TOP 10 PREDICTIONS

IDC Predictions 2014: Battles for Dominance — and Survival — on the 3rd Platform

Frank Gens IDC Predictions 2014 Team

PREDICTIONS

- Under 2014's 5% IT growth are two very different industries: a stagnant (0.7% growth) 2nd Platform "legacy IT" market and a high-growth (15%) 3rd Platform market driven by mobile, cloud, Big Data, and social solutions; emerging markets; line-of-business execs; and cloud service providers (SPs) and developers.
- 3rd Platform technologies and solutions will drive 29% of 2014 IT spending and 89% of all IT spending growth. 40–50% of that growth will come from cannibalization of traditional (2nd Platform) markets.
- Emerging markets will bounce back to double-digit (10%) growth, led by a rebounding China (12–14% growth). China's IT spending will grow by the same absolute dollar amount as the United States', even though the Chinese IT market is one-third the size of the U.S. market.
- Smartphone and tablet sales will continue to dwarf slumping PC sales by 2.5:1. Apple will see strong iPhone and iPad growth and maintain its 2:1 unit value edge but still face a 1:3 volume deficit versus Android. In a challenge to Apple, the Google Play store will sharply narrow the App Store's revenue advantage. The clock will be ticking for Microsoft as it urgently seeks developer support for its mobile platforms.
- Cloud spending will surge by 25%, reaching over $100 billion. We predict a near doubling of cloud datacenters from Amazon's newly energized traditional IT competitors. There will be a pitched battle for cloud developers, with numerous big platform-as-a-service (PaaS) rollouts and enhancements, driving 10 times growth in SaaS.
- Data volumes will continue to explode to 6 trillion terabytes. IT spending on Big Data will grow by 30%, shifting toward analytics tools and apps, and be increasingly delivered by cloud.
- Social networking will become embedded in cloud platforms and most enterprise apps and processes (including innovation management). Standalone enterprise social networks will become extinct.
- Two paths will drive datacenter spending: Integrated systems will drive nearly 10% of spending, driven by enterprise datacenters. Cloud service providers, favoring more componentized/commoditized systems, will drive nearly 30% of spending as cloud SPs become the most strategic customers for tech vendors.
- By 2018, one-third of the top 20 market share leaders in most industries will be significantly disrupted by new competitors (and "reinvented" incumbents) that use the 3rd Platform to create new services and business models. Many will create (like GE) industry-focused innovation community "platforms."
- The "Internet of Things (IoT)," with 30 billion endpoints and $8.9 trillion in revenue by 2020, promises to be a game changer for almost every major IT vendor. 2014 will see lots of IoT partnerships emerge.

December 2013, IDC #244606

IN THIS STUDY

Welcome to IDC's predictions for 2014 in the information technology industry.

In this document, we offer IDC's broadest outlook for the overall technology marketplace. To create this document, we tapped into our social network of over 1,000 IDC worldwide analysts to exchange and refine our collective views on what the coming year holds in store. We narrowed down the literally hundreds of predictions we received from the IDC analyst community, focusing only on those predictions that met the following criteria:

- **High growth.** They illuminate key growth opportunities for 2014.
- **Industrywide impact.** They are relevant to many different segments and players in the IT marketplace.
- **Disruption.** They require major structural change within companies and across the industry and therefore present a unique opportunity for competitive advantage for those companies that recognize and navigate through the market's changes faster and better than others.

Our goal is to draw your attention to "what will matter most" in 2014: the trends and events that spotlight strategic shifts that are profoundly reshaping the IT marketplace *and* that require IT vendors and their customers to make smart, and sometimes very difficult, decisions.

We look forward to your feedback on how we did.

IDC Predictions 2014 Team

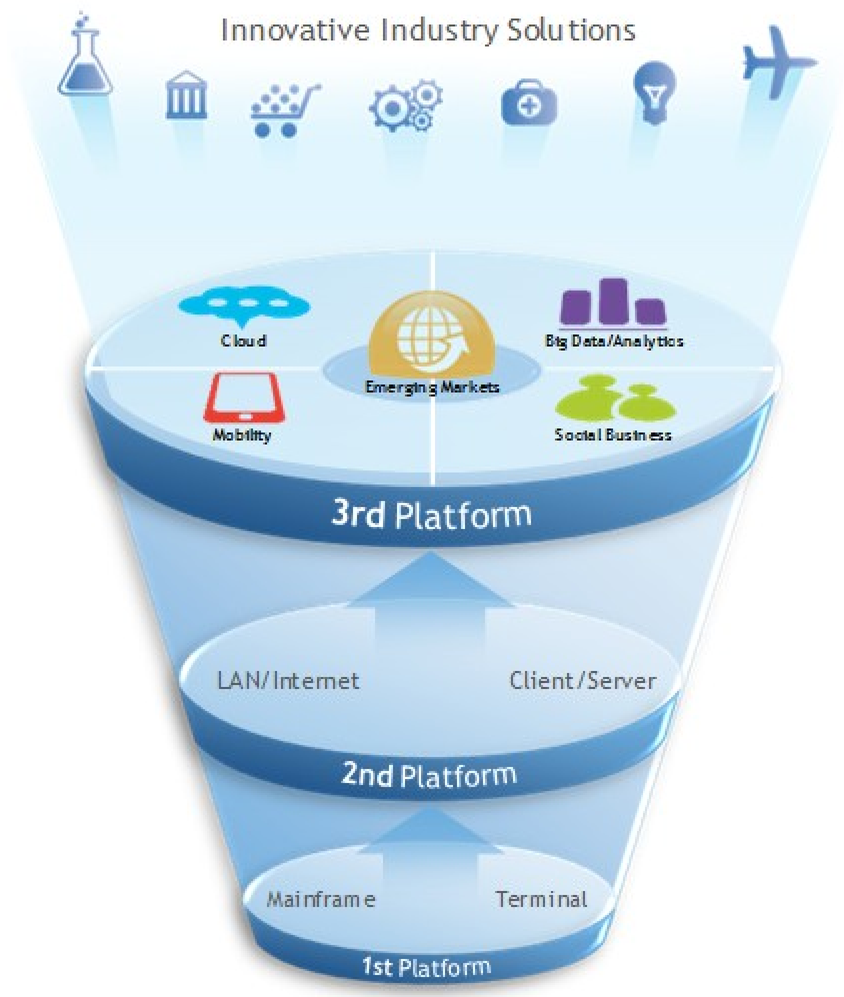
The following IDC analysts made major contributions to IDC's predictions for 2014: Steve Conway, Crawford Del Prete, Mukesh Dialani, Laura DuBois, Matt Eastwood, Mike Fauscette, Kitty Fok, Al Hilwa, John Jackson, Danielle Levitas, Ramon Llamas, Denise Lund, Carrie MacGillivray, Robert Mahowald, Tom Mainelli, Stephen Minton, Henry Morris, Ashish Nadkarni, Sandra Ng, Melanie Posey, Joseph Pucciarelli, David Reinsel, Ryan Reith, Avneesh Saxena, Dave Schubmehl, Kuba Stolarski, Scott Strawn, Mary Johnston Turner, Vernon Turner, Dan Vesset, Richard Villars, Meredith Whalen, and Ali Zaidi.

SITUATION OVERVIEW

For the past five years, IDC has predicted and chronicled the IT industry's massive and disruptive shift to its "3rd Platform" for innovation and growth — built on the four technology pillars of cloud, mobile, Big Data, and social technologies (see Figure 1).

FIGURE 1

The IT Industry's 3rd Platform for Innovation and Growth



Source: IDC, 2013

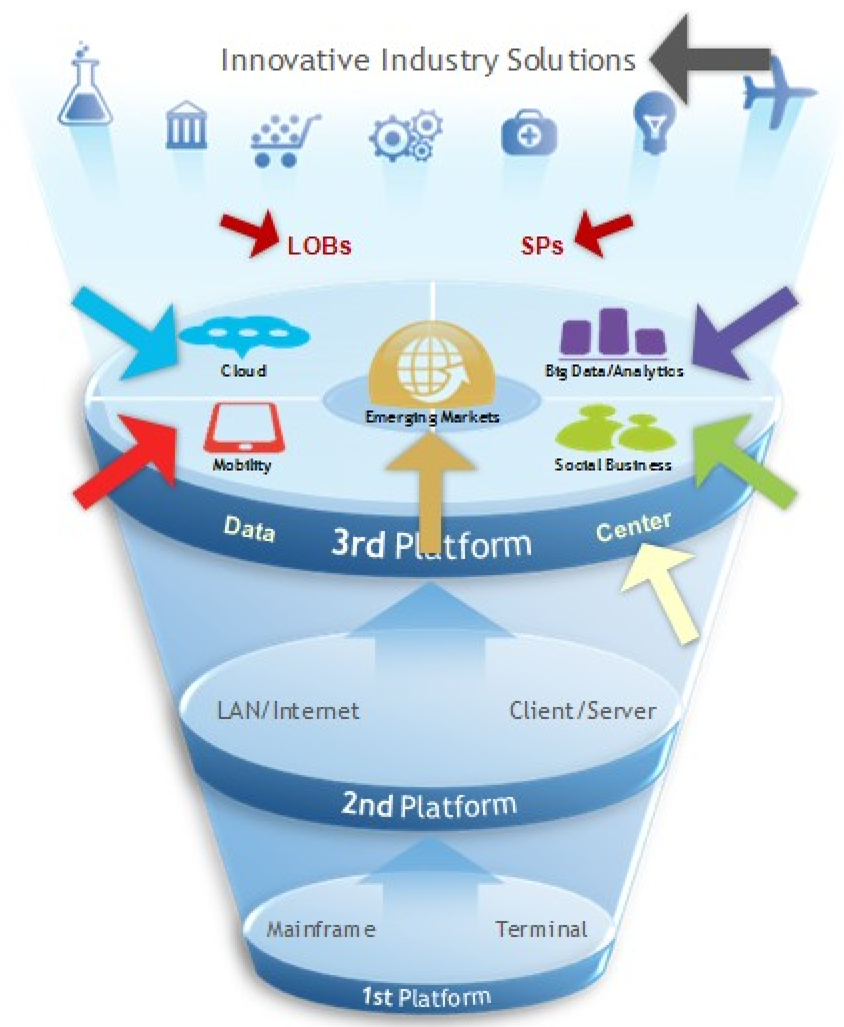
We predicted that 2013 (see *IDC Predictions 2013: Competing on the 3rd Platform,* IDC #238044, November 2012) would mark the industry's giants finally realizing the *only* competition they need to worry about is around these 3rd Platform technologies and solutions. We saw this prediction unfold this year in very dramatic ways: a very high-profile tech CEO lost his job, a major IT player went private, numerous vendors endured cash cow stagnation, and billion-dollar 3rd Platform acquisitions bets were made. As we leave 2013, it's clear: the 3rd Platform finally has the necessary attention from the IT industry's leaders!

So what will we see in 2014?

With all players' eyes now firmly on the 3rd Platform, and leadership of the IT industry for the next two decades so obviously at stake, 2014 will be all about pitched battles all across the platform: in mobile devices and platforms, in cloud services, in Big Data and social technologies, in the datacenters that will support the 3rd Platform, in a new generation of industry-transforming killer solutions, in rising customer groups (emerging markets, line-of-business executives, and cloud service providers and developers) driving growth and new requirements, and around the Internet of Things – the new frontier, stretching the reach and impact of the 3rd Platform (see Figure 2).

FIGURE 2

2014's Key Battlegrounds on the 3rd Platform



Source: IDC, 2013

The four strategic themes we'll see in virtually *all* of these battlegrounds in 2014 are:

- Escalation. We'll see big "put up or shut up" investments to scale up capabilities, most notably around global cloud datacenters and the rollout of many new developer services on those cloud platforms. Reaching global scale quickly will be goal number 1 for many major IT players in 2013.
- Consolidation. The escalation in investments will be driven by the realization that there will room for only a small number of big "winners" in key areas, including mobile platforms, cloud infrastructure, and cloud solution platforms/marketplaces. This consolidation will be around players that reach critical scale in 2014–2017.
- Innovation. The past five years of the 3rd Platform buildout have been about laying the infrastructure and developer platform foundations. This next chapter is about fostering an explosion of innovation on that foundation, with hundreds of thousands to millions of new "killer" apps and solutions. "Developers, developers, developers, developers!" (thank you, Steve Ballmer) will be the most strategic mantra for 3rd Platform competitors in 2014 — for the next two decades, the biggest winners in the industry will be those that can capture the hearts and minds of this next generation of innovators over the next two years. Miss the developers, miss the market.
- Value migration. Value will continue to shift dramatically as the 3rd Platform cannibalizes huge 2nd Platform markets *and* as value migrates within the 3rd Platform itself: up the "stack," from infrastructure to developer platforms and marketplaces, from applications to data, and from broad applications to industry-specific solutions and communities. Of course, the most dramatic value migration driven by the 3rd Platform will not be that within the IT industry but within virtually every other industry on the planet: enabling the delivery of innovative new offerings, redefining competitive advantage, and driving major disruptions of leadership ranks.

Clearly, 2014 promises to be a year of extraordinary change, challenge, and opportunity — as the transition to the "3rd Platform" marketplace enters this, its "much higher stakes" second chapter. Let the battle for 3rd Platform innovation and market leadership begin!

FUTURE OUTLOOK

In this section, we provide the details of our predictions for 2014. Key data points are summarized in Table 1, which is followed by the detailed predictions.

TABLE 1

IDC Predictions 2014 — By the Numbers

Key Metric in 2014	Message in the Metric
IT growth moderately up in 2014. IT spending growth will accelerate to 5% in 2014, up from 2013's 4% (constant currency).	The modest uptick will be driven by a recovery in emerging markets, hot (but moderating) mobile device growth, and pent-up demand for infrastructure investment.
Emerging markets bounce back. Emerging markets will bounce back with 10% growth in 2014, up from 2013's relatively "sluggish" 8%. A recovering China will be a big factor, reaching 12–14% growth (versus 8% in 2013).	We don't see a return to the homogenous supergrowth in emerging markets that has defined most of the past decade. Next year could define a new "post BRIC" era in which emerging markets move in many different directions. But as a group, they are still essential for growth.
Developed markets uninspiring (on the surface). U.S. IT spending growth will edge down less than a point to 3.8%, and Western Europe will uptick a point to 3%, while growth in Japan will go from flat to -1%.	These are huge markets with sluggish overall growth. But under the surface, there is very high growth in 3rd Platform (cloud, mobile, social, Big Data) markets — and the developed economies are among the fastest adopters, well worth focusing on in these emerging areas.
3rd Platform driving the present and future. Spending on mobile, cloud, Big Data, and social and related offerings will grow 15%, drive 29% of IT spending, and drive 89% of IT spending growth. By 2020, almost 50% of IT spending — and over 100% of IT growth — will be driven by the 3rd Platform.	Under 2014's 5% IT growth are two very different industries: a stagnant (0.7% growth) 2nd Platform "legacy IT" market and a high-growth (15%) 3rd Platform market driven by mobile, cloud, Big Data, and social solutions; emerging markets; line-of-business execs; and cloud service providers (SPs) and developers. The 3rd Platform must be the number 1 priority for IT suppliers (and CIOs).
3rd Platform cannibalizing the 2nd Platform. We estimate that 40–50% of the growth in 3rd Platform spending will come from cannibalization of 2nd Platform offerings, which will average close to 0% growth or less.	This is another reason to accelerate investments in, and focus on, the 3rd Platform. The 40–50% is an average across several areas; cannibalization is currently higher in some categories, like tablets, and lower in other areas, including infrastructure as a service (IaaS).
PCs versus tablets and smartphones. Sales of smartphones and tablets will continue to dwarf those of PCs, with tablets and smartphones outselling PCs by about 2.5:1. The PC slide will continue as spending drops by 6% (versus 2013's -10%).	There are no signs of reversal in this trend.
Mobile platform/OS battles. Android will maintain its 3:1 volume advantage, but Apple will retain the value high ground with a 2:1 unit value advantage — and will maintain strong growth in 2014. Microsoft needs to increase developer interest by 50–100% to stay in the game — a tall order.	The trenches have been dug, and the battle lines pretty well hardened, in the mobile device/platform space, but some shifts could be driven by the app store download momentum for Android on one side and Apple's expanding unit volume efforts with the iPhone 5c and (forthcoming) iWatch on the other. Microsoft remains a big wild card.
Cloud services adoption surging. Cloud spending will grow a remarkable 25%, reaching over $100 billion. Over 75% of that spending will skew toward public (multi-enterprise) clouds rather than private clouds.	Cloud adoption has shifted squarely from the early adopter crowd to mainstream enterprises. This will accelerate as more vendors dramatically escalate their cloud focus and investments, and a tripling in the number of developers drives 10 times growth in SaaS offerings over the next four years. Cloud is steadily becoming the new foundation for enterprise IT.

TABLE 1

IDC Predictions 2014 — By the Numbers

Key Metric in 2014	Message in the Metric
Cloud datacenter escalation. We predict a 10–20% increase in Amazon's cloud datacenter footprint, along with a near doubling of cloud datacenters from several of Amazon's newly energized traditional IT competitors.	Cloud is a scale game, and players without massive scale will be uncompetitive. IDC predicts that by 2017, there will be just six to eight major global players in IaaS, perhaps fewer, based on which companies are willing to invest massive capital in a global cloud delivery capability.
Cloud app platform/marketplace rollouts and consolidation. 2014 will be a big year of cloud app platform and marketplace rollouts and enhancements. This will be a prelude to a consolidation of developers and apps around a small set of winners: by 2017, 80% or more of new cloud solutions will be hosted on (and aligned with) the top 6 platforms/marketplaces.	In 2014 and 2015, we'll see a battle for developers play out in the cloud, much like the one between Android, iOS, and Windows for mobile apps and developers. Amazon, Microsoft, salesforce.com, Google, IBM, Oracle, SAP, Pivotal (formed by EMC and VMware), HP, and others know that new cloud apps will fuel the industry's growth, and these platform players want developers to host their innovative new apps and solutions on their PaaS/marketplace.
Big Data avalanche, continued. In 2014, the size of the "Digital Universe" — all digitized information created, replicated, and consumed in a year — will continue to explode, growing by 50% to about 6ZB (6 trillion terabytes).	The quest to drive valuable insights from this data avalanche will drive massive investments, shape the future of the cloud, and create new data-centered analytics and content services. It will also drive a shift in the marketplace, from app-centric to data-centric market power.
Social/community technologies becoming embedded. By 2017, 80% of Fortune 500 companies will have an active (social technologies–enabled) customer community, up from just 30% today.	Social technologies will become increasingly integrated into existing applications over the next 12–18 months and — most significantly — into the next generation of applications and processes.
Integrated systems' increasing enterprise appeal. Nearly 10% of general-purpose enterprise server, storage, networking, and management software spending will funnel through these pre-integrated systems in 2014, up from 6–7% in 2013. By 2020, converged systems will account for almost 20% of this spending.	Integrated systems that pre-integrate system components and software to simplify buying, implementing, and running IT will continue to grab bigger chunks of enterprise datacenter real estate in 2014.
Cloud SPs' growing influence on the IT market. In 2014, an astounding 25–30% of server shipments (including shipments from ODMs) will go to cloud service providers' datacenters. This will grow to 43% by 2017.	This has a huge impact on the IT hardware industry. Cloud SPs' needs and preferences will increasingly dictate what IT architecture and products look like. Cloud SPs will also be the source for the greatest variety of workload-optimized computing options — contrary to the current image of cloud as "one size fits all." The IT hardware industry will need to make a big strategic flip to a "cloud first" design and distribution strategy.
3rd Platform disrupting every industry. IDC predicts that by 2018, one-third of the top 20 market share leaders in most industries will be significantly disrupted by new competitors (and "reinvented" incumbents) that use the 3rd Platform to create new offerings, new business models, and new cost structures to drive revenue growth and expand value.	Think of this as the long-anticipated period in which virtually each industry gets "Amazoned" in its own way. These disruptions will manifest themselves as cannibalization of cash cows, slowed growth, squeezed margins, and declining market share. This threat — and opportunity — makes it imperative that senior management become much better versed about the 3rd Platform and its possibilities in their own business and industry.

TABLE 1

IDC Predictions 2014 — By the Numbers

Key Metric in 2014	Message in the Metric
The emergence of many industry-focused innovation platforms and ecosystems. There are currently a relatively small number of these platforms, but over the next two years, we'll see many dozens to hundreds of these emerge.	A core strategy for competing in these disrupted and reinvented industries is to create an industry-focused innovation/solution platform, one that attracts and enables large communities of innovators. Illumina, Johnson Controls, the New York Stock Exchange, Nasdaq, and others have already created industry innovation platforms and communities. GE jumped in earlier this year.
Line-of-business executives driving more IT spending. In 2014, and continuing through 2017, IT spending by groups outside of IT departments will grow at over 6% per year — almost 2.5 times the rate of the IT department — led by marketing, customer service, and sales groups.	As more IT spending clusters around a new generation of competitive advantage solutions — many of them at the core of major industry transformation and disruption — IT budget control will continue to shift beyond the CIO and IT department into the hands of the line-of-business executives.
Internet of Things groundwork being laid. IDC predicts that by 2020, 30 billion autonomously connected endpoints will be deployed — in consumer electronics, cars, appliances, medical equipment, and beyond — driving $8.9 trillion in revenue.	To create momentum, new industry partnerships will emerge as traditional IT vendors (i.e., Microsoft, IBM, HP, Dell) begin to accelerate their partnership with global service providers (i.e., AT&T, Telefonica, Verizon, Vodafone) — and semiconductor vendors (i.e., Intel, Qualcomm, Samsung) — to create integrated offerings in the consumer electronics space. Look for the Chinese government and industry to play a very active role in IoT development and adoption.

Source: IDC, 2013

1. Worldwide IT Spending: 2014 Growth Modestly Up, Driven Largely by Smartphones, and Emerging Markets Bounce Back

IT spending growth will accelerate to 5% in 2014 (up from 4% this year in constant currency) on a recovery in emerging markets, scorching hot (albeit moderating) mobile device growth, and general pent-up demand for infrastructure investment after the macroeconomic-driven slowdown of 2013:

- Smartphones and tablets versus everything else. Sales of smartphones and tablets, with 2014 revenue growth of 13% (down from 2013's 23%), will continue to drive a startlingly large 60%+ of overall industry growth. Excluding these mobile devices, IT spending will increase by 2.4% in 2014 – a major improvement, by the way, from 2013's 0.4% growth. Looking at the other major product and services segments, we predict improved growth in servers (1.6% versus 2013's -3.5%), storage (2.6% versus 0%), networks (7% versus 6.1%), software (6.2% versus 5.6%), and services (3.9% versus 3.2%). The PC sector will still be under stress, with a predicted revenue decline of 6% – an improvement, nonetheless, from 2013's 10% slide. (For more discussion, see prediction number 4 [Mobile Devices and Platforms].)
- Emerging markets bounce back. IDC predicts that emerging markets – Asia/Pacific (excluding Japan), Latin America, Central and Eastern Europe, and the Middle East and Africa – will

bounce back into the double-digit range, with 10% growth in 2014, up from 2013's relatively "sluggish" 8%. (For more discussion, see prediction number 3 [Customers in Emerging Markets].)

- **Developed economies showing modest up- and downticks.** In the developed markets, 2014 will be a mixed bag of modest growth increases and decreases. We predict moderately lower U.S. IT spending growth in 2014, edging down less than a point to 3.8%. And while the pace of recovery in Europe remains tepid, we predict a modest uptick in IT spending, from 2% to 3%, as most countries post positive GDP growth, even though high unemployment remains a constraint. While the economy in Japan has also stabilized somewhat, we predict a modest decline in Japanese IT spending in 2014 to -1%.
- **Macroeconomic assumption: moderately stronger GDP growth.** Our current macroeconomic assumption is that every region will see moderately stronger growth in 2014 than in 2013, and that this will translate into a moderate uptick in the pace of IT spending. The most significant risks to our forecasts are all related to this key macroeconomic assumption, with some downside risks still lingering in emerging markets, Europe, and the United States. If the economy remains stable, we expect 2014 to be a year for many CIOs to fix the roof while the sun is shining, given the weak pace of infrastructure spending since 2010.

2. A Tale of Two Industries: Value Shifting from 2nd Platform to 3rd Platform

Even though we've just reviewed our outlook for the growth of the IT industry overall, we must tell you: an amalgamated view of the industry tells almost *nothing* at all about what's really happening. Underneath the top-line predictions discussed in prediction number 1 is a tale of two almost completely distinct IT industries, as discussed in the Situation Overview section: the stagnant 2nd Platform "legacy IT" market and the high-growth 3rd Platform market at the core of the industry's next two decades of growth.

Before we shift into more detailed predictions about cloud, mobile, Big Data, and other key elements of the new marketplace, we share the following important industrywide shifts predicted for the emerging 3rd Platform marketplace in 2014:

- **3rd Platform technologies and solutions will dominate growth in 2014 and beyond.** IDC predicts that in 2014, 3rd Platform technologies (including mobile, cloud, Big Data, and social technologies) — along with the services and solutions tied to these technologies — will grow by 15%, drive 29% of IT spending, and drive 89% of IT spending growth. By 2020, almost 50% of IT spending — and over 100% of IT growth — will be driven by 3rd Platform technologies and solutions.
- **The 3rd Platform will cannibalize more 2nd Platform growth in 2014 and beyond.** Spending and value will continue to rapidly shift away from traditional product and service categories and into 3rd Platform technologies, services, and solutions. While spending on 3rd platform technologies and solutions will grow at 11% annually over the next seven years, some of that growth — we estimate 40–50% (currently higher in some categories, like tablets, and lower in areas including infrastructure as a service) — will come from cannibalization of 2nd Platform offerings, which will average close to 0% growth or less. Of course, the bigger story is not about cannibalization: an expanding portion of 3rd Platform growth will come from entirely new high-value solutions (see prediction number 9 [Innovative Industry Solutions]), solutions that were not possible with 2nd Platform technologies and economics.

- **Value will migrate within the 3rd Platform, moving "up the stack."** Value is not just migrating from the 2nd to the 3rd Platform; it is also migrating within the 3rd Platform. As we discuss in more detail in prediction number 5 (Cloud Services), prediction number 6 (Big Data Explodes), and prediction number 9 (Innovative Industry Solutions), value is migrating from IaaS to PaaS, from generic PaaS to Big Data-optimized PaaS, and from cross-industry PaaS and SaaS to industry-specialized PaaS and SaaS. This isn't surprising: all of these shifts are about bringing 3rd Platform technology closer to customers' efforts to create competitive advantage.
- **Amazon will continue to "eat" more of the IT industry.** This may be, by far, the easiest prediction for 2014: Amazon Web Services (AWS) will continue to expand into many more IT offering areas. Over the past 18 months, Amazon has radically expanded beyond its low-cost, self-service infrastructure-as-a-service roots to what we see as the 3rd Platform's "innovation zone," rolling out an avalanche of platform-as-a-service offerings for developers of the next generation of killer apps, and in the process delivering many more "higher order" services, such as service orchestration, virtual desktop, and application streaming. Further, it is aggressively targeting opportunities that were formerly the domain of large professional services firms and ISVs, including datacenter migration, application migration, and Web application and site migration. And it's providing these with the same very disruptive cloud pricing as its infrastructure services. There's no reason to believe AWS will slow down in picking off more profitable corners of the IT industry — and delivering them in a very competitive 3rd Platform model. Needless to say, this is a huge wake-up call to the IT industry incumbents, which will no longer be foolish enough to say "We don't compete with Amazon" (see the "incumbent IT suppliers" bullet point in this section).
- **Google will "wake up" to the enterprise IT market in 2014.** Make no mistake: Google is certainly wide awake in the core markets in which it currently plays (and dominates). But, unlike Amazon, it has been remarkably dormant in the IT marketplace — even though it shares many of the same 3rd Platform strengths its neighbor to the north has wielded so disruptively in the IT market for the past five years. Yes, Google Enterprise has grabbed a large share of enterprise IT email and collaboration business with Google Apps, and earlier this year it rolled out an infrastructure-as-a-service offering (Compute Engine, Cloud Storage) and made enhancements to its platform-as-a-service offering (App Engine). But Google has thus far had an underwhelming presence — certainly relative to most observers' expectations and relative to Amazon's presence — in the transforming enterprise IT marketplace. In 2014, we expect Google to "wake up" and respond to the 3rd Platform IT opportunity with more focus and urgency — or risk being boxed out of a market in which it surely should be vying for leadership, especially given the industry's growing Big Data centricity (see prediction number 6 [Big Data Explodes]).
- **Incumbent IT suppliers will more urgently strip down, and reconfigure, their businesses for the fight.** In 2014, the companies that won market leadership in the 2nd Platform era — and are the incumbents in most customer sites today — will even more aggressively reconfigure themselves for the fight for the 3rd Platform marketplace: acquiring more 3rd Platform competencies and divesting diminishing return businesses (or businesses that are marginal to the new core). Companies likely to be very active acquirers and divestors in 2014 include Microsoft, IBM, HP, Dell, EMC, Cisco, Oracle, SAP, AT&T, and Verizon.

The remaining eight prediction areas focus on the major component pieces — the key communities, technologies, and solutions — of the 3rd Platform marketplace. In 2014, and for the next several years, each of these areas will contain strategic battlegrounds — where IT suppliers will vie for leadership (and in some cases, simply survival) in this next era of IT growth and innovation.

3. Customers in Emerging Markets Will Drive Growth and Shape the 3rd Platform

In the past several years, emerging markets have become much more important contributors to overall IT growth, and in 2014, we'll see their impact on the IT market continue to increase:

- **Emerging markets growth will bounce back.** BRIC IT spending growth will rebound to 13% in 2014, or 8% excluding mobile phones, largely due to a recovery in China. Overall emerging markets growth — consisting of Asia/Pacific (excluding Japan), Latin America, Central and Eastern Europe, and the Middle East and Africa — will resume double-digit growth of 10% after dipping to 8% growth in 2013. This is over three times the growth rate of developed markets, driving nearly $740 billion — or 35% of worldwide IT spending. IDC predicts that by 2020, emerging markets will account for 40% or more of global IT spending. This is a remarkable jump from 2007, the start of the 3rd Platform era, when emerging markets IT spending was just more than half of 2014 levels and just 26% of worldwide spending. For another year, emerging markets will have an oversized impact on IT spending growth: IDC predicts that in 2014, emerging markets will drive — for the first time — over 60% of worldwide IT spending growth.
- **China will drive as much IT growth as the United States.** After relatively "slow" 2013 IT growth of 8%, China — which passed Japan in 2013 to become the second-largest IT market — will bounce back with 12–14% growth in 2014, driving almost 30% of emerging markets' IT spending. We predict that, remarkably, the absolute size of IT spending growth in China in 2014 will equal that of the United States, even though the size of the Chinese market is less than one-third that of the United States; both markets will see over $25 billion of net-new IT spending in the coming year.
- **A "post BRIC" era means more individualized emerging markets growth outlooks.** While we expect 2014 stabilization of the global economy and continued strength in underlying demand, we do not see a return to the homogenous supergrowth in emerging markets that has defined most of the past decade. Indeed, the next year could define a new "post BRIC" era in which emerging markets move in many different directions, creating a wider variety of opportunities and challenges that are increasingly unique to local market conditions. While some organizations have been burned by the bets they placed on emerging markets in 2013, any retreat in 2014 will only be to the benefit of emerging competitors from China, India, and elsewhere with global ambitions of their own. Emerging markets are thus a more complex and challenging but no less important market than 12 months ago.
- **Emerging markets will shape much of the new 3rd Platform IT marketplace.** Strategically, emerging markets will play a growing role in the growth and direction of the 3rd Platform marketplace:
  - **Smart connected devices:** In 2014, the number of smart connected devices shipped in emerging markets will be almost double that shipped in developed markets — a remarkable jump from just four years ago, when developed markets shipments exceeded emerging markets. Similarly, the number of smart connected devices shipped in China will be almost double that shipped in the United States in 2014. And this gap will accelerate: from 2012 to 2017, the installed base of smart connected devices in developed economies will grow by about 25%, while emerging markets will double. IDC predicts massive downstream ramifications of the rapid expansion of mobile devices in emerging markets: the rest of the IT market will not be far behind! In fact, IDC predicts that spending on all IT hardware

(servers, storage, network equipment, etc.) in emerging markets will surpass that in developed markets by 2015 or 2016.

- Cloud: Unlike mobile devices, emerging markets' share of cloud spending lags behind that in developed markets, but the gap will continue to narrow. While in 2014 emerging markets spending on cloud services will be just one-fifth of that in developed markets, emerging markets will reach one-quarter the size of developed markets by 2017. IDC predicts that over the next seven years, emerging markets cloud spending will grow sevenfold versus threefold in developed markets. By 2020, over one in four dollars spent on cloud will be in emerging markets.
- Big Data: Emerging markets accounted for just 23% of the "Digital Universe" — all digital information created and replicated worldwide — in 2010; in 2014, we predict it will exceed 40%, and by 2020, it will exceed 60%, driven in large part — no surprise here — by mobile devices. The Internet of Things will massively increase data volumes and strain even in today's leading cloud infrastructures and software technologies — our analysts are seeing some leading research efforts in China around disruptive new technologies to evolve the 3rd Platform to support this load.

4. Mobile Devices and Platforms: Opportunities, and Challenges, Ahead for Apple, Android, and Microsoft

2014 will be a big year of competition, consolidation, and innovation in mobile devices and software platforms:

- PCs versus tablets and smartphones — the mobile device onslaught continues. In 2014, dollar sales of smartphones and tablets will continue to dwarf those of PCs, with tablets and smartphones outselling PCs by about 2.5:1. The PC slide will continue, albeit more slowly, as spending drops by 6% (versus 2013's -10%), while tablet sales grow by a scorching 18% and smartphones grow by 12%. Smartphone sales will be boosted by larger-screen (phablet) models, which will take some share from small form factor tablets. Tablet unit shipments passed notebook PCs this past year; we predict that revenue from tablet sales could pass notebooks within the next 24 months.
- Android's "volume" versus iOS "value" battle continues. Apple will see strong growth in iPad and iPhone shipments (about 33%), driven by the recent product refreshes and an expanding product lineup (including larger-screen iPad "Maxis?" — hopefully that name won't be used!). We predict that the Android community — led by Samsung — will maintain its 3:1 volume advantage over Apple, while Apple will maintain its value edge, with an over 2:1 advantage in average selling price. But in 2014, we'll see both sides make stronger forays into each other's backyards — Apple's success in driving iPhone 5c in 2014 will be a critical factor for Apple's long-term success, tapping into higher-volume markets, including China. The key to winning this battle, however, will be less about devices than the "value ecosystem" of developers and apps surrounding the devices.
- Android's app volumes (and value) will gain on Apple's. Apple's strong value (and profit) advantage is in part tied to the strength of — and monetization of — Apple's App Store and developer ecosystem. Apple has for a long time maintained the high ground in value creation: total app revenue on Google Play has been well below 10% of that on iOS. IDC predicts this "app ecosystem value gap" could shift dramatically in 2014. The first sign is Google Play (Android) app downloads surpassing those on iOS, which happened for the first time in 1Q13. And, on the monetization front, App Annie has data suggesting that Google Play app revenue

has grown to 45% of the Apple App Store's as of 2Q13, up dramatically from just 10% in the prior year's quarter. If this trend holds, Google could well close the "app ecosystem value gap" with Apple by 2015, which would be a disastrous development for Apple. Message to Apple: Keep driving volumes up, keep innovating, start cross-merchandising more effectively, and keep developers happy — or risk an eventual "Windows beats Mac OS" 1980s replay.

- Apple's favorite movie: *Land of the Living Android Forks.* The Android community has its own issues. One big one is that Amazon and other Android-based mobile players are playing with fire (no pun intended) by propagating, and pouring resources into, "forked" Android versions that run only on their devices, and require developers to create modified versions of their Android apps to run on them. And we predict they may grab more matches in 2014. In 2014, in addition to Amazon (Fire OS), we could see players like Facebook and possibly Samsung create "specialized" Android platforms that help them differentiate and "add value" to Android — and loosen their dependence on Google of course. Forked versions are becoming institutionalized (if they aren't already) in China, where Google struggles to play. To these players, we say "Be careful." The most valuable thing about an operating system (OS)/software platform is the developer community that aggregates around it — and Apple's fondest wish, no doubt, is the balkanization of the Android world and the dilution of its developer-fueled market strength. Of course, these forked versions are being developed because players want to avoid the fate of PC vendors that saw Microsoft and Intel extract all the money out of the PC platform. But the last time a vendor tried to play that game, OS/2 was created. We'd argue that a consolidation or bridging of forked versions to the Google Play store app world would be a better choice than increasing the "differentiation" that splinters the developer community; sorry, Amazon — the 75% compatibility of FireOS is pretty good, but not enough. The Android community is just starting to gain some significant ground on Apple's ecosystem — this is a critically important time for the major Android device manufacturers to concentrate their efforts to build a common, powerful Android app (and developer) ecosystem.

- It's "halftime" in Microsoft's mobile platform "make or break" drama. Last year, we said Microsoft had 18–24 months to significantly increase mobile app developers' interest in developing Win 8, Win RT, and Windows Phone. So far, according to the latest IDC-Appcelerator app developer survey (2Q13), there's good news and bad news: the developer interest has risen by about 8 points, but the percentage of developers "very interested" in the Windows platforms (average 37%) still remains far below that of Android (72%) and iOS (87%). We predict that if Microsoft fails to reach the 50% "very interested" level within the next 12 months, it could be game over — as its platforms could begin to "lose altitude" with the developer community (as has happened with BlackBerry). In our view, a critical piece of the puzzle is that Microsoft must move more quickly in 2014 to bring its three code bases together.

- Apple steps up its game as a cloud services player. In addition to threats from other mobile devices and platforms, Apple is facing a threat from the cloud services world. It will become much clearer in 2014 that mobile platforms and cloud platforms are two ends of the same service delivery foundation — and consumers and enterprises will expect their providers to offer the best of both worlds. Apple needs to dramatically ramp up its cloud services offerings, and in 2014 we expect it will, with major improvements and overhauls to its iCloud offerings to better address the growing cloud-based threats from Google, Amazon, Microsoft, and others; it's ironic that the company that taught the industry the importance of linking (Web-based) content to a device — and that was fast to drive "things to download to your device from the cloud" — has been slow in developing "things you can run from your device in the cloud."

5. Cloud Services: Platforms Consolidate, Innovation Explodes

IDC predicts that in 2014, cloud spending — including cloud services and the technology to enable cloud services — will grow a remarkable 25%, reaching over $100 billion. Over 75% of that spending will skew toward public (multi-enterprise) clouds rather than private clouds for one simple reason: that's where the next generation of enterprise applications and solutions are being developed.

IDC predicts a slew of strategic shifts in 2014 in the cloud services space in each of the three major layers of IaaS, PaaS, and SaaS. These shifts will pit key cloud suppliers against each other and will likely lead — when the dust settles — to a new leadership structure within the IT industry:

- **Escalation setting the stage for consolidation among IaaS players.** IDC predicts that Amazon, Microsoft, IBM, HP, and others will dramatically escalate their cloud datacenter deployments in 2014. Amazon will continue to expand its very large footprint to 30 or more availability zones (from today's 26), particularly where it has gaps in Latin America and Asia. And we predict a near doubling of cloud datacenters from several of Amazon's newly energized traditional IT competitors. Why this escalation of cloud infrastructure deployments? Because cloud is a scale and liquidity game and players without massive scale will be uncompetitive, missing out on major customer opportunities. IDC predicts that by 2017, there will be just six to eight major global players in IaaS, perhaps fewer, based on which companies are willing to invest massive capital into a global cloud delivery capability. Who will these players be? They will come from among the three big "integrated stack" providers (Amazon Web Services, Google, and Microsoft) plus a small number of major players around two or three of the open ecosystem platforms — which include OpenStack, VMware, and CloudStack (each vying to become "the Android of the cloud platforms"). And so we are entering a "put up or shut up" time as some players dramatically escalate their investments to scale up their capacity and global presence while others hesitate and ultimately scale back. One important caveat: if the "NSA/Snowden effect" and/or "data sovereignty" requirements lead to country and regional governments legislating/regulating in favor of local cloud providers, and effectively against the global players' cloud offerings, we could see acceleration of global players establishing local presence in more countries as well as opportunities for a significant number of regional players catering to region-specific requirements.
- **A new stage of IaaS differentiation.** In contrast with the "one size fits all" image of cloud compute and storage services, we'll see a dizzying increase in the variety of workload-specialized cloud infrastructure services — rivaling and quickly surpassing what's available from the server and storage OEM community. We've already seen the beginnings of this from Amazon Web Services, Rackspace, SoftLayer/IBM, Microsoft, Verizon, and AT&T. Over the next 12–24 months, we'll see this new form of "specialized infrastructure" differentiation ratchet way up. This will be a total inversion of what most people assume about the cloud: it's not where your hardware options will be constrained, it's where you'll have the widest range of options and soon will be the first place to get general access to new hardware solutions.
- **IaaS without PaaS capabilities becoming a dying breed.** In 2014, it will become even clearer that value is migrating from pure IaaS toward IaaS with PaaS capabilities. IaaS providers with no PaaS services — including development, testing, staging, deployment, *and* ongoing monitoring and management — and no ecosystem of developers and solutions will go the way of the dodo bird, being unable to meet the requirements of both enterprise customers and commercial cloud app/SaaS developers.

- **A pitched battle for developers (and apps) in the cloud.** In 2014 and 2015, we'll see a battle for developers play out in the cloud, much like the one between Android, iOS, and Windows for mobile apps and developers. Amazon, Microsoft, salesforce.com, Google, IBM, Oracle, SAP, Pivotal (formed by EMC and VMware), HP, and others know that new cloud apps will fuel the industry's growth, and these platform players want developers to build and host their innovative new cloud, mobile, and desktop apps and solutions on *their* PaaS/marketplace. In 2014, there will be great urgency in this battle for developers: IDC predicts that by 2017, 80% or more of new cloud solutions (and developers) will be hosted on (and aligned with) the top 6 of these competing platforms. Look for many major rollouts in the PaaS/apps marketplace in 2014, including IBM's critically important release of a new cloud app platform (code-named BlueMix) aimed at the commercial app/solution developer community. A key differentiator in this battle will be cloud resource scale, or "cloud liquidity." It's one thing to have the right PaaS/marketplace, but if the customer doesn't have confidence in its provider's ability to meet projected capacity needs in a timely fashion, it will look elsewhere.
- **A tenfold explosion of new cloud (SaaS) "apps."** New apps — and the data generated by, and associated with, those apps — will fuel the growth of the 3rd Platform for the next decade and beyond. IDC predicts that over the next four years, we'll see a tenfold growth in the number of "apps" in the cloud, driven by a tripling of the number of "developers"/contributors to cloud app ecosystems. Two-thirds of these new apps will have an industry-specific or role-specific focus (see prediction number 9 [Innovative Industry Solutions]).

6. Big Data Explodes, Integrates with Cloud Platforms, and Gives Birth to New Services

IDC predicts that in 2014, the size of the "Digital Universe" — all digitized information created, replicated, and consumed in a year — will continue to explode, growing by 50% to about 6ZB (6 trillion terabytes), driven by the explosion in mobile devices, apps, social media, and the Internet of Things. The quest to drive valuable insights and real-time decision making from this data avalanche will drive massive investments, shape the future of the cloud, and create new data-centered analytics and content services:

- **Big Data spending will explode and shift toward analytic tools and solutions**. IDC predicts worldwide 2014 spending on Big Data technologies and services will grow by 30%, exceeding $14 billion. Given the 2014 focus on the apps buildout on the 3rd Platform, it should be no surprise that growth will shift from the infrastructure and data management layers to the analytic tools and application layers.
- **"Data-optimized cloud platforms" are table stakes for attracting developers and apps**. IDC predicts that over the next three years, 80% or more of the new "killer apps" emerging on the 3rd Platform will be "data intensive" — that is, they will leverage huge volumes of data and/or real-time data streams. The implication is that it is imperative that the cloud platform providers battling for developers/innovators (see prediction number 5 [Cloud Services]) offer an increasingly rich variety of "Big Data" services. 2013 saw increasing activity, with major moves from AWS, IBM, Microsoft, salesforce.com, SAP, and Oracle. In 2014, look for an upshift in the race among these players, and others, to deliver the best Big Data-optimized cloud platform. The messages are clear: in 2014 and beyond, cloud platforms without a rich variety of Big Data analytics and management services will fail to attract developers. Conversely, Big Data analytics and management software tools that are not replatformed for, and optimized for consumption in, the cloud will be quickly marginalized by cloud platform-based competitors.

- **Big Data analytics services will see explosive growth.** Demand for Big Data analytics skills will continue to significantly outstrip supply in 2014, creating big opportunities for vendors to provide an increasing variety of analytics services (many of them cloud based). We predict 2014 spending on Big Data analytics services to exceed $4.5 billion, growing at an impressive 21% annual rate through 2016. We already see such players emerging, including Accenture, IBM, Genpact, TCS, HP, Deloitte, PwC, and Capgemini, as well as relative newcomer pure-plays like Fractal Analytics, Mu Sigma, Opera Solutions, and AbsolutData Analytics. IDC expects these providers to aggressively acquire scarce Big Data talent as well as niche industry and process-specific IP to differentiate their offering. IDC predicts that over the next three years, there will be at least a threefold increase in the number of these players and services — many of these new players and offerings will have an industry-specific focus.
- **Value-added content providers and data brokers will proliferate.** Value-added content (VAC) is an emerging market of strategic importance on the 3rd Platform. Social media, blog posts, Web transactions, industrial data, and many other types of data are being aggregated, curated, enhanced, and sold to organizations hungry to understand their customers, their products, and the markets in which they exist. There are a number of start-ups like Gnip, DataSift, and ZoomInfo grabbing open source data from the Web and other places — using automation to curate and aggregate data and then make it available for sale to private and public organizations for analytics purposes. And, interestingly, many companies — including cable operators, telcos, and others — that have not been traditional information vendors are exploring how to monetize their data as an additional revenue stream. In addition, companies like Twitter have been buying value-added content vendors like Bluefin Labs to expand their reach in social media aggregation and analysis. We predict this market will expand dramatically over the next few years and that these data-oriented VACs will become an increasingly large part of the partner ecosystem around cloud solution platforms/marketplaces. Enterprises (and developers) coming to solution platforms/marketplaces will browse for interesting data sources, as well as apps, to subscribe to. One big example we will be watching with interest is IBM's recently announced Watson platform and ecosystem, which will also provide a good example of the steady progression of value up the 3rd Platform stack we'll see in the Big Data world: from data as a service to analysis as a service to recommendations as a service.
- **The shift from an app-centric to a data-centric IT marketplace leads to an era of "disposable" enterprise applications.** The 3rd Platform is creating an environment in which data sits apart from any one app, can be accessed/analyzed by many apps, and dictates where apps should be hosted and run. IDC predicts the emergence — over the next five years — of an enterprise app world in which many new applications are more "disposable," with replacement cycles of months and years rather than decades.

7. Social Networking/Social Business: Embedded and Disrupting

While many still question the business value of social technologies, the reality is that social technologies will become increasingly integrated into existing applications over the next 12–18 months, and — most significantly— into the *next* generation of applications and processes:

- **Social becomes a standard foundation for customer engagement and marketing.** Social technology-based customer communities will become a standard — and strategic — component of virtually all customer engagement and marketing strategies. By 2017, 80% of Fortune 500 (F500) companies will have an active customer community, a big jump from today's 30%. Google, Facebook, and Twitter will emerge as primary power brokers feeding these systems (see the "enterprise social platforms" bullet point in this section).

- **Social invades, and disrupts, product and service development.** Think of this as the *other* side of the business from the many marketing-focused social solutions: the leverage of customer networks to feed the development of new offerings. Innovation management solutions — built on customer communities and enterprise social networks (ESNs) — will increasingly disrupt how companies source market requirements and feedback. By 2016, 60% of the F500 will deploy social-enabled innovation management solutions, including offerings from Lithium, Spigit, Imaginatik, HYPE, and Brightidea. This is about moving from a "make and sell" to a "sense and respond" business model.
- **Enterprise social platforms meet cloud PaaS platforms (and ecosystems).** In 2014 and 2015, social platforms will converge with the cloud (PaaS) platforms and the expanding cloud developer/solution world. Social networking services/ESNs will be made available as standard services within cloud platforms, from PaaS players like IBM, Oracle, SAP, salesforce.com, and Amazon. In 2014, we'll see the move from standalone ESNs to embedded ESNs, which merge the network into the workflow rather than creating a "social layer." This embedding and addition of work context is critical for adoption and for realizing value from social in the enterprise. The standalone enterprise social network will go the way of the BlackBerry as embedded ESNs that bring people and information together in a workflow context and in real time, surfaced in every application through the PaaS, become standard. Instead of "social" applications, every application will be social.

8. 3rd Platform Datacenter Transformation: Architecture Wars, Software Revolution, and the Rising Role of Cloud SPs

Cloud, mobile, social, and Big Data solutions — while primarily running in the cloud — are still, of course, dependent on the real physical datacenters underneath the cloud. And there are massive changes underway in this datacenter "foundation" for all of the services and solutions that make up the 3rd Platform, including a battle of visions about how best to build and operate a modern datacenter:

- **Rapid growth in integrated systems in enterprise datacenters.** Integrated systems that pre-integrate system components and software to simplify buying, implementing, and running IT will continue to grab bigger chunks of enterprise datacenter real estate in 2014. Nearly 10% of general-purpose enterprise server, storage, networking, and management software spending will funnel through these systems in 2014, up from 6–7% in 2013. By 2020, integrated systems will account for almost 20% of this spending.
- **Cloud service providers skewing industry growth toward componentized/commoditized systems.** A counter-vision of datacenter infrastructure comes from the world of cloud service providers, which favor highly componentized and commoditized systems and have largely eschewed the integrated systems of major system OEMs. In 2014, an astounding 25–30% of server shipments (including shipments from ODMs) will go to cloud service providers' datacenters. This will grow to 43% by 2017. These cloud services providers are already playing an even greater role in HDD storage capacity shipments through direct purchases or via ODMs. Consequently, in spite of the rapid growth of integrated systems that scale at the level of one to three racks in enterprise datacenters, IDC predicts the commoditized/componentized vision will gain the greater share over the next three years as an increasing amount of compute and storage capacity in the market funnels through cloud SPs' datacenters in 10 or more rack modules.
- **Redeveloping/adapting software for OpenStack and other open infrastructure platforms a top priority for datacenter software players.** The growth of both integrated systems for enterprises and cloud SPs' hyperscale component infrastructures means that infrastructure/management

software vendors — including those aimed at the strategic hybrid cloud opportunity — need to have an "architecture neutral" software-defined datacenter strategy: offerings that can run, for example, in a tightly integrated/converged model as well as on componentized environments. Using integrated systems packaging as a way to lock in customers to bundled software offerings is an utterly losing strategy. In 2014, we predict virtually all infrastructure/management software vendors will continue to race toward the new model; a key step will be redeveloping/adapting offerings to run in an OpenStack, CloudStack, or other vendor- and architecture-neutral environment.

- **The IT hardware industry — just like the software industry — flipping to a "cloud first" strategy.** In *IDC Predictions 2008: The Post-Disruption Marketplace Takes Place* (IDC #209776, December 2007), we talked about an upcoming "big flip" in the software industry: that the cloud (SaaS) would become the primary design point and first release path for new software. IDC predicts that in 2014, IT hardware/systems vendors will also "flip" their strategies, designing new innovations for initial release and (widespread) adoption through cloud SPs' datacenters, not enterprise datacenters. The ongoing shift of "where computing happens" — from enterprise datacenters to SPs' datacenters — means that cloud SPs, with their huge and growing scale and broad market reach, will soon become the fastest and largest channel for new hardware/system architecture adoption. This obviously makes it even more urgent that IT hardware and software providers find a way to sell more offerings into — and through — the SP community. Most of the server OEM vendors have thus far had very mixed success here — their traditional focus has been on enterprise datacenters. In 2014, we predict HP, IBM, Dell, EMC, Oracle, Fujitsu, Cisco, Juniper, and others will sharply increase their focus on offerings that align with SPs' unique architecture, scale, deployment, and pricing demands.
- **On the path to the solid state optimized datacenter.** The need for greater speed, rapid scale, and density in the increasingly data-intensive 3rd Platform datacenter will drive very rapid growth in the deployment of solid state (flash-based) storage over the next several years. IDC predicts that most of the major integrated system players will be selling all-flash configurations as standardized offerings (i.e., not custom builds) and that by 2018, a majority of integrated systems sold will be "all flash." Any cold data will be flying out of the rack into bulk storage appliances and the cloud. The impact of solid state won't be limited to servers and integrated systems, however. The growing use of solid state for memory, cache, and storage will drive major redesigns of datacenter modules in terms of size, power/cooling profiles, and asset life-cycle management. It will also spur significant re-architecting of many critical business applications.

9. Innovative Industry Solutions: Industry Disruptions, and New Roles, Ahead

By far the greatest IT spending growth over the next 10 years and beyond will be driven by new high-value solutions built on the 3rd Platform. Many of these solutions don't even exist yet. But this next generation of "killer apps" — many of them focused on "competitive advantage" offerings and business models in specific industries — will pull along a massive amount of cloud, mobile, social, and Big Data product and services spending. All the previous predictions around platforms, developers, ecosystems, and solution marketplaces come together around this common, strategic destination: enabling the transformation, expansion, and disruption of literally every other industry on the planet. Predictions of what we'll see in 2014, and over the next few years, at the very top of the 3rd Platform include:

- **The 3rd Platform will seriously disrupt market leadership ranks in all industries.** IDC predicts that by 2018, one-third of the top 20 market share leaders in most industries will be significantly disrupted by new competitors (and "reinvented" incumbents) that use the 3rd Platform to create new offerings, new business models, and new cost structures to drive revenue growth and expand value. Think of this as the long-anticipated period in which virtually each industry gets "Amazoned" in its own way. These disruptions will manifest themselves as cannibalization of cash cows, slowed growth, squeezed margins, and declining market share. This threat — and opportunity — makes it imperative that senior management become much better versed about the 3rd Platform and its possibilities in their own business and industry.

- **The emergence of industry-focused innovation platforms and ecosystems — as a new base of competitive advantage — will accelerate in 2014.** As discussed in *IDC Predictions 2013: Competing on the 3rd Platform* (IDC #238044, November 2012), a core strategy for competing in these disrupted and reinvented industries is to create an industry-focused innovation/solution platform, one that attracts and enables large communities of innovators. Being at the center of these innovation communities will be a very powerful place to be in every industry. Last year, we identified Illumina (genomics), Johnson Controls (smart buildings), the New York Stock Exchange and Nasdaq (financial trading), and others that have already created industry innovation platforms and communities. Aetna's CarePass, Kaiser Permanente's Interchange, and UnitedHealth Group's Optum cloud are bringing data-centric app platforms to the health sector. Earlier this year, GE joined in with the Predix platform for the industrial equipment sectors in which it competes. There are currently a relatively small number of these platforms, but over the next two years, we'll see many dozens to hundreds of these emerge. Many of these platforms will be key hubs in the emerging Internet of Things economy (see prediction number 10 [Internet of Things]). IDC predicts that most of the next wave of industry platform players — like these early examples — will not reinvent the cloud IaaS/PaaS underpinnings they need but will build on top of the major cross-industry PaaS/marketplace platforms. In 2014, it will be critically important for Amazon, HP, IBM, Microsoft, Oracle, Pivotal, Salesforce, SAP, and others to find these industry platform players and win their business. We predict quite a few of these wins/partnerships will be announced in 2014.
- **The buyer profile continues to shift to business executives.** It should be no surprise at all: as more IT spending clusters around a new generation of competitive advantage solutions — many of them at the core of major industry transformation and disruption — IT budget control will continue to shift beyond the CIO and IT department into the hands of the line-of-business executives. In 2014, and continuing through 2017, IT spending by groups outside of IT departments will grow at over 6% per year — almost 2.5 times the rate of the IT department — led by marketing, customer service, and sales groups.
- **By 2018, adoption of 3rd Platform IT technologies will redefine 90% of IT roles**. Effective IT talent management will be key to realizing the full business potential of the 3rd Platform. IDC predicts the 3rd Platform will change the skills for 90% of IT roles over the next three to five years. Roles that will be most significantly impacted include application development, service management, and IT management. The 3rd Platform will also create a labor shortage for roles such as enterprise architecture, business analytics, and security. Nascent roles today such as mobile development and social developers will be catapulted onto center stage.
- **New IT organization roles around innovation will emerge.** By 2016, 70–80% or more of Global 2000 organizations will task a strategic planning/competitive analysis team to leverage at least one dimension of the 3rd Platform (e.g., mobile apps, Big Data analytics, social networking) to create new opportunities and disrupt competitors within their industry. Less than half of those will explore the more ambitious effort to create an innovation platform and ecosystem for their customers, partners, and industry (e.g., GE's Predictivity Platform).

10. Internet of Things Accelerates 3rd Platform Growth

While a whole new crop of 3rd Platform solutions will drive the next decade of IT industry growth, there will be one other very important growth accelerator for the 3rd Platform IT industry: the radical expansion of the 3rd Platform's edge beyond smartphones, tablets, and PCs to the so-called Internet of Things. Thirty billion autonomously connected endpoints and $8.9 trillion in revenue by 2020 promise to be game changers for almost every major IT vendor. Further:

- **IoT partnerships will emerge among disparate vendor ecosystems.** To create momentum, new industry partnerships will emerge as traditional IT vendors (i.e., Microsoft, IBM, HP, Dell) begin to accelerate their partnership with global service providers (i.e., AT&T, Telefonica, Verizon, Vodafone) — and semiconductor vendors (i.e., Intel, Qualcomm, Samsung) — to create integrated offerings in the consumer electronics space. These new partnerships will accelerate the number of connected devices, expand the intelligent systems that manage the sensors (a goal for the microprocessor vendors), and create integrated solutions offerings for the business services organizations of the IT players. Not to be left out in the cold, IT vendors that can't form these types of partnerships will instead turn to accelerating open industry standards to ease the complexity of seamless connectivity within the IoT. As a result of this, unlikely business collaboration could be formed by Cisco and Oracle as two of the major players that would want to see industry standards work in their favor (e.g., OASIS Message Queuing Telemetry Transport [MQTT] for Cisco and, for Oracle, establishing Java as the de facto platform for embedded systems in devices at the edge). Benefits of such a move could be appealing to IoT ecosystems powerhouses such as GE, Rockwell, Schneider Electric, and many of the IoT World Forum Steering Committee members.
- **Leaps of faith in 2014 will create end-to-end IoT solutions.** To reach 30 billion autonomously connected endpoints and $8.9 trillion in revenue by 2020, coordination and collaboration will be required as described previously. In 2013, the ecosystem began to shake out with partnerships being named, such as SAP and Ericsson revealing their tie-up at Mobile World Congress or GE announcing partnerships with Cisco, Intel, and AT&T at its Mind+Machines Conference in October 2013. However, this is just the tip of the iceberg in terms of the efforts that need to occur across the IoT market to drive standardization and a holistic story for enterprise customers looking to invest in the IoT. In 2014, potential (and surprising) partnerships could include Cisco working closely with BlackBerry and its QNX platform — which is primarily relevant in the embedded systems market despite BlackBerry porting it to its smartphone operating system — to help drive deep penetration within the automotive components, industrial control systems, medical instruments, defense systems, and nuclear power plant systems. This hookup could give Cisco a powerful, and compelling, story to tell its enterprise customers — especially within the automotive, manufacturing, healthcare, and government sectors. The IoT market is a breeding ground for innovation and thinking outside the box, and it will start with the big industry leaders' will to take leaps of faith to create end-to-end solutions.
- **Open source–minded China will be a key player in the Internet of Things.** At the recent ISC Big Data'13 conference in Heidelberg, the Chinese Academy of Sciences' (CAS') Dr. Zhiwei Xu gave a fascinating talk in which he said China envisions the average Chinese home in 2030 will have 40–50 intelligent devices/sensors that together generate 200TB of data per year. Multiply that figure by 500 million homes, and you get 100ZB of new data annually. The planners foresee the need for extreme architectures to manage this vast cloud-and-device network including hundreds of exabyte-scale, billion-thread servers; tens of thousands of petabyte-scale servers; and millions of smaller servers. Xu said China will rely on open source software such as DataMPI, which he said is four to five times faster than Hadoop at functions including sort and

PageRank. He said CAS is developing a new server it hopes will scale to 1 billion threads, with a dramatically simplified architecture and hardware/software stack. On a suite of 40 benchmark applications, Xu said he and his colleagues expect to reduce latency 123-fold and benchmark load 50-fold. So what's our prediction? It seems pretty obvious: as IoT drives massive scale changes in the 3rd Platform (think 3rd Platform 2.0), China looks to be a very active player in the adoption of and in developing competitive technologies and solutions. As IoT players develop strategies and solutions in 2014, keeping an eye on China — as a key market and a seed bed for new technologies and competitors — will be extremely important.

ESSENTIAL GUIDANCE

The march toward the radically new 3rd Platform IT marketplace — built on a whole new set of foundation technologies, based on a whole new economic model (much higher volumes, much lower prices, much faster cycle times), delivering value through a whole new set of solutions, defined by the needs of a greatly expanded set of customers, developed by largely new communities of developers/innovators, and brought to market through a service provider community of both new and familiar faces — will hit unprecedented speed and urgency in 2014.

Our essential guidance for navigating this market transition in 2014 is very simple: Look carefully at the new marketplace — at the key battlefronts we've identified in this document — and craft and prioritize strategies and investments that align with this emerging marketplace.

As noted previously, to be successful, your strategy in 2014 must address the four core dynamics of the marketplace, asking and answering these questions:

- Are you **escalating** your commitments to the 3rd Platform marketplace — sufficiently scaling up resources and competencies to the levels needed to be among the global leaders?
- Do you understand your best play(s) in a **consolidating** marketplace? Are you ready/able to compete for global-scale leadership at the strategic "platform" levels? If not, are you positioning to align, as a contributor/partner/community member, with the players that will win top positions in the consolidated marketplace?
- Are you positioning your organization for a major role in one or more **innovation** ecosystems? Either as an innovator/developer or as a platform for innovators or both? The hundreds of thousands to millions of new solutions on the 3rd Platform will drive the bulk of the industry's growth over the next 20 years — so understanding how to tap into the development and deployment of those solutions will be the most important strategic insight you can develop. Remember the most important mantra for 2014: "Developers, developers, developers, developers!"
- Are you fast enough to adapt to the **value migration** that will be an annual fact of life in the 3rd Platform marketplace? One of the wonderful things about the 3rd Platform is that it has dramatically lowered the barrier for new innovations to be developed and brought to market. The bad news is that companies with slow "innovation cycle times" will find themselves (and their "high value" offerings) commoditized very quickly. Seeing where value is migrating will not be enough to succeed in the new marketplace. The much more challenging effort is to inject a much faster cycle time into the culture and processes of your business — without this, success on the 3rd Platform will be very temporary.

LEARN MORE

To see the rest of our predictions — as well as the dozens of IDC Top 10 Predictions documents that we will publish (and Webcasts we will host) in December and January, each focused on a different segment of the IT industry — visit IDC's predictions page at **www.idc.com/research/Predictions14/index.jsp**.

Related Research

- *Worldwide Black Book Query Tool, Version 3, 2013* (IDC #244215, October 2013)
- *IDC Predictions 2013: Competing on the 3rd Platform* (IDC #238044, November 2012)

Synopsis

This IDC study offers IDC's broadest outlook for the overall technology marketplace. 2014 will be all about pitched battles all across the 3rd Platform: in mobile devices and platforms, in cloud services, in Big Data and social technologies, in the datacenters that will support the 3rd Platform, in a new generation of industry-transforming killer solutions, in rising customer groups (emerging markets, line-of-business executives, and cloud service providers and developers) driving growth and new requirements, and around the Internet of Things — the new frontier, stretching the reach and impact of the 3rd Platform.

According to IDC Chief Analyst Frank Gens, "After a year in which a very high-profile tech CEO lost his job, a major IT player went private, numerous vendors endured cash cow stagnation, and billion-dollar 3rd Platform acquisitions bets were made, it's clear: the 3rd Platform finally has the necessary attention from the IT industry's leaders. In 2014, we'll see every major player make big 'put up or shut up' investments to scale up cloud, mobile, and Big Data capabilities and fiercely battle for the hearts and minds of the developers that will create the solutions driving the next two decades of IT spending."

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1000 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For more than 48 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

Global Headquarters

5 Speen Street
Framingham, MA 01701
USA
508.872.8200
Twitter: @IDC
idc-insights-community.com
www.idc.com