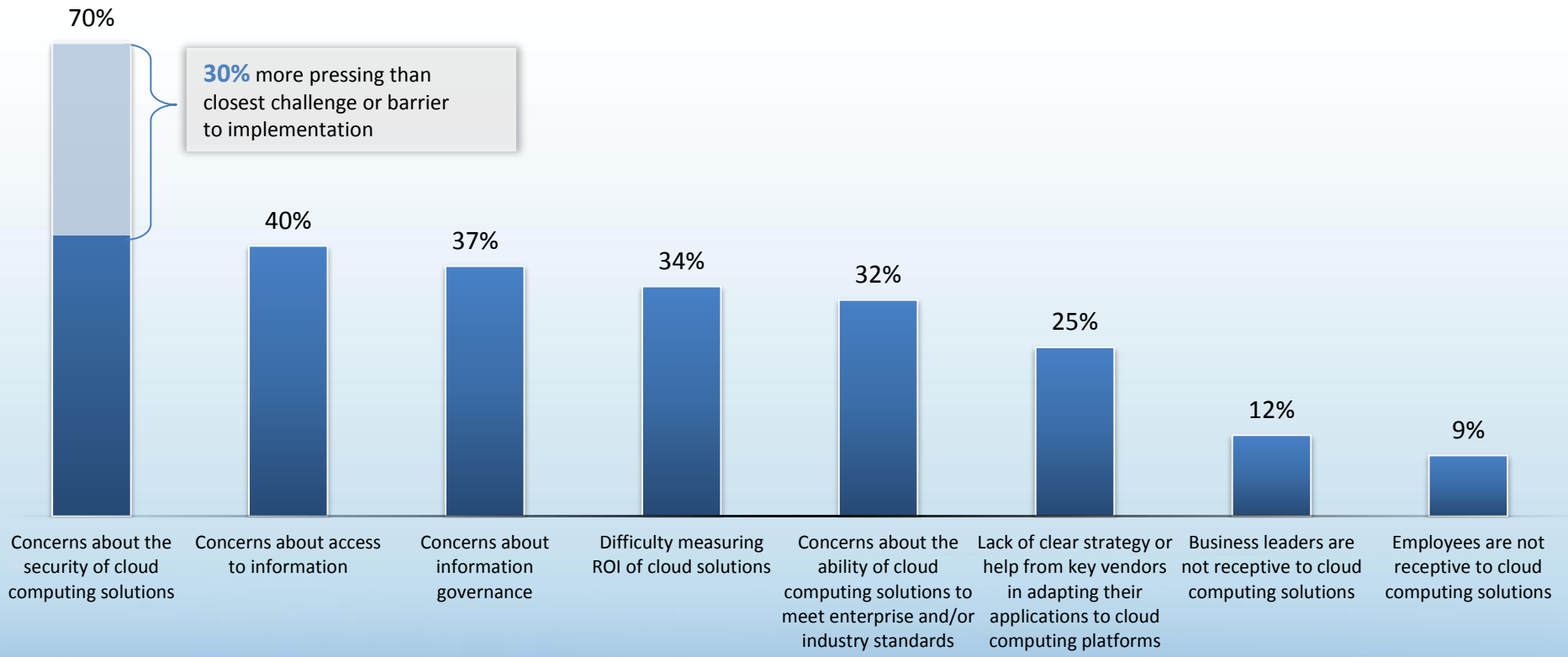
Smart Buildings

Demand Response

Social Mobile Commerce

8. The 'Right' Answers?

Hurdles for Cloud Computing: Security, Access and Governance



Q. What are the top three challenges or barriers to implementing a cloud computing strategy at your organization?

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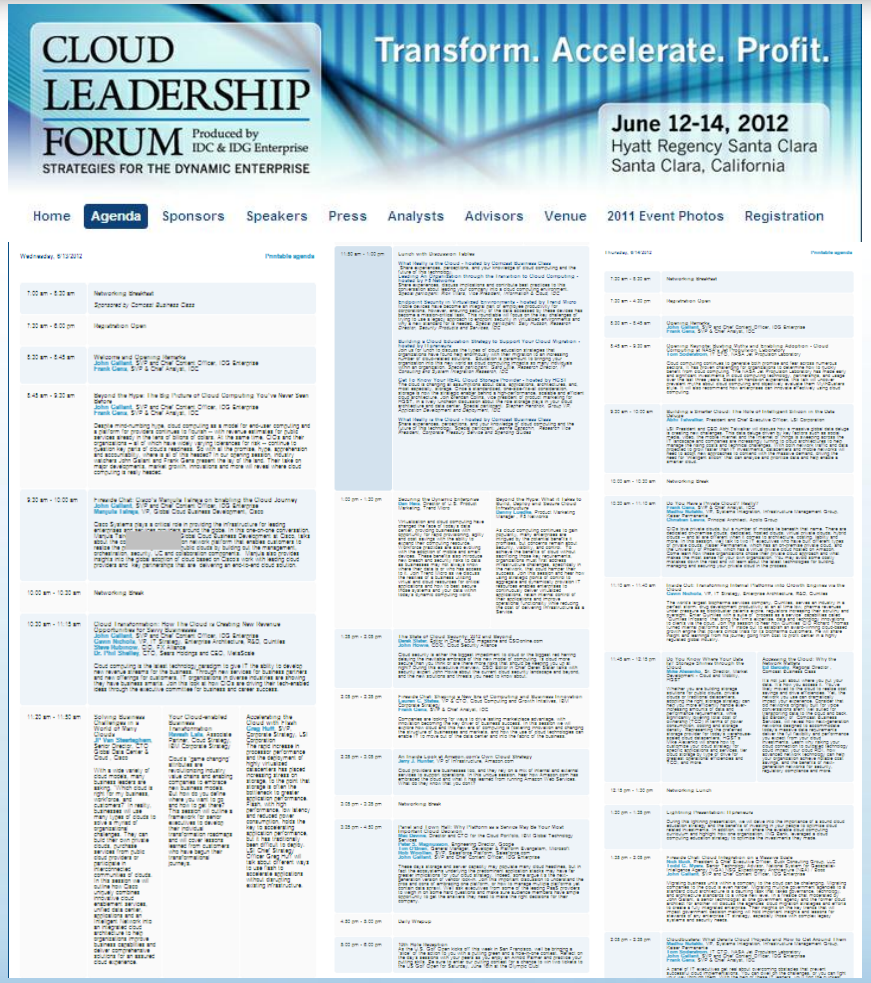
Let the Forum Begin…