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IBM USES CAMS FIREPOWER TO ACCELERATE IN INDIA

Vanitha Narayanan
Managing Director, IBM India



In a tough market like India, where a huge number of software services firms compete intensely, IBM is creating an uncontested market space using disruptive technologies such as Cloud, Analytics, Mobility and Social

IBM using CAMS for creating new markets

India has always been a value conscious market. Every major IT company worth its salt knows the difficulty of succeeding in this market with fancy keywords or market hype. If a vendor company shows the potential of a promising emerging technology, most Indian companies decide to wait till the hype dies out, the dust settles down, and the technology has some proven reference implementations.

In a tough market like India, where a huge number of software services firms compete intensely, how can software companies differentiate themselves? If you are a company like IBM, you create your own markets by creating an uncontested market space using disruptive technologies such as Cloud, Analytics, Mobility and Social (CAMS).

Take for instance, the issues faced by local municipal authorities in supplying and distributing water. Aging pipes, leakages and unauthorized use of water are common problems faced by every city. Most major cities in India suffer huge losses in water distribution with close to 40% of fresh water unaccounted for or wasted due to leakages.

Can technology come to rescue? IBM thinks it can, and has accordingly signed up with two water distribution authorities, one in Bangalore and one in Kerala. Bangalore Water Supply and Sewerage Board (BWSSB), today uses Big Data and predictive analytics technology from IBM to create systems for monitoring water distribution systems. In partnership with IBM, the BWSSB has built an operational dashboard, which serves as a “command center” for managing the city’s water supply networks, and hopes to minimize unaccounted water by detecting large changes in water flow, through real-time monitoring. Similarly, the Kerala Water Authority (KWA) is using IBM’s Analytics and Mobility solutions to analyze, monitor and manage water distribution in the city of Thiruvananthapuram. The data monitored by the IBM systems will help KWA in tracking water meters across the city on consumption, thereby reducing billing anomalies and improving revenue collection by over 10%.

Water distribution is not the only problem that IBM is trying to solve. In the micro-finance space which is a high volume but low value business, IBM is advising clients like Janalakshmi Financial Services to lower the cost of acquiring and servicing a customer so that the business does not become unprofitable. This includes using smartphones or tablets to service the customer and making use of analytics to get insights into the behavior of the unbanked masses, and help improve the credit-decisions process. Similarly, IBM is helping clients like Bharat Light and Power (BLP) to transform their businesses by using technology. BLP is using analytics to build accurate wind forecasting models and plans to use this analysis for improving its production and operational efficiencies.

The opportunities are huge as each customer example and success can create more markets for IBM in specific verticals. For example, once IBM signed a landmark transformational deal with Airtel in the telecom sector, it repeated its success with other clients such as Vodafone and Idea Cellular.

With age-old problems such as energy-deficit states, water scarcity, etc., there are innumerable opportunities in India for IBM to exploit. By showcasing an impressive list of clients who are using technology to transform their future, IBM has upped the game, and in the process, made Big Data and Analytics, Cloud, Mobile, and Social part of the mainstream. [IW](#)

► **Srikanth RP** is Executive Editor of InformationWeek India. srikanth.rp@ubm.com



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Managing Director	: Joji George
Printer & Publisher	: Anees Syed Ahmed
Executive Editor	: Srikanth RP
Assistant Editor	: Nivedan Prakash
Principal Correspondent	: Jasmine Kohli
Correspondents	: Subarna Talukder (Bengaluru) Rashi Varshney (Delhi) Prema Sharma (Delhi)
Copy Editor	: Shweta Nanda
DESIGN	
Art Director	: Deepjyoti Bhowmik
Senior Graphic Designer	: Shailesh Vaidya
Graphic Designer	: Shailesh Ghadigaonkar
MARKETING	
Deputy Marketing Manager	: Sanket Karode
ONLINE	
Deputy Manager—Online	: Nilesh Mungekar
Web Designer	: Nitin Lahare
OPERATIONS	
Head—Finance	: Yogesh Mudras
Head—Operations	: Max Fernandes
Management Services	: Jagruti Kudalkar
SALES	
Mumbai	
Manager—Sales	: Ranabir Das ranabir.das@ubm.com (M) +91 9820097606
	: Venkatesh Raman venkatesh.raman@ubm.com (M) +91 9987550472
Bengaluru	
Manager—Sales	: Roshan Sahadevan roshan.sahadevan@ubm.com (M) +91 9945723607
	: Satish K Kutty satish.kutty@ubm.com (M) +91 9845207810
Delhi	
Manager—Sales	: Rajeev Chauhan rajeev.chauhan@ubm.com (M) +91 98118 20301
	: Sanjay Khandelwal sanjay.khandelwal@ubm.com (M) +91 9811764515
Production	
Production Manager	: Prakash (Sanjay) Adsul
Circulation & Logistics	
Deputy Manager	: Bajrang Shinde
Subscriptions & Database	
Senior Manager Database	: Manoj Ambardekar manoj.ambardekar@ubm.com
Assistant Manager	: Deepanjali Chaurasia deepanjali.chaurasia@ubm.com

HEAD OFFICE

UBM India Pvt Ltd, Times Square, Unit No. 1 & 2,
B Wing, 5th Floor, Andheri-Kurla Road, Marol,
Andheri (E), Mumbai - 400 059, India.
Tel: 022 6172 7272; Fax: 022 6172 7273

INTERNATIONAL ASSOCIATE OFFICES

USA

Huson International Media

(West)

Tiffany DeBie, tiffany.debie@husonmedia.com
Tel: +1 408 879 6666, Fax: +1 408 879 6669

(East)

Dan Manioci, dan.manioci@husonmedia.com
Tel: +1 212 268 3344, Fax: +1 212 268 3355

EMEA

Huson International Media

Gerry Rhoades Brown, gerry.rhoadesbrown@husonmedia.com
Tel: +44 19325 64999, Fax: +44 19325 64998

JAPAN

Pacific Business (PBI)

Shigenori Nagatomo, nagatomo-pbi@gol.com
Tel: +81 3366 16138, Fax: +81 3366 16139

SOUTH KOREA

Young Media

Young Baek, ymedia@chol.com
Tel: +82 2227 34819; Fax: +82 2227 34866

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IBM uses CAMS firepower to accelerate in India

By creating an interesting mix of Cloud, Analytics, Mobile and Social services, IBM is creating a new market by inspiring Indian enterprises to transform their enterprises

BY SRIKANTH RP

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What can a water supply authority, an online matrimony portal and a retail mall have in common? All these enterprises are using IBM's technology in some way (Cloud, Analytics, Mobile and Social) to transform their respective organizations, and in a way pioneering the path for other organizations to follow.

A case in point is the Bangalore Water Supply and Sewerage Board (BWSSB), which is using Big Data and predictive analytics technology from IBM to create systems for monitoring water distribution systems. Bangalore's massive population growth (from 5.4 million in 2000 to over 10 million) has put tremendous strain on the city's water supply and distribution systems. In partnership with IBM, the BWSSB has built an operational dashboard, which serves as a "command center" for managing the city's water supply networks. Around 45% of the water supplied by the BWSSB goes unaccounted. Implementing this solution will help minimize unaccounted water by detecting large changes in water flow, through real-time monitoring.

Another interesting example is of Matrimony.com, which is looking to completely change the way traditional matchmaking is done. The online portal, which is in the business of matchmaking adds over 8,000 subscribers on a daily basis. Faced with an ever-increasing amount of data to sort, generate, analyze and match, Matrimony.com needed a reliable and scalable analytics platform to support several petabytes of data and deliver near-real-time responsiveness. Today, by capturing customer data from multiple channels including e-mails, SMSes, banner ads (across the website), telesales and from their retail center, the online firm uses IBM's technology to gauge insights and leverage it for driving personalized marketing campaigns to match potential partners faster and attract more subscribers.

Similarly, DLF has deployed an innovative mobile-phone based solution that channels data insights from customers visiting DLF Promenade, a high-end shopping mall serving



VANITHA NARAYANAN
MD IBM India

Our strategy revolves around closely connecting to the national agenda of the markets we operate in. We do this by leveraging high value technologies like cloud, data, mobile and social

VANITHA NARAYANAN
MD IBM India

the metropolitan New Delhi area. The technology performs real-time analytics to convert data gathered from shopper's movements in the mall to provide meaningful interactions for smartphone users. DLF is now using the solution to allow retailers in the mall to extend sales deals to shoppers via the app, based on footfall heat maps.

One look at the examples and you realize that IBM is slowly but cleverly building a transformational list of customer successes that are based on the pillars of its CAMS strategy.

"Our strategy globally and in India revolves around closely connecting to the national agenda of the markets we operate in. We do this by leveraging high value technologies like cloud, data, mobile and social to transform our clients, ecosystem and society," states Vanitha Narayanan, MD IBM India.

IBM is executing this strategy through advanced, integrated solutions based on capabilities, such as analytics for business and physical systems called System of Insights; cloud computing and business process systems called System of Records; and mobile and social business called System of Engagements.

CREATING NEW MARKETS

In many of the customer examples, IBM is trying to create a new market by giving its customers the capability to create new services and thereby, new opportunities to succeed. This is more like a consulting opportunity at play, but in a factory model.

"Whether 'smarter' means helping a bank to retain more customers through world-class mobile solutions, a hospital group to deliver highly individualized care coordinated with social services, a local government to anticipate and alleviate traffic congestion before it happens, or a retail chain to provide a seamless customer experience across multiple channels, we are developing and investing in a portfolio of replicable industry solutions to help clients achieve their goals and drive important outcomes for their customers," says Narayanan.

Combining domain expertise with emerging technologies, IBM has attacked unique problems with innovative solutions.

Take the power deficit problem, which has been an age-old issue for India. According to industry estimates, approximately 400 million people in India do not have access to electricity. From a human development index perspective, if the US consumes 30,000 units per person, India consumes 600 units per person. India also has a growing population and a natural resources problem, which makes India a perfect case for clean energy generation.

India's energy infrastructure is thus, highly strained, with an ever increasing demand for energy. To sustain its growth trajectory, India needs to meet its energy demands in an environmentally sustainable manner.

This calls for intelligent analysis of data for energy generated from various sources like wind, solar, biomass and hydro technologies.

Last year, a clean energy company called Bharat Light and Power (BLP) made a big move in this direction by forming a 10-year strategic engagement with IBM to drive business growth, enhance revenue and increase operational efficiency. This was a landmark agreement hailed by many analysts in the country. The deal was seen as transformational, and as an answer to India's increasing demand for energy.

As one of the largest clean energy generation companies in India, BLP aims to address the sustainable energy challenge by increasing its renewable energy generation capacity to one gigawatt (GW) over the next few years. This ambitious goal needs the support of technologies that can enable BLP to intelligently generate insights from huge amounts of data, and hence enhance BLP's power generation ability.

For a company like BLP, its challenges lie in execution and in improving the operational efficiencies of plants in remote locations. If a wind turbine breaks down, then it has to send its field staff to fix it, which is a major issue as most of its wind farms are located in remote regions. This is where insights delivered using the cloud will be extremely useful.

"Predictive analytics can help us in being proactive than being reactive. For example, if a gear box is likely to go down, we can predict this incident, months in advance and take appropriate action. Using analytics, we can also build accurate wind forecasting models and use this



Using IBM's mobile technology, we can provide the information analyzed on the cloud to our staff and alert them about any possible device breakdown

BALKI G IYER

Chief Development Officer, Bharat Light and Power

analysis for improving our production and overall operational efficiencies. The key is in being able to predict and improve power generation and bring down the percentage of device breakdowns through proactive monitoring. Overtime, we envisage this to be a shared platform, which can be offered as a service to other companies," states Balki G Iyer, Chief Development Officer, Bharat Light and Power (BLP).

BLP believes that its partnership with IBM will gather valuable insights from the data generated, which in turn will ensure that the firm has an integrated view of its operations and is equipped to take proactive measures.

"Using IBM's mobile technology, we will be able to provide all the information analyzed on the cloud platform, to our ground staff on their handsets and alert them well in advance. This will enable us to build smarter operations with higher efficiency and greater utilization. IBM will also help us in centrally monitoring and managing our existing and future generation plants as well as store and manage the data on the cloud," explains Iyer.

The opportunities are huge as each customer example and success can create more markets for IBM in specific verticals. For example, once IBM signed a landmark transformational deal with Airtel in the telecom sector, it repeated its success with other clients such as Vodafone and Idea Cellular.

The same strategy can be seen playing out even today. For example, once the business case for Bangalore Water Supply and Sewerage Board (BWSSB) was established and the potential of technology was seen, other government organizations also started deploying IBM's solutions. Just some months ago, IBM announced that Kerala Water Authority (KWA), Government of Kerala, India is using IBM's Analytics and Mobility solutions to analyze, monitor and manage water distribution in the city of Thiruvananthapuram.

With a population of more than 3.3 million, providing connections with equitable water supply to

210,000 households across divisions/subdivisions was a challenging task, due to aging pipes, leaking infrastructure and unauthorized use of water. There were huge losses in water distribution with close to 45% of fresh water unaccounted for or wasted due to leakages. Also, without systems in place to monitor and provide real-time visibility into water consumption, it was difficult for KWA to track the performance of water treatment

model and predict how changes to one system will affect others, decreasing the risks of change and speeding the return on investment.

A smart city throws up innumerable opportunities for IBM. A case in point is the Delhi - Mumbai Industrial Corridor (DMIC) project. The DMIC is one of India's most ambitious infrastructure programs. The project owners of DMIC are working with IBM to provide seamless digital

In the Indian context, there are a huge number of traditional problems for IBM to solve with disruptive technologies

facilities and the effectiveness of the water supply network.

KWA was also facing challenges in revenue collection as the billing system was unable to accurately track water consumption by consumers. The data monitored by the IBM systems will help KWA in tracking water meters across the city on consumption, thereby reducing billing anomalies and improving revenue collection by more than 10%. With the solutions, KWA aims to achieve 100 % success in equitable water supply with the ability to monitor and flag irregularities in water usage using sensors and intelligent meters.

In the Indian context, there are a huge number of traditional problems for IBM to solve with disruptive technologies.

THE SMART CITY OPPORTUNITY

While IBM has always chanted the smart cities mantra, it has received a fillip with the announcement of the new government to create 100 smart cities in India. Very simply, a smarter city is any urban area that exploits information to optimize the delivery of city services. A smart city will have the ability to collect and analyze real-time information on everything from transportation networks to hospitals to the electricity grid and can be used to

connectivity among townships, better management of clean water, energy, transportation, public safety, education, and healthcare. This allows the essential city services to be managed more effectively using smart devices, sensors and intelligent communications for better living conditions.

Similarly, the Bangalore International Airport has deployed IBM's Smart Airport Enabler to bring together a common view of its operations across multiple internal and external stakeholders, with an aim to provide passengers, partners and airport clients with efficient and best in-class services.

IBM is also engaged with the Lodha Group to build out a smart city in Palava. Envisioned as a city of opportunity and spanning over 4,000 acres, Palava will incorporate IBM's smarter cities technology using advanced, data driven systems to integrate information from all city operations into a single system to improve efficiency and deliver an enhanced quality of life for residents.

IBM has also worked with the Center for Railway Information System (CRIS) to implement a Crew Management System (for Indian Railways) to automate the day-to-day management of staffing on board its

trains. The CMS provides information about the crew at all times and facilitates the booking of crew on freight trains, passenger carrying trains as well as short movements within terminals and yards. The system uses the SMS technology to help managers determine the exact location of crew members. When there is a crew shortage, the system generates alerts that enable the supervisor to step in and take action. With direct data access over mobile phones, the system also provides greater transparency and visibility of information to the right person at the right time.

Similarly, the Delhi International Airport Limited (DIAL) has partnered with IBM India to establish a common-use infrastructure in New Delhi's Passenger Terminal Building 3 that automates its operations and improves customer satisfaction. It also gives the airport a competitive edge through quality service in the growing Indian aviation market by building a single, scalable unified network solution to integrate all communications across the passenger terminal and its associated service buildings and facilities.

"The recent launch of the IBM Client Center in Delhi is an indication of where we see the industry moving and how we are committed to serve our clients in the region with solutions that will help transform their industry. Programs like Smarter Cities Challenge, had the IBM team working with Chennai Municipality on recommendations to improve their revenue collection leveraging technology," states Narayanan.

The smart city opportunity includes reduction of traffic congestion and air pollution (Smart Transportation), enhancing surveillance systems to reduce crime rates (Smart Public Safety), sourcing and managing power more intelligently (Smart Grid) and improving quality, supply and access to water (Smart Water). IBM also has an Intelligent Operations Center (IOC) in India, which has been designed to help cities of all sizes by integrating city systems and applying intelligence to their city operations through one

central point of command.

THE FINANCIAL INCLUSION OPPORTUNITY

Under the new Narendra Modi government, financial inclusion is a key government policy imperative as 65% of India's population lacks access to formal banking services in India. The Government is therefore focused on utilizing the potential of IT to deliver affordable financial inclusion and

plans and vision to deliver affordable financial services to individuals and enterprises across India. IBM will use advanced analytics capabilities that integrate JFS's geo-spatial insights with credit-decisions process to help improve distribution and collection models. JFS will also use a 'Biometric Dedupe' solution from IBM Research to enhance the speed of de-duplication of fingerprints while onboarding new customers.

The recent announcement by the government to renew focus on financial inclusion in India presents a huge opportunity for IBM to use its expertise to align to the national agenda

leapfrogging growth.

Similarly, the Indian financial services industry is at a turning point with new financial institutions coming in the next few years. Future growth and market leadership hinges on differentiated products, services, and most importantly, innovative operating model. Technology will be vital for transformation and capability building for this segment and data analytics/ cloud/ mobile and social technologies will help catalyze the journey.

"Scaling of financial services, enabling financial inclusion, is again a huge segment of the market we are focused on. Whether it is an innovation on your credit score, or innovation on validating the clients, we are working towards enabling financial inclusion in the country. The recent announcement by the government - Jan Dhan Yojana to renew focus on financial inclusion in India presents a huge opportunity for IBM to use its expertise to align to the national agenda. Our recent tie-up with JFS is an example of that," says Narayanan.

The Janalakshmi Financial Services (JFS) deal which Narayanan refers to is a six years agreement, wherein IBM will provide business consulting expertise combined with its Big Data and analytics, cloud and mobile capabilities helping JFS expand on its

JFS, in fact is the first microfinance firm to use Big Data to make sense of urban banking and get insights into the behavior of the unbanked masses.

Through its research technology, savings system, payments technology and door to door customer reach, Janalakshmi has records of 2 million customers in India. "We have got both disparate and structured data and also the expertise to extract and analyze it. But here we are going several step upwards in terms of managing the data, getting into a more analytic approach towards using the information. With Big Data one can actually coalesce and tell the customer what is the customer's transactional behavior. So if we are privy to a customer's transactional behavior then we can design the loan that we can offer to him or her," says Radhakrishnan V S, Janalakshmi's MD and CEO.

Getting the urban unbanked into the mood of regular savings so that it strengthens his capacity to bag a loan is what Janalakshmi is aiming at this point. Big Data will help the firm provide systematic disciplined mechanism of savings or any another financial solutions.

"Microfinance is a high volume and low value business. Our customers are not going to keep more than ₹1000-2000 in bank account. How

TECHNOLOGY	CLIENTS
Data Analytics	<p>DLF</p> <p>DLF has deployed an innovative mobile-phone based solution that channels data insights from customers visiting DLF Promenade, a high-end shopping mall serving the metropolitan New Delhi area. The technology performs real-time analytics to convert data gathered from shopper's movements in the mall to provide meaningful interactions for smartphone users. DLF is now using the solution to allow retailers in the mall to extend sales deals to shoppers via the app, based on footfall heat maps.</p>
	<p>Bangalore Water Supply and Sewerage Board (BWSSB)</p> <p>BWSSB, is using IBM analytics technology to create systems for monitoring and managing increasingly complex water distribution systems in the city. IBM is working closely with BWSSB to create an operational dashboard, based on the IBM Intelligent Operations Center (IOC), which serves as a "command center" for monitoring, administering and managing the city's water supply networks.</p>
	<p>Matrimony.com</p> <p>The online match making portal will use IBM's analytics and big data solutions to better serve its customers and customize the search results for each individual using data analytics tools.</p>
	<p>Kerala Water Authority (KWA)</p> <p>KWA is using IBM Analytics and Mobility solutions to analyze, monitor and manage water distribution in the city of Thiruvananthapuram. With the solutions, KWA aims to achieve 100% success in equitable water supply with the ability to monitor and flag irregularities in water usage, using sensors and intelligent meters.</p>
Cloud	<p>Bharat Light and Power (BLP)</p> <p>BLP in a 10-year SO deal is using IBM's SoftLayer cloud capabilities for increasing its power generation capacity. IBM will manage and effectively use the vast amount of data generated by the power generation sources, which will ensure that BLP has an integrated view of its operations and is equipped to take proactive measures. Using IBM's mobile technology, the company will be able to provide all the information, analyzed on the cloud platform, to its ground staff on their handsets and alert them well in advance. This will enable BLP to build smarter operations with higher efficiency and greater utilization.</p>
	<p>Mankind Pharma</p> <p>The pharmaceutical company in India has selected SoftLayer's cloud platform to support its business growth and expansion. SoftLayer, an IBM company, will enable Mankind Pharma to significantly improve the performance of its business critical applications and scale the use of these applications across multiple locations.</p>
	<p>Lava International</p> <p>This leading Indian mobile handset company, has selected IBM SmartCloud Virtualized Server Recovery (VSR) services, a cloud-based disaster recovery solution, to ensure continuous business operations, manage costs and improve overall resiliency. Lava now has a backup option to support its more than 2000 internal and external users, including top retailers and distributors in India. Lava has signed a ten-year deal to avail cloud services out of IBM's Bangalore data center. IBM will also perform 24/7 monitoring and management through automation of the hosted infrastructure.</p>
Mobile and Social	<p>ING Vysya Bank</p> <p>The bank has adopted IBM MobileFirst solutions for the development of its ING Vysya Mobile, a cost effective, secure and scalable mobile banking app. The app will effectively enhance the bank's reach into untapped markets, such as remote cities and rural areas. Additionally, the app will improve engagement with the bank's customers through new personalized features that provide greater availability and convenience to its services.</p>
	<p>Polaris Financial Technology</p> <p>The firm has built Octopus, a functional Enterprise Social Network, that aligns enterprise social with common enterprise business needs to provide a holistic workplace. Polaris adopted IBM Connections as its Social OS and built Octopus on top of it.</p>
	<p>Narayana Health</p> <p>One of the biggest medical institutions in the country has partnered with IBM, for implementing an efficient e-mail and collaboration tool that will keep all the employees, associated professionals and other stakeholders completely connected. The hospital now has access to business class e-mail, a collaborative calendar and contact management that can be virtually accessed anywhere in a security rich cloud environment, lowering operational costs by at least 15%, while improving reliability and manageability.</p>

do you ensure that your technology cost is such that it does not become unprofitable?" says Radhakrishnan. Big Data and Analytics, and mobility will bring down the operational cost of JFS largely. "In the mobility space for example our frontline people today carry netbooks which costs about ₹30,000 – 40,000 but with the partnership with IBM our frontline people can actually carry phablets. So we will be able to reduce our unit cost significantly. Also, we can push in a lot of other information about the customer based on these devices," explains Santanu Mukherjee, Senior VP, JFS.

Other significant wins in the financial services space include Central Bank of India, where the bank is leveraging IBM analytics to radically transform its financial management processes, which includes activities ranging from budgeting to forecasting to liquidity management. The Central Bank of India is now one of the few public sector banks to achieve complete automation of corporate performance management activity on a bottoms-up approach.

Similarly, IndusInd Bank is using IBM's help to deepen customer relationships by delivering personalized location-based recommendations and offers in real time. This is a unique engagement with the bank, where IBM Research India has developed a new technology that connects people with contextual information. Another example is that of ING Vysya Bank, which has selected IBM for their MobileFirst solutions for the development of ING Vysya Mobile — a cost effective and scalable mobile banking app. The new app will effectively enhance the bank's reach

into untapped markets, such as remote cities and rural areas. Additionally, the app will improve engagement with the bank's customers through new personalized features that provide greater availability and convenience to its services.

PIONEERING THE NEXT ERA OF COMPUTING

IBM is investing \$1 billion in Watson, including \$100 million to enable

programmed; rather, they learn, from the vast quantities of information they ingest, from their own experiences, and from their interactions with people. The first development unit for Watson was announced in India. This will assist a brand's customer service agents, or sit directly in the hands of consumers through mobile devices, cloud-delivered services and online chat session. The targeted industries are telecom, healthcare and banking.

From a portfolio point of view, IBM has one of the broadest suite of services. With a list of impressive clients, IBM is making sure that it participates in the growth of Indian companies

an ecosystem of entrepreneurs and partners, establishing the IBM Watson Group, and dedicating 2,000 professionals. Watson represents a first step into cognitive systems, a new era of computing. It uses programmatic computing plus the combination of three additional capabilities that make Watson truly unique: natural language processing, hypothesis generation and evaluation, and dynamic learning.

While none of these capabilities is unique to Watson by itself, the combination delivers the power to move beyond programmatic computing and unlock the world of global, unstructured data.

With Watson technology, organizations can move from a keyword-based search that provides a list of locations to an intuitive, conversational means of discovering a set of confidence-ranked responses. These new systems are not

From a portfolio point of view, IBM has one of the broadest suite of services. With a list of impressive reference clients in prominent but growing sectors, IBM is making sure that it participates in the growth of Indian companies.

Says Narayanan, "Whether you look at smarter cities or you look at the growth of small enterprises in India, leveraging disruptive technologies like Big Data, Analytics, Social, Mobile and Security, we are helping clients, government and partners accelerate in this moment of dynamic change in the market. We believe, this is a serendipitous moment for IBM India to deliver and derive the greater results and value for our clients across industries."

In India, there are innumerable opportunities for IBM to exploit. There are age-old problems such as energy deficit states, water scarcity and then there are transformational opportunities. By showcasing an impressive list of clients who are using technology to transform their future, IBM has upped the game, and in the process, made Big Data and Analytics, Cloud, Mobile, and Social part of the mainstream. [iW](#)



We have got both disparate and structured data and also the expertise to analyze it. But we are going several step upwards in terms of managing the data

RADHAKRISHNAN V S

MD and CEO, Janalakshmi Financial Services

► **Srikanth RP**
srikanth.rp@ubm.com

How moving to the cloud increased staff efficiency for Eveready Industries

By moving its e-mail and collaboration solution to the cloud, Eveready has empowered its employees to collaborate more effectively

BY RASHI VARSHNEY

The brand Eveready Industries India, is a known and iconic brand in India, and is especially known for its battery range of products. Eveready Industries' current portfolio includes batteries, torches, rechargeable torches, CFL, LED, electrical appliances, mobile chargers etc. The group is an undisputed market leader commanding over 50% of the market share in India.

Operating in a large segment of product segments, the company has seen consistent growth. However, maintaining a diverse portfolio and growth trajectory was a difficult task, and it became challenging for the company to communicate with its large workforce and take proactive decisions.

To sustain its competitive edge in the market, the firm wanted its IT infrastructure to move at the speed that the business demanded. The firm wanted to find a way to improve its business agility, while keeping overall costs down. It also wanted to find a way to address technology obsolescence.

"During our hardware refresh cycle, we had to take a call whether we should procure new hardware or look for other models. Since technology obsolescence is rapid nowadays, it made sense for us to look at the cloud. We decided to move our mail and collaboration piece to the cloud by choosing a solution from IBM," says Arup Choudhury, CIO, Eveready Industries India.

Eveready decided to implement iNotes (formerly IBM Lotus iNotes) as its cloud e-mail and collaboration solution. iNotes is a full-featured web-based version of the IBM Notes client, which provides browser access to IBM Notes e-mail, calendar and contacts. The software enables social capabilities that provide easier access to expertise,

information and business applications, leading to increased productivity and better business results.

CLOUD BOOSTS EMPLOYEE PRODUCTIVITY

Today, the solution has helped the company implement an efficient e-mail and collaboration solution that would keep all employees completely connected, while keeping IT expenditure to the minimum. E-mails can be accessed anywhere in a secure environment. Management costs have also come down significantly with improved reliability. Employees can now collaborate more quickly and share files with their counterparts through the cloud.

Basically, the Eveready's staff of 550 people now has access to business e-mail, a collaborative calendar and contact management that can be virtually accessed anywhere in a secure environment. This has allowed the company's employees to contribute easily across projects, create communities quickly and effortlessly and work as a cohesive team with better communication.

Thanks to the cloud, the firm does not have to worry about technology obsolescence. Elaborating further on the benefits of the cloud, Choudhury says, "We are seeing noteworthy benefits among our workforce. The travelling has been drastically reduced as today communication is extremely smooth and one can reach any corner of the company anytime. Further, idea exchange among the teams has improved considerably now."

Eveready's journey to the cloud is not restricted to mail and collaboration. The firm also uses SaaS solutions for ERP, training and testing. "Our mail and



"With the cloud, travelling has drastically reduced and idea exchange among the teams has improved considerably"

Arup Choudhury, CIO,
Eveready Industries India

collaboration functions are completely on the cloud. No consultants are required for ERP version upgrades. Our IT team uses the SaaS tool to perform the activity themselves. The testing tool automatically records the tests thus creating the user manuals automatically," says an excited Choudhury.

In summary, for Eveready, the cloud has not only helped to manage attrition, but has also succeeded in reducing CAPEX. Eveready estimates that it has reduced ₹ 1.5 crore in hardware costs) and in rolling out faster ERP upgrades (savings of ₹ 1 crore estimated). **iw**

How BLP is using the cloud to transform India's energy landscape

In a power-deficit country like India, BLP's deal with IBM is a trendsetter and can change the way power generation companies operate

BY SRIKANTH RP

[tweet@sikrp](#)

In November 2013, Bharat Light and Power (BLP), a renewable energy producer in India, formed a 10-year strategic engagement with IBM to drive business growth and increase operational efficiency. The deal was seen as transformational, and an answer to India's increasing demand for energy.

To understand why the deal was viewed as a trendsetter, it is important to understand the context. India is a power deficit country, and according to industry estimates, approximately 400 million people in India do not have access to electricity. From a human development index perspective, if the US consumes 30,000 units per person, India consumes 600 units per person.

India's energy infrastructure is thus, highly strained. To sustain its growth trajectory, India needs to meet its energy demands in an environmentally sustainable manner. This calls for intelligent analysis of data for energy generated from various sources like wind, solar, biomass and hydro technologies.

BLP aims to address the sustainable energy challenge by increasing its renewable energy generation capacity to 1 gigawatt (GW) over the next few years. This ambitious goal needs the support of technologies that can enable BLP intelligently generate insights from huge amounts of data, and hence enhance BLP's power generation ability.

For a company like BLP, its challenges lie in execution and in improving the operational efficiencies of plants in remote locations. If a wind turbine breaks down, then it has to send its field staff to fix it, which is a major issue as most of its wind farms are located in remote regions. This is where insights delivered using the cloud will be extremely useful.

BLP believes that its partnership

with IBM will it gather valuable insights from the data generated, which in turn will ensure that the firm has an integrated view of its operations and is equipped to take proactive measures.

"Using IBM's mobile technology, we will be able to provide all the information, analyzed on the cloud platform, to our ground staff on their handsets and alert them well in advance. This will enable us to build smarter operations with higher efficiency. IBM will also help us in centrally monitoring and managing BLP's existing and future generation plants as well as store and manage the data on the cloud," explains Balki G Iyer, Chief Development Officer, BLP.

CLOUD POWER BOOSTS EFFICIENCY

By leveraging the cloud, BLP has improved its situational awareness. Iyer says that as most of its technology assets are on the cloud, it can use the reach and power of the cloud for remote monitoring of its assets and perform instant monitoring. Additionally, by analyzing the diverse and huge amount of data from its different sources, BLP can use predictive analytics to improve its operations.

"Predictive analytics can help us in being proactive than being reactive. For example, if a gear box is likely to go down, we can predict this incident, months in advance and take appropriate action. Using analytics, we can also build accurate wind forecasting models and use this analysis for improving our production and operational efficiencies. The key is in being able to predict and improve power generation and bring down the percentage of device breakdowns. Overtime, we envisage this to be a shared platform, which can be offered as a service to other companies,"



"Our aim is to be one of the smartest operators in the power generation business, and technologies like cloud computing are helping us in delivering transformational benefits for enterprises"

Balki G Iyer, Chief Development Officer, Bharat Light and Power

states Iyer.

He believes that once processes are standardized, then best practices can be offered as a service to every power generation company. Today, all BLP assets are integrated via the cloud, and the combined insights help it in gaining competitive advantage. "Our aim is to be one of the smartest operators in the power generation business, and technologies like cloud computing are helping us in delivering transformational benefits for enterprises," explains Iyer. [IW](#)

► **Srikanth RP**
srikanth.rp@ubm.com

BPCL ups efficiency drive with VMware

Virtualization is powering some of the most business critical applications at BPCL

BY SRIKANTH RP

tweet@sikrp

It was one of the first companies to have an IT department way back in 1964. BPCL is also the first PSU Oil company in India to have implemented SAP R/3 at all locations across India. With SAP as the IT backbone, Bharat Petroleum took advantage of the Internet-based capabilities along the entire value chain with a CRM solution. A large data warehouse project has also been implemented, which facilitates access to real-time accurate information on key performance indicators at all Bharat Petroleum locations. This enables the management to take strategic and business decisions, thus ensuring value-added services, better customer satisfaction and enhanced shareholder value.

The PSU is also one of the first companies to take a decision to implement virtualization — a pioneering move way back in 2002 when virtualization as a concept was in its infancy. BPCL took this strategic

decision of moving away from proprietary hardware (UNIX) to an open platform on Intel-based commodity hardware. Simultaneously, the firm also decided to adopt virtualization to create a highly available, scalable and reliable infrastructure backbone to support business critical applications.

The virtualization journey was a

Today, BPCL runs over 100+ virtual machines on 5 ESXi servers at its corporate data center, Sewree and more than 90 virtual machines on 6 ESXi servers at its integrated data center. The firm has achieved a good consolidation ratio of 20:1.

“The server virtualization drive helped in improving server utilization

With virtualization, BPCL managed to reduce the recurring cost for additional servers for items such as annual maintenance, power consumption, administration and manpower

phased one where the firm started with a non-SAP environment, then went ahead with a peripheral SAP landscape. Today, BPCL runs over 250 VMs across its data centers (Corporate Data Center, Sewree) and DR (Integrated DC, Greater Noida). BPCL has already enabled its BCP/DR strategy on VMware SRM.

by a significant percentage, reduced annual hardware expenditures, accelerated application testing and deployment from months to weeks, and more importantly, improved time-to-launch in-house applications,” says J R Akut, GM (IS -Technology), BPCL.

In the process of consolidation and virtualization, BPCL managed to reduce the recurring cost for additional servers for items such as annual maintenance, power consumption, administration and manpower. As a result, BPCL has a robust foundation to create a scalable infrastructure to support its growing business.

VIRTUALIZATION POWERS BUSINESS CRITICAL APPLICATIONS

At the heart of BPCL's IT infrastructure lie two critical applications. The first one is the 'LPG Next Application'. The application is hosted on an exclusive website www.ebharatgas.com, which provides the convenience of booking Bharatgas online along with information about the product for the consumers. The website also provides a feedback system, enabling the consumers to directly speak to the organization.



BPCL Team (L-R): Ajoy Sonowal, Manager (System Administration); L B Sharma, Sr. Manager (System Administration); S K Suri, Chief Manager (Systems Administration); and Gaurav Srivastava, Dy. Manager (System Administration)



S K Suri, Chief Manager (Systems Administration) and J R Akut, GM (IS Technology), BPCL

This is one of the business critical applications running on the VMware vSphere platform, which caters to more than 3500+ distributors and 40 million+ customers.

The second critical application is SAP ERP, which BPCL uses to run most of its operations. Users located across more than 350 locations employ these applications in their daily work. As a corporate strategy, BPCL has also taken a step towards virtualizing its T&D environment on a SAP/VMware/RHEL/x86 stack. BPCL is also looking to extend this platform for core production modules like ECC, SCM, CRM. This SAP deployment at BPCL is one of the largest deployments in India with over 3,000 concurrent SAP users.

In a strategic decision, the company has moved from RISC UNIX servers to Intel-based environments where 90% of the environment will be completely virtualized in a year. Using VMware's technology, BPCL has been able to achieve high availability for its applications, consolidate its software licenses and optimize its network architecture with enhanced security.


JOURNEY TO THE SOFTWARE DEFINED DATACENTER

Having built a robust foundation for virtualization with sufficient skills internally and experience on virtualization, the firm is now looking

forward to adopt a software-defined data center model. As part of the strategy, BPCL is looking to virtualize most components of SAP production in the next few months.

For disaster recovery, VMware Site Recovery Manager with Storage array based replication is operational for non-SAP applications. The firm is now planning to extend VMware Site Recovery Manager for SAP Application servers as part of its BCP strategy. BPCL is also planning for additional compute capacity to transform remaining physical servers to vSphere platform.

As part of BPCL's Software Defined Data Center journey, BPCL is also appraising software-defined networks to enhance security with micro segmentation to bring security closure to the source (VMs) instead of the perimeter firewall, and reduce lot of east west traffic which is created due to higher consolidation ratio and virtualization footprint.

The firm is also looking at automating the operations management using VMware vCenter operations manager, building a fully automated BCP / DR strategy by using tools like SRM for SAP and non-SAP environment, while simultaneously boosting networking and security virtualization using vCloud Network and security. 

The server virtualization drive helped in improving server utilization by a significant percentage, reduced annual hardware expenditures, accelerated application testing and deployment from months to weeks, and more importantly, improved time-to-launch in-house applications

— J R Akut
GM (IS -Technology), BPCL

▶ **Srikanth RP**
srikanth.rp@ubm.com

Cnetric plugs into the cloud to help customers jumpstart on e-commerce

By leveraging cloud, Cnetric is able to provide a comprehensive e-commerce solution that has the capability to support dynamic online business models at a cost-optimized rate

BY SUBARNA TALUKDER

Indian e-commerce market is growing at a staggering pace. In fact, according to a report by Gartner, India is one of the fastest-growing e-commerce markets in the Asia-Pacific region, which is likely to cross \$6 billion in revenues in 2015. In order to cash in on this market boom, a number of companies are exploring ways to leverage e-commerce platform with an aim to drive sales and improve customer interaction.

An IT solutions provider, Cnetric is eyeing huge opportunity in this space and is helping businesses and brick and mortar retailers to leverage an e-commerce platform to expand their market reach. Cnetric helps these companies get on the cloud by building their applications and providing them cloud services.

LEVERAGING THE POWER OF CLOUD TO TRANSFORM E-COMMERCE

In order to improve the client experience, Cnetric realized it needed to provide a comprehensive e-commerce solution that had the capability to support dynamic online business models at a cost-optimized rate. This business need prompted Cnetric to move on the cloud last year, with a goal to empower the customers who were lacking in-house IT infrastructure by providing a software-on-cloud based architecture. Further, by providing a cloud-based service to its consumers, Cnetric could provide an OPEX-based service, which is an attractive proposition to the mid-market segment.

"Uptime and less investment on hardware are some of the drivers for moving to the cloud model. In addition,



mid-market always prefers an OPEX-based model to get service," says Manohar Durai, President and CTO of Cnetric.

As Cnetric does not have its own data center, it wanted to choose a provider which owned a data center in India. In accordance with its business need, the company chose IBM Softlayer to provide platform-as-a-service for its customers.

"Customers are very particular about data centers being in their own country. IBM has its data centers in India and sub-continent, which is preferred by our Indian customers," asserts Durai. Elaborating further on the decision to go with IBM solution, Durai says, "IBM is also better in terms of hardware specifications on which it supports cloud. IBM cloud is more secure and comes with an end-to-end solution, which is advantageous for customers."

After zeroing in on the IBM solution, Cnetric ventured on its cloud journey by building a team that was aware about virtualization and knew how to

work around it. Today, Cnetric's CRM, ERP and accounting system have been successfully placed on the cloud. The key benefit of moving to the cloud is that Cnetric has been able to reduce the cost of IT.

"Most of our core applications are leveraging the cloud infrastructure. Even our tech-support and customer service applications are on the cloud. This has reduced our CAPEX as we do not have to invest on software and hardware separately to run our business," informs Durai.

In tangible terms, Cnetric has been able to reduce its cost of bandwidth by 60-70% and cost of operation by 50%. Further, the company has registered 50% reduction in the cost of investment.

Going ahead, Cnetric plans to move more of its applications on the cloud. Point-of-sale and analytics are some of the operations that are top on its list for cloud migration. [IW](#)

▶ **Subarna Talukder**
subarna.talukder@ubm.com

Your Next Cloud Move

You've realized the easy gains from SaaS. Now it's time to dig into PaaS, performance, and more

JOE MASTERS EMISON

Industry pundits, and some IT practitioners, have spent years chattering about cloud, tossing around the same tired complaints. Meanwhile, cloud providers have their own narratives, endlessly retweeted and reblogged, about how their services will make your life sunshine and unicorns.

We're not going to waste your time on either. Let's assume you get cloud's reality and trade-offs and can parse marketecture on your own. Instead, we're going to see what our latest State of Cloud Computing Survey reveals about how cloud adoption has evolved since 2012.

One thing that's clear: Cloud is a growth industry. In our 2012 State of Cloud Computing Survey, 31% of 419 respondents, all from companies with 50 or more employees, were using cloud services, with 27% on the fence and another 27% with no plans. Among the 380 respondents to our 2014 survey, just 22% have no cloud plans and 45% report cloud use. The

laggard categories — those on the fence or with no plans — have gone from a majority (54%) in 2012 to a minority (44%). Our new Cloud ROI Survey also shows steady growth in cloud use.

Sixty-four percent use software-as-a-service, up from 57% in February 2013. SaaS is mature and the undisputed top way respondents consume cloud. Today, the really exciting action revolves around platform-as-a-service (PaaS) and infrastructure-as-a-service (IaaS) — that is, essentially limitless amounts of hardware available on demand via API and paid for in small units of time.

WHY PAAS WILL BREAK YOUR HEART

The percentage of respondent organizations using PaaS has dropped from 46% to 43% to 39% over the past 32 months. However, the percentage of respondents planning to use PaaS is increasing, rising from 30% to 37% year over year.

What this means is that the promise of PaaS is out of alignment with the reality. What they need is so much larger and more diverse and messy than what PaaS actually delivers, accounting for the seven-point decline since 2012.

Yet, IT still really needs something that does what PaaS is supposed to do, so hopers keep hoping, and PaaS vendors keep getting new buyers. To add to the confusion, the range of services offered as "PaaS" is incredibly disparate; it's difficult to believe that any IT team would be deciding among Force.com (proprietary platform connected to Salesforce.com), Cloud Foundry (on-premises software), and Microsoft Azure (hosted platform).

PaaS is usually described (and implemented) as an abstraction layer that sits on top of IaaS, letting developers simply write code and ignore the vast majority of the system and network admin work that is still necessary with IaaS.

There are two problems with this

Feature

concept. First, few current offerings provide IT with the control and flexibility it needs. That likely accounts for people abandoning hosted PaaS once they get a taste. Second, deploying code and launching servers is only one part of what enterprises actually need when they go to enable IaaS (including private clouds) to run SaaS.

Gee Rittenhouse, VP of Cisco's Cloud and Virtualization Group, points out that networking is a huge part of operating a private cloud, and software-defined networking, or some other abstraction layer, is essential to operations such as having web applications talk to databases, without manually writing and monitoring lots of rules. Sadly, PaaS isn't that layer.

It's not that vendors aren't trying to meet customer needs. Apprenda and Microsoft Azure have added Java support. Azure now has "VM Agents" that run on both Windows and Linux. While they're not much different from other options on Linux, they substantially improve configuration management on Windows. The Cloud Foundry Foundation has exploded in popularity, with ActiveState, CenturyLink, EMC, Hewlett-Packard, IBM, Pivotal, Rackspace, SAP, and

VMware as key sponsors. Mesosphere is collaborating with Google Compute Engine, RightScale announced VMware support, and Amazon Web Services continues to release enormous numbers of new features and services to drive easier management (and presumably increase lock-in). Those

is soaring.

Docker is an open source project that seems to help with a pretty broad range of cloud pain points, says Darren Shepherd, a senior principal engineer at Citrix. It makes configuration management simpler, helps alleviate lock-in with IaaS providers, lets us get close to

Interest in Docker is soaring — essentially every major IaaS and PaaS provider has a Docker strategy today

are just few announcements from the past year.

But the public PaaS market is so large and complex that there really isn't anything approaching a market leader to drive consensus, certainly not in the way Amazon Web Services dominates public IaaS. And so we will continue to see more announcements and more innovation and more hope that some silver-bullet-y solution will arise so that we don't have to keep slogging through all the crap we have to deal with today.

And this is why interest in Docker

bare-metal performance by bypassing virtualization, and should ease orchestration. And that is why our survey, even with its large enterprise focus, shows significant interest in Docker, and Linux containers in general. Only 5% are using it in production or development, but 24% are testing or considering it. Essentially every major IaaS and PaaS provider has a Docker strategy today, including Microsoft, which supports running Docker (a Linux-only technology!) on Azure VMs.

With Docker, you still have to manage your containers, and you still have to monitor availability, cost, performance, and security, notes Joe Kinsella, founder and CTO of cloud analytics platform CloudHealth Technologies.

Oh, and Docker isn't secure for multitenant environments.

INFRASTRUCTURE-AS-A-SERVICE EQUILIBRIUM

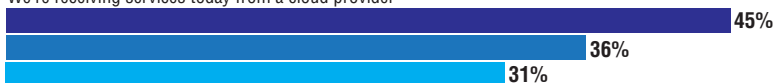
OK, back to IaaS. We are at a point of maturation with respect to core features and pricing — that is, multiple IaaS vendors have roughly the same core features (in AWS terms, that would be EC2, EBS, and S3), and the prices are roughly in the same ballpark. Witness pledges like Microsoft's to match Amazon's pricing. Also, IT is getting better at replacing a cloud vendor with little impact on the business; 73% of companies that fired

Cloud computing plans

What are your organization's plans for cloud computing?

■ 2014 ■ 2013 ■ 2012

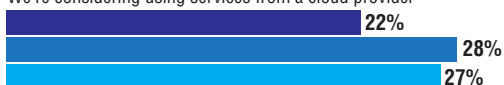
We're receiving services today from a cloud provider



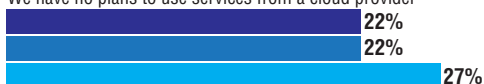
We're planning to use services from a cloud provider within the next 12 months



We're considering using services from a cloud provider



We have no plans to use services from a cloud provider



Data: InformationWeek State of Cloud Computing Survey of 380 business technology professionals at organizations with 50 or more employees in August 2014, 419 in February 2013, and 496 in December 2011

a provider saw slight or no impact, compared with 67% a year ago. The security landscape also seems to be fairly stable; only concerns about leak of customer information in our post-Target-breach world show significant increases, and our survey finds that cloud vendors are being seen as more dependable.

So, in this moment of relative calm for IaaS, what is the next battleground? Performance. Our survey shows this holding steady as a top concern about cloud use, with 32% of companies citing it. But for IaaS providers to remain competitive, they must upgrade hardware on a regular basis, as performance expectations will rise.

For example, Microsoft recommends running SQL Server on Azure VMs only for Tier 2 and Tier 3 workloads. This is largely because Microsoft hasn't had many customers ready to run their Tier 1 loads in the cloud, says Mark Russinovich, technical fellow with Azure. However, that's changed recently, and Russinovich says the company is poised to run scale-up, very throughput-intensive SQL Server deployments in Azure. Running such workloads will require that Microsoft update processors and improve I/O performance to catch up with Amazon and Google, both of which support Tier 1 database loads in their clouds.

In the wake of this spring's IaaS

price war, Adrian Cockcroft, Netflix's first cloud architect and now a Battery Ventures technology fellow, compiled some recommendations for IT executives. Cockcroft points out that Amazon and Google are running on faster processors for the most widely used instance types, and

they do provide significantly better performance. However, it's likely that the rise of Linux containers and Docker will make these "bare metal" offerings as inexpensive as plain-vanilla virtual machines — at least for Linux — because you can run multiple containers without having to use

Hybrid strategy is increasingly looking like more of a short-term compromise measure than an ideal way of deploying applications in the cloud

that Microsoft and IBM SoftLayer are running on older, slower processors. Microsoft has, however, been launching newer (higher-priced) instance types with newer processors, and any IaaS vendor that plans to compete with Amazon is going to have to spend significant money rolling out faster processors in the next 12 months.

One wildcard in the IaaS performance race is bare metal — that is, servers allocated by API without any kind of virtualization. Both IBM SoftLayer and Rackspace now have bare-metal cloud offerings, although SoftLayer's can take up to four hours to launch a server, far more than the industry norm of about five minutes. These offerings are more expensive than baseline virtual servers, but

virtualization.

In general, please be skeptical of IaaS price/performance claims. Vendors tend to dodge objective benchmarking, and they instead opt for "benchmarking," where the books can be cooked in shameless ways. One of the most common tactics is to compare their latest-and-greatest to Amazon's older products and ignore newer releases. At the end of 2013, we ran our own benchmarks across major IaaS providers. You can do it, too. It's really the only way to evaluate provider performance.

So much press around public cloud has been feature- and security-focused that issues around performance have gone largely unreported. Time for that to change.

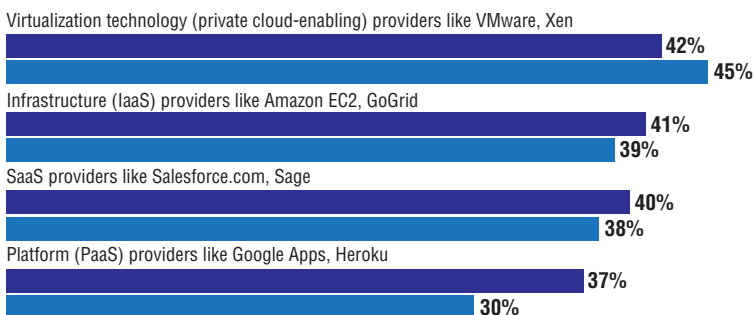
HYBRID: HOT OR NOT?

Any talk of PaaS and IaaS will eventually run to hybrid clouds, which combine public and private cloud resources. Hybrid may be the current vendor and media darling, but the hybrid strategy is increasingly looking like more of a short-term compromise measure than an ideal way of deploying applications in the cloud. This reality is driven home by another trend in the past year: Microsoft and IBM SoftLayer have announced their own versions of AWS's Direct Connect to enable tighter, lower-latency connections between your own data center and the hardware underneath their

Planned cloud provider use

Which of the following types of providers is your organization most likely to begin using within the next 12 months?

■ 2014 ■ 2013



Data: InformationWeek State of Cloud Computing Survey of 212 business technology professionals at organizations using or planning to use cloud services with 50 or more employees in August 2014 and 209 in February 2013

respective public clouds.

The main reasons IT needs such low-latency connections relate to legacy application architectures — think a relational database that needs to run on bare metal to handle write load. Applications written to modern cloud architecture specifications easily handle higher latencies, meaning the usefulness of these hybrid enablers diminishes as legacy apps are retired.

Now, legacy systems are remarkably resilient, and some regulated industries just don't have the approval to go full public-cloud yet, so we'll continue to see hybrid deployments. But no expert I spoke with believes that hybrid will be the default, desired deployment in the future. So before you jump in, think seriously: Do you want an expensive stopgap? Commit long term to a true hybrid environment, or keep public and private separate.

DEVOPS AND CLOUD

Early SaaS adoption was driven by line-of-business leaders seeking to break free from horrendous enterprise applications. Developers are providing that same energy today to IaaS. The rise of the cloud directly correlates with the rise of the developer's power. Many vendors have not yet learned this lesson, and many IT organizations have also failed to understand this relationship — both at their own peril.

Dev teams are hungry to adopt because cloud has a profound impact on their lives. Instead of having to rely on a sysadmin supply chain to allocate resources, developers can spin up what they need, saving months on the front end. But this is just scratching the surface of what IaaS can do.

Enterprises on average spend three months building an application, says Sinclair Schuller, CEO of enterprise PaaS provider Apprenda. That includes four to six weeks of reinventing the wheel with respect to things like authentication, caching, and security. They then take another three months to deploy, coordinating with various

infrastructure, network, and admin teams to get required hardware, hypervisor, storage, and databases set up properly.

If the enterprise had a proper platform that provided standardized support services and tools that could deploy the application from

"Hey, can I get a credit card to charge \$100 per month to cut months off this project?" Yep, thank them for cloud "shadow IT." We see it happening everywhere. Vendors that offer quick and easy sign-ups enjoy much better adoption than those who still wine and dine CIOs.

Early SaaS adoption was driven by line-of-business leaders seeking to break free from horrendous enterprise apps. Developers are providing that same energy today to IaaS

what the developers create, that six months could be cut down to six weeks.

Look, software is eating the world, so plenty of financial, logistics, and consumer goods companies are now effectively software companies. The nature of software — we can change it easily, and many stakeholders lack the technical knowledge to understand what's possible and what's hard — makes it better to develop software iteratively. One not-particularly well-understood part of the shift to such Agile development is that, because fewer decisions are made up front, fewer decisions are made hierarchically. This means that developers get to make calls, since they're the ones writing the software.

Developers are the ones who said,

5 CLOUD COMMANDMENTS

1. Choose providers strategically, with an eye to standards. Price isn't everything.
2. Hybrid cloud is too expensive to be a stopgap. Commit long term, or keep public and private separate.
3. Do not ignore Docker.
4. When it comes to performance and security, don't trust. Verify.
5. Find your org's DevOps disciples and let them drive cloud strategy.

Meanwhile, CIOs who wise up and empower developers as innovation engines are much more successful than CIOs who don't nurture and guide these shadow IT movements. Neglect can yield some really awful results.

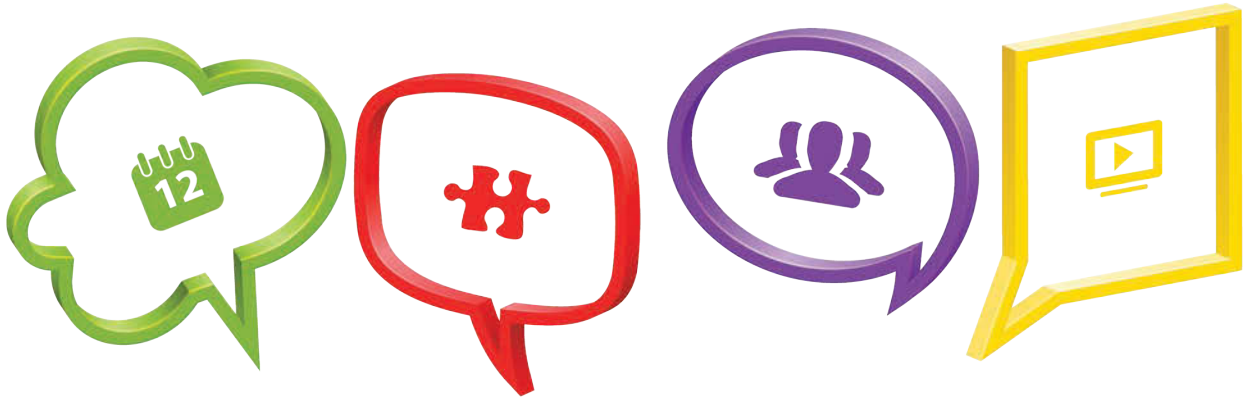
The balance of power is poised to shift again slightly, to the DevOps team. But that's another story.

The biggest cloud gains that we have yet to realize are going to be on the cost, not the revenue, side. There are incredibly painful outcomes from having badly orchestrated and designed infrastructures. These range from actual runaway costs, to the burden of having to maintain and manage heterogeneous infrastructures (more staff, more complexity, harder patching), to the opportunity hit of losing some agility. In the simplest sense, orchestration is about bringing more automation, coordination, and repeatability to application deployments.

In an ideal world, next year's survey will be full of enterprises that were able to orchestrate their environments to a level rivaling Netflix, but instead of deploying what is essentially a single customer-facing use, they'll support an immense range of business services across data centers and cloud providers. Are you ready? [IW](#)

Source: InformationWeek USA

4 pillars to Enterprise Social Networking success



Success starts and ends with integration. Here's how to finally make collaboration click

Twenty-three years ago, I saw a glimpse of the future. Chase Manhattan Bank's London office had launched an ambitious plan to improve collaboration among its senior loan teams. IT was rolling out a system that essentially removed paper from workflows and allowed direct collaboration with the New York office. This setup had it all — employee directory, open wiki, robust search, integrated email and calendars, and a killer workflow. It was the very definition of an enterprise social platform, before that term was widely used. I was hooked. I thought surely it would be a home run and make 1991 “the year of enterprise social.”

The product was Lotus Notes 2.0. I'm still waiting.

Enterprise social networking is the Chicago Cubs of technology — always an also-ran and a perennial disappointment for its fans. Not that I'm bitter. So what happened? Lotus was far ahead of the pack back in 1991, but WordPerfect/ Novell, message boards, and mainframe and midrange collaboration systems were all in the hunt. They were Web 1.0 before there was a web. Email

didn't extend beyond the enterprise back then, and the first HTTP website went live that year, in December. And social? Mark Zuckerberg was 7. The short answer is that the web killed the original enterprise social vision, as I'll explain. Nevertheless, most IT organizations still are stuck trying to implement that old, tired dream, like a die-hard Cubbies fan insisting that this will be the year. Enterprise social has sputtered because it has been overshadowed the last decade by three much more dominant communication options: websites, public social networking, and email. These three remain indispensable channels for how we interact globally, so any enterprise social initiative — if it hopes to succeed — must seamlessly integrate with the web, your email system, and outside social networks. We're not talking about simply forwarding email notices. We mean tight, clean, two-way integration among these four pillars of collaboration, replete with single sign-on, integrated document exchanges, a unified directory, and true unified communications. The basic goal of enterprise social is almost universally agreed on and dead simple: to help

employees work more efficiently. The means to do so is enabling more collaboration and easier access to relevant data and people. This improved efficiency is an impossible dream unless you fully integrate your social platform with the three most prevalent digital collaboration methods. That level of integration will challenge your development, data, and security teams while forcing much-needed discussions around responsibility for data. If you want enterprise social to succeed, there's no shortcut around the hard discussions and the hard work. Here are specific steps to integrate with the big three: websites, email, and social networks.

WEBSITE INTEGRATION

Website integration is the elephant in the enterprise social networking room. Why do companies keep content management systems (CMS) and web systems for customer-facing collaboration completely separate from their internal tools?

Our *InformationWeek* 2014 Digital Business Survey shows that 67% of organizations with 1,000 or more employees and a digital strategy have six or more public-facing websites,

with a whopping 25% having more than 50. Whether business-to-business or business-to-consumer, and regardless of industry, e-commerce is one of the few consistent revenue drivers, and that growth has come from web-centric systems.

Given the strategic business value of these e-commerce and other customer-facing website systems, wouldn't you assume they would be systematically designed to integrate with in-house enterprise social networks? Guess again. In almost every instance, "internal" and "external" systems are siloed. They have different logins, discrete conversation and support streams, and duplicative content. Worse still, the public-facing system has likely received ample funding over the past few years, while the internal platform has been starved.

Blame marketing. While it's technically not its fault, it's a symptom of the "compartmentalized view" of technology implementation that has existed for years. Web presence?

That's the same as catalogues, billboards, and ads, so it belongs to marketing. Internal collaboration and productivity? Line-of-business execs and HR decide on that. Flow between

analysis of the CMS used for the top 30,000 websites as ranked by Alexa.

IT should have bridged the gap years ago. We're not saying you need a single platform for e-commerce and

In almost every instance, "internal" and "external" systems are siloed. They have different logins, discrete conversation and support streams, and duplicative content

the systems simply wasn't a big part of the discussions.

Look at the difference in the platforms in use. IBM, Oracle, and Microsoft all sell options for web and internal systems. These internal systems are not exclusively designed for internal use, since they can integrate with public sites. Take SharePoint, for example. It has always had a large share of internal social initiatives, but its public website use is just 1.1%, as revealed by a Datanyze

internal social networking; you just need to make these two worlds more tightly aligned in four key areas.

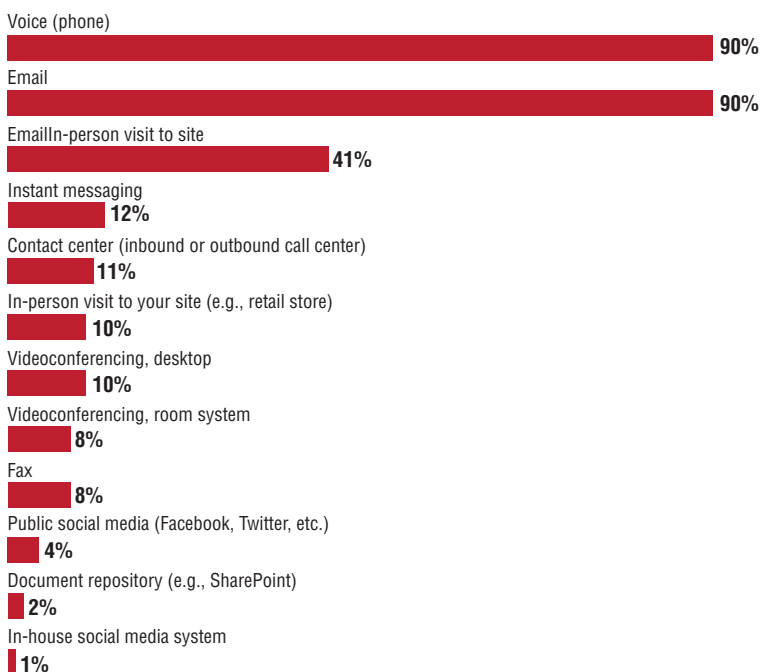
1. Data: It's amazing how many organizations end up cutting and pasting documentation and information from the web to internal systems. It's more than blog posts and articles; we're talking about product details, specifications, comments, and even collaboration forums and discussions.

A social platform vendor (which will remain anonymous for obvious reasons) proudly showed me its product using a Fortune 500 telecommunications company as a star customer. The telco had built a social system to enable engineering teams to easily collaborate on new products and solve issues. Great demo, right? Problem is, this telco also has a customer portal on the web that does the same thing. It had originally been just for large-customer support but had expanded to allow feedback and collaboration on upcoming products. When I asked about integration between the two, I was met with the kind of dead silence you normally associate with someone checking their email during a web conference call.

Start with a deep audit and review of existing content. Do you have documents re-created and posted in two separate systems? How about comments? How about requests? Do your employees have different logins for the customer-facing web versus the employee-facing? Is there any

Top communication methods

What are the top methods by which employees communicate with outside customers, suppliers, and partners?



Data: InformationWeek 2014 Unified Communications Survey of 343 business technology professionals deploying or planning to deploy unified communications, April 2014

level of integration? Once you get the baseline, you can start tackling the issue with a mix of workflow changes, integration tools, and direct integration.

2. Search: If you have siloed internal and external systems, at least implement integrated search that connects to and crawls public-facing sites. It's an easy fix that makes life easier for employees. This is one of several updates IT can — and should — make quickly.

3. Design: Across multiple years, *InformationWeek's* Social Networking in the Enterprise surveys have shown a relatively consistent pattern: More than 90% of organizations have some type of "intranet," whether it's an internal wiki, employee directory, or portal. However, it's unlikely that they've kept up with the times. Does your portal work on mobile? A tablet? Even more relevant, has it been resized to support the larger, wider

screens on desktops and laptops? We doubt it.

My favorite example is a US-based manufacturer that just completed a major site redesign and consolidation. This was a big one. Not only did it update its design, it added thousands of pages of updated product content and consolidated public sites to make collaboration easier for everyone. Very slick, very modern. An "internal" announcement, designed to foster excitement and gather feedback, didn't get posted on the internal portal until two weeks after the new site went live. (Note that until this point, the internal portal hadn't had any updated content on the home page in more than a year).

4. Logins: When it comes to logins, the good news is that our Digital Business Survey shows most enterprises already have or are working toward single sign-on for their customers.

Also good news: Our most recent

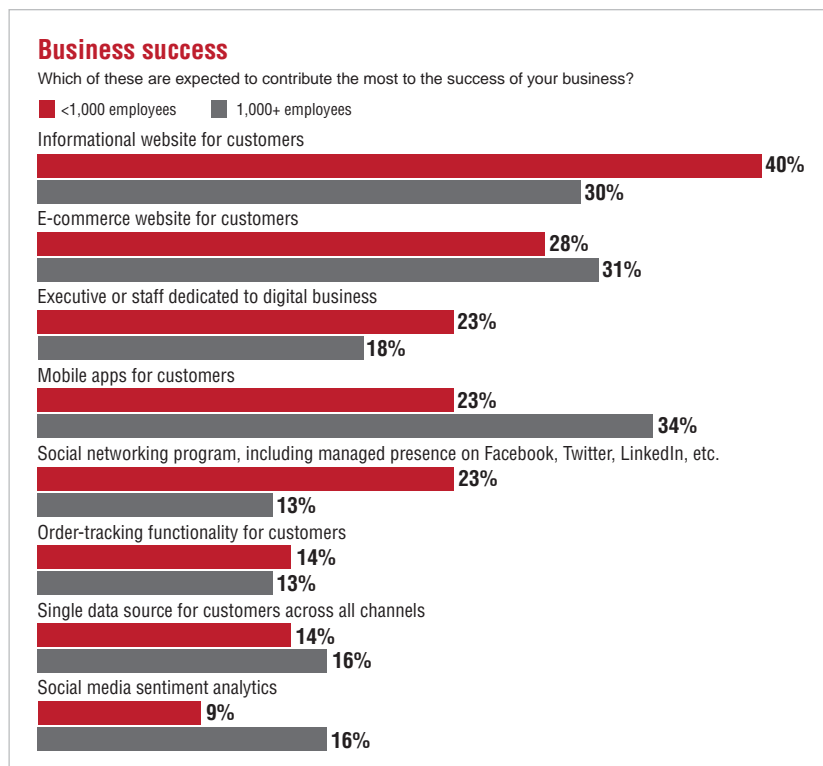
Digital Business Survey finds that two-thirds of organizations have single sign-on for their internal systems.

The challenge is that internal systems almost always use Microsoft Active Directory, Sun, Oracle, IBM, or even Novell as their primary authentication directories. When IT adds single sign-on, it likely stacks on RSA, CA, or other additional authentication utilities. Tighter and tougher has been the trend internally, while easier and simpler is the trend outside. For example, many public-facing sites have opted to add the option to log in with Facebook, Google, or Twitter as part of their e-commerce presence. Customers love the option. Everyone already has too many passwords.

These major platforms, including Google, Facebook, and Twitter, offer slick APIs because they want people to use them. There are even third-party vendors, like GetSocial and Janrain/RPX, that aggregate the options into one easy utility. You may not want that type of easy access on internal, secure systems. But why don't you take a page from the social playbook and let your employees automatically access public systems with their internal credentials?

If you don't have social logins for your public sites, get on it. If you have any level of consumer interaction, the big three of Google, Facebook, and Twitter should be on your review list. B2B sites should consider LinkedIn as well. The smaller social players like MySpace (officially the eight-track of social networks) will be a judgment call for your team. Having an aggregator like Janrain takes the development challenge off your plate.

But remember that your social integration needs to go far beyond easier login access. Consider some advanced "pull from" tricks to beef up the quality of the information inside the system. For example, every organization has some level of employee directory with names, photos, skills. Do a quick test. Look up one of your colleagues on LinkedIn,



Note: Percentages based on elements of digital strategy in the coming 12 to 24 months; multiple responses allowed
 Data: InformationWeek Digital Business Survey of 202 business technology professionals at organizations with fewer than 1,000 employees and 134 at organizations with 1,000 or more employees with a digital strategy, November 2013

then go to your employee directory. Which has more depth?

LinkedIn has officially replaced the résumé and Rolodex, so why do you force employees to duplicate information? LinkedIn has an API; you can pull public data right into your system, making it searchable and usable. Confidential information can be kept separate. Or you can continue to pretend that employees don't use LinkedIn, despite the social network reporting 313 million visitors last quarter, with 26% visiting at least once a month.

You can look at LinkedIn as a threat, as a site where your people go to find new jobs, or as a resource that has up-to-date information on your employees.

DON'T FORGET EMAIL

If enterprise social is the Cubs, then email is the Yankees. Always winning and universally hated.

Email is neither dead nor going away anytime soon. The Radicati Group has tracked email trends for years and recently highlighted an interesting development. The business use of email has been growing at a steady 6% or so clip for the last several years, and is forecast to continue that pace. *InformationWeek's* 2014 State of Unified Communications Survey shows email at the top of a list of a dozen communications methods used to interact with customers, partners and suppliers. So, your enterprise social success is directly related to

how well your platform integrates with your email system. Key features to include:

1. People can send from and reply directly to the social system via email.
2. Summaries from the platform go directly to email.
3. Direct links (that do not require

4. Presence awareness in platform, so that if you are logged into the system, it will be aware of it and indicate that to any users who are working in the system. Conversations, comments, or requests should show up on your screen. If you're not actively online, it should email you.
5. Calendar integration so that any event will be automatically synced into the personal work calendar (which also syncs to the ever-present smartphone).
6. Task integration so that jobs can be assigned and managed in your email client.

Jive and Salesforce have great plugins that work with Outlook right out

of the box. IT handicaps the success of those deployments if it doesn't enable them.

Integrating your email with external social sites is a bit trickier and yet has an important urgency. Enterprise email has reached a pivot point. The same Radicati research forecasting business email growth

Your enterprise social success is directly related to how well your platform integrates with your email system

also tracks a slowdown in consumer use of email. In fact, it's forecast to flatline by 2018.

Translation: Your customer is reading fewer emails from companies, even if you're emailing your colleagues more than ever. More email use at work, less at home. We know the culprits — social platforms and text messaging. Emailing a consumer seems so '90s.

Don't panic yet. Consumers still average 87 emails per day (versus 108.7 for business users). It's just that their use isn't forecast to grow, while business email volume is forecast to jump to 139 a day. So there's time, but companies must seriously look at how they're engaging with consumers. There are ample options to use email to directly connect via social platforms like Twitter or Facebook. Now's the time to start architecting a solution. In some cases, the social norms for communicating via social are works in progress, at best.

THE SOCIAL MINEFIELD

Companies' misuse of Twitter and Facebook for interpersonal contact is astounding. Universities are having to learn fast just how intensely they must monitor and respond to Twitter posts from students. Many now have full-time social staff to watch and "pull in" students who tweet or post Facebook questions to the general public.

In companies, a service team could

Sign in, please

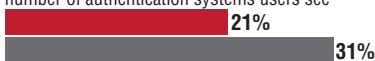
How many separate user names and passwords do customers need to access your online systems?

■ <1,000 employees ■ 1,000+ employees

One login system is used to provide all access



Multiple login systems are in place, but we're working toward limiting the number of authentication systems users see



Multiple login systems; no interconnectivity



Data: InformationWeek Digital Business Survey of 202 business technology professionals at organizations with fewer than 1,000 employees and 134 at organizations with 1,000 or more employees with a digital strategy, November 2013

integrate an option like Tweetymail, which lets them receive and send direct tweets via their email client. It's fast, easy, and makes their inbox that much more effective.

The public social networking space is messy and getting messier. New apps like WhatsApp have exploded, with 500 million users and counting, even as collaboration apps including Instagram and Vine have moved from single-purpose suites to a more complex model by introducing messaging as part of their offerings.

Social platforms aren't interested in providing a seamless experience; they're fighting each other for their lives. Google, Facebook, Twitter, LinkedIn, Instagram, Snapchat, WhatsApp — all have different interfaces and personas. They're not going to make it easy for you.

But you can make it easy for your staff and customers. Put all this chaos to work for you. Everybody today has multiple social touch points, so integrating them with your organization's in-house network gives you a competitive edge. To do that, your team needs to understand all the options and start with two questions:

1. Are our customers, vendors, or competitors on each of these networks?
2. If they're not, is there a strategic advantage to us being there

anyway?
If the answer is "yes" to either of these, then ask: "Who in our organization needs to be involved in creating that social presence? Marketing, sales, customer service, HR, security? How do we build access and integration?"

IT is the only group within the

level as expanded analytics and mobile strategies, and above a move to a private cloud. However, only 59% of these IT leaders feel they are effective at driving their collaboration efforts, a nine-point drop over the prior year.

The big players in enterprise social, mainly IBM, Microsoft, and

Enterprise social will never reach critical mass until it's easy to integrate with partners, customers, and others outside the firewall

organization that has the technical skills and (a slightly) unbiased view of any new social system, so align IT with the right groups at the start. Facebook may be the darling of marketing, but the bigger value may be to have your customer service team engaged in conversations on a daily basis.

DON'T SIT THIS ONE OUT

Why are we so adamant about building these web, email, and social network ties to your internal system? Because what we're doing today isn't good enough. Collaboration is a priority for 79% of CIOs, according to our Strategic CIO Survey. Collaboration ranks at the same

Oracle, have made a concerted effort to up their level of integration. But platform vendors can't do it all, and, like the social sites, tend to have a decidedly paternalistic approach to integration. Sure, Microsoft will build SharePoint integration among all of its systems, but SharePoint to Google Apps? Don't hold your breath.

Every modern company now has the "big four" collaboration options in place, and they'll get more benefit out of them if they're integrated. Your public web presence will continue to get more funding and will remain a growing source of revenue for the long term. Public social networks will also continue to grow. And email will not go away.

The team responsible for your enterprise social network must accept this reality and focus on integrating rather than just building. Enterprise social will never reach critical mass until it's easy to integrate with partners, customers, and others outside the firewall.

Ignore that reality and you'll continue to see usage dwindle as the "outside" players try to move inside your network with tools like LinkedIn for Outlook. If that happens, your enterprise social network will be about as relevant as the Cubs at World Series time. [IW](#)

Source: InformationWeek USA

WORLDWIDE DAILY EMAIL TRAFFIC					
Radicati Group predicts business email volume will grow steadily even as consumer email levels off.					
	2014	2015	2016	2017	2018
Total worldwide emails sent/received per day (in billions)	196.3	204.1	212.1	220.4	227.7
% Growth		4%	4%	4%	4%
Business emails sent/received per day (in billions)	108.7	116.2	123.9	132.1	139.4
% Growth		7%	7%	7%	6%
Consumer emails sent/received per day (in billions)	87.6	87.9	88.2	88.3	88.3
% Growth		0.3%	0.1%	0.1%	0.0%

Data: Radicati Group 2014 Email Statistics Report



The trouble with Big Data

Just 30% of respondents to our new survey say their companies are very or extremely effective at identifying critical data and analyzing it to make decisions, down from 42% in 2013. What gives?

BY MICHAEL HEALEY

The more you know, the more you know what you don't know. This year's *InformationWeek Big Data and Analytics Survey* stands as a prime example of that adage.

We see companies moving in a positive direction on some fronts — they're integrating more with external data sets, expanding their use of analysis tools, and focusing more on customer data. However, this progress is tempered by a disturbing shift. When we asked survey respondents (266 in all, at organizations with 50 or more employees) to rate how effectively their organizations identify and use data, more characterize their approaches as "limited and siloed" than "holistic and inclusive." Only 30% of respondents say they're very or extremely effective at identifying critical data and using it to make decisions — that's down from 42% in 2013. A whopping 63% say they're only moderately to slightly effective, with the remaining 7% throwing in the towel and claiming defeat.

Add it up, data jockeys: 70% admit

their companies are below par when it comes to data effectiveness, an increase of 12 points over 2013.

It's not as if businesses don't get what big data can do for them. In fact, the areas cited as most ripe for improvement are critical for any enterprise: competitive intelligence, business security, customer service, and product development. And we see good momentum in some key areas, especially pulling in external data sources such as web analytics. And more than 55% of respondents plan to expand their analytics tool capabilities in 2015.

The right priorities, the right data, the right tools. Why are we faltering?

First, with new data sets and better tools come a (sometimes painful) realization of how far most of us have to go to become truly digital enterprises. Sure, we can develop a better web presence, create an Internet of Things strategy, and expand our social footprint. But most survey respondents lack a commitment to using all the data they can now tap into. Very few orgs are

pulling in all the sources needed to get a 360-degree view of customers, for example.

Lack of budget is the top barrier to successful use of big data, cited by 31% of respondents. But let's be real: Funding complaints always rate No. 1. In second place? Fourteen percent have the guts to say there are more important IT priorities, up three points from last year. We think that response gets at the root cause of big data dawdling: IT is often saying, if not in so many words: "Hey, CMO. You want to own big data and digital? Fine, have fun. Don't call us, we'll call you."

This "stepping away" of IT from a pivotal role in data analysis is confirmed by looking at who pushes new ideas for data analysis. Only 19% of the respondents to our survey say IT is the primary driver, down from 26% in 2013.

Enterprises are faltering in their ability to comprehensively analyze big data, and IT has opted to walk away.

Look, for years IT organizations have been told they don't own

enterprise data, the business does. Lately we've heard about the rise of the CMO and how it takes that mindset to really know what data matters and how to mine it. So the message too many IT teams seem to be taking away: "This isn't an IT problem. We build the systems, keep the lights on, try to keep attackers out. We don't own big data. Our input isn't wanted."

Big data is tied to digital transformation, which is inextricably linked with the e-commerce, social, IoT, and mobile movements redefining how businesses operate. These are all becoming "non-IT" functions, so why hold on to big data responsibilities?

Simple — because your organization doesn't have the skills outside of IT to handle this tsunami of data. Deloitte Consulting called the insurance industry "information rich, knowledge poor." But it's not just insurance. This moniker applies to almost every industry. You may have a crack team of business analysts, data scientists, and Excel jockeys, but they simply can't do the heavy lifting needed to bring in all the information needed to yield real knowledge. Our survey shows that almost everyone is pulling in their key financial, sales, and product data. That's old-school stuff; no surprise there. Lots of companies are also

tapping their server logs, email files, and CRM software. However, the wheels start to come off when it comes to unstructured data and data sources that aren't linked easily, such as phone logs, smartphone data, and partner sales data. All of these sources probably are accessible and won't blow up your security model, so why

do it. Geolocation, sensor, and RFID data? Also left out of the loop, as well as third-party intelligence services such as Dun & Bradstreet's. Even unstructured data stored in the cloud is getting the short end of the stick when it comes to analysis. IT organizations have helped fuel the explosive growth of Google Docs, Office 365,

Enterprises are faltering in their ability to comprehensively analyze big data, and IT has opted to walk away

haven't they been tapped? Because doing so would require IT — not data analysis — skills. This pattern pops up again in response to our questions about external data. More than half of enterprises in our survey analyze web and social data, and an increasing percentage analyzes public records. Again, this is relatively clean data than any analyst can pull. Enterprises are struggling with data that requires developer time (translation: IT resources). In fact, some of the richest, newest big data is sitting idle. We're talking sentiment analytics (aka analysis of brand chatter) — only half of survey respondents

Box.com, yet only 42% of enterprises in our survey actually analyze that data.

This is what happens when IT bows out of big data. It's not a pretty picture.

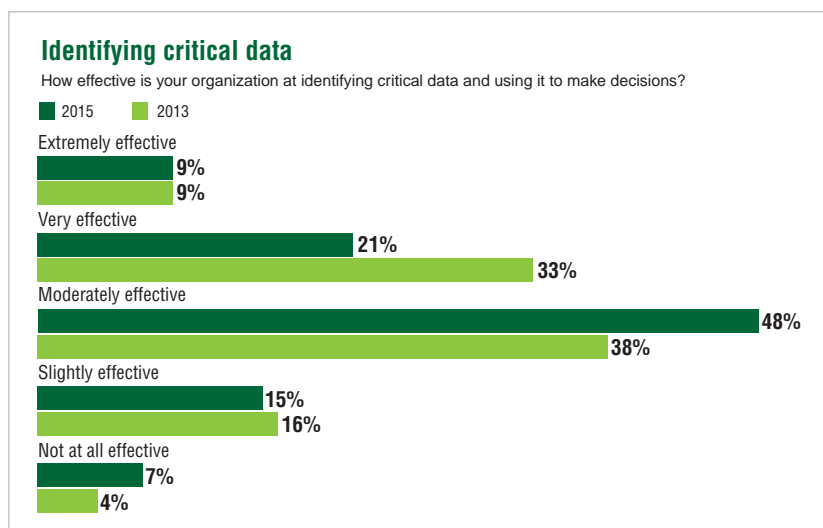
IT'S A SOFTWARE WORLD

A few weeks ago, GE CEO Jeff Immelt said: "Every industrial company is going to have to be dedicated to making a transformation into a software and analytical company."

We had to laugh, having just finished a marathon call with a global manufacturer that has a long history of success. The call centered on proposed cuts to the manufacturer's data management, e-commerce, demand generation, and social networking initiatives.

This isn't a troubled company looking to shave expenses. It's a smart, profitable, growing company. It has invested heavily in improving its digital capabilities presence, yet it got stuck when it came to understanding the data it was collecting and generating.

The problem? It still relies on the classic warehouse data set: top-line sales, channel reports, profit margin by customer, and field sales reports. There's a breakdown when it comes to tying in the massive amounts of data it now has about customer buying patterns, social chatter, and web activity. It even has geo-specific data



Data: InformationWeek Big Data and Analytics Survey of 266 business technology professionals at organizations with 50 or more employees in September 2014 and 257 in September 2012

it could tap. It just isn't part of the analysis because it's never been pulled in as part of the core reporting.

In the end, a massive number-crunching and analysis exercise convinced management not to slash the manufacturer's online expansion. But this was an expensive fire drill. Who headed up the exercise? Marketing, sales, and operations. Who was on the review call? Same group. IT never attended. We'll likely see the same fire drill in 18 months.

That's not to say that GE's Immelt isn't right. In fact, he didn't go far enough. It's not just industrial companies that must become software and analytical companies. Companies in retail, media, insurance, banking, and virtually every other industry must do more than just "be digital." They must live the data.

We often talk about IT redefining itself and letting business units take on the appropriate digital roles: e-commerce with sales, customer apps with engineering, social monitoring with customer service. However, in the case of big data, IT organizations need to expand their scope and provide a new level of support. We're not just talking about architecting a product infrastructure, but also building out and supporting the data models and helping develop skill sets to understand and act on the results.

DAVID? GOLIATH? NO MATTER

We sliced and diced our survey results to compare those who rate their companies' big data skills "extremely or very effective" with those who rate themselves less effective. Interestingly, there was no major difference between large and small enterprises. Even the Fortune 500 can be ineffective with data. The "effective" and "less effective" groups also tend to have the same big data spending priorities, focusing on tools, staff, and training.

But when it comes to data usage, the differences start to show. The more data under management, the more effective the group. This group tends to have broader use of data

warehouse tools and is less likely to rely on Excel for data analysis. Interestingly, use of next-gen systems such as Hadoop tends to be about the same at both groups.

The effective group is also much more aggressive with internal data, including unstructured, smartphone, and partner data. The less-effective group barely touches this data. Not surprisingly, the effective group is also more aggressive with external data sources and more likely to use IoT, social, and third-party data.

The biggest differences are less about tools and data sets and more

about approach — suggesting that even cash-strapped shops can improve.

A full 77% of the effective group sees data as a cross-departmental pool of information. Only 46% of the ineffective group see things this way, with the majority working with siloed teams. The most effective enterprises have a deeper pool of data users, with 36% actively encouraging wide access. Senior executives at the effective companies are six times more likely to be primary data users than execs at the less-effective companies.

GET BACK IN THE GAME

What's the first order of business for IT leaders? Make the case to get your team back in the big data mix. Only 18% of the companies represented in our survey consider data analysis to be core to how they do business and work to build up predictive insight and knowledge, compared with 43% that admit they have limited data analysis insight beyond basic financials and rarely share insights across departments. This latter group actually increased 4 points from 39% in 2013.

The future of IT is in big data

analysis. Security, managing end-user devices, even application development should be secondary to the goal of capturing, developing, and turning this mess into effective insights.

Next, know what data to pull in and who you need to work with. The most challenging areas?


>> **Quote data:** Controlled by sales, this is a mixed set of structured and unstructured data including quotes, bids, and proposals. Depending on the sales process, it can be difficult to compile.

The future of IT is in big data analysis. Security, managing end-user devices, even app development should be secondary to capturing and turning this mess into insights

>> **Web visits and history:** IT owns this. To be effective, you need all web activity broken down by customer, including general visits, events, and transactions. Advanced analytics are required to mine raw data for detailed tracking of visits. Historical data susses out long-term patterns of behavior covering multiple years. Requires building data storage, as apps such as Marketo and Infusionsoft keep only 90 days of activity.

>> **Catalogue and mailer information:** Marketing's purview. This data is rarely integrated with an online view of customers.

>> **Customer service history:** Service logs and activity records generally aren't part of the core ERP system.

Who besides IT can cross these boundary lines, crossing functions such as sales and marketing and also business divisions? Providing better planning, better data sets, better usage, and senior buy-in — that's a recipe for success. 

Source: InformationWeek USA

Baubles, Bubbles, and Troubles

In a recent lecture at the University of California, Irvine, I spoke about the reasons I believe that Silicon Valley is not the right model for India's tech sector. Well-received by some, the topic seemed heretical to others given the fact that "The Valley" has become a metonym for "Innovation" in the common conception.

But since when has the common conception been particularly accurate? I argue that Silicon Valley has created a "Reality Distortion Field" in which its resident elites sing its praises and then use these songs as proof of the greatness of their model. Perhaps some myth-busting is in order.

Let's begin with the obligatory cavil. Silicon Valley companies no doubt have done many things that one should consider amazing — brought new technologies to market, created wild profits, and trained some of the world's best and brightest. The Intels, HPs, Apples, Googles, and Facebooks of the world are colossi on the landscape not only of technology but of business in general.

But how this came about is not so clear. Nor is the set of lessons many derive from this spectacular growth of the Valley. The Reality Distortion Field would have us believing one thing while the real situation might offer complexity and nuance: Put simply, Silicon Valley is not an inscrutable entity that should be mindlessly touted as the model for everyone.

Enter India's technology milieu. While the last two decades have witnessed incredible growth and some signal successes, once again one must look at this sector in context.

According to NASSCOM figures, the Indian IT and IT-enabled services sector employees are at 3.2M. Now, India's total workforce is approximately 500M — which puts IT and ITES combined at under 1% of the total. Further, the combined

revenue of these companies is \$118B, which is in toto less than that of Apple Corporation. Finally, though there is scant self-reporting it is an acknowledged fact that there is poor minority representation in the Indian IT/ITES sector.

These figures are cited onto to put the sector in context. Once again, if one read only the English-language press or succumbed to Bangalore's Reality Distortion Field, one would

well for the IT sector's sustainability unless we find a model that accounts for our particular needs.

Those of us who have benefitted from the rise of technology have enjoyed the baubles and have benefitted from the bubble. But baubles and bubbles spell trouble for democracy and equality, which should be the ultimate end-goals of our fascination with technology.

I encourage *InformationWeek*

The Valley Is:	Reality Distortion Field	Nuanced Point of View
Massively Innovative	The Valley has spawned hundreds of wildly successful companies.	... true but largely at public expense and with public subsidy.
A Risk-Taker's Paradise	Venture Capital networks allow risk to translate to rewards.	... VCs hit some and miss some; further, a huge percentage of sunk costs (Transportation, Education, Internet) are borne by the public.
Meritocratic	Changing patterns of ownership with a large percentage of non-white and immigrant technical staff.	... hides under the veneer of meritocracy to reproduce inequities across race, class, and gender lines.

labor under the belief that the IT sector plays a much larger role in the overall Indian economy than it really does. Once again, this is not an aspersion, just a fact.

There are some profound reasons for this: India's socio-economic ecology is different from that in the capital-rich countries of the "developed" world. These differences provide all the more impetus behind our need to diverge from the Silicon Valley model and to create one that jibes with the needs of India's citizenry.

Put simply, India is a labor-rich, capital-poor country with massive social and economic inequality. It's also a country in which the linkages between education, society, and industry have been neglected for too long. Finally, it's one in which progressive companies too often tend to dismiss the domestic market in favor of "exports." These do not augur

readers to start an active conversation about the vision for India's IT sector, especially about its role in the overall economy and society. [IIV](#)



▶ **Romi Mahajan** is President, KKM Group



Piyush Somani

A look at how auto-scalable cloud solutions can help e-commerce companies handle unpredictable spikes in traffic

Preparing e-commerce firms for unpredictable traffic spikes

A recent report by Gartner predicts that the Indian e-commerce market is the fastest growing market in the Asia-Pacific region. The report says that India represents a \$3.5 billion market, growing at approximately 60-70% every year. This market is likely to grow at an even faster pace, as more Indian users are increasingly using their smartphones to buy products on online platforms.

The growth is not only due to the growing number of online users, but also due to the fact that average online spend is increasing rapidly. E-commerce websites get a large proportion of their business during holiday seasons or major festivals. However, during periods of huge online promotions, e-commerce websites receive unpredictable demand spikes.

When e-commerce websites cannot handle inordinately large volumes of traffic, they crash. Most recently, one of the most popular Indian e-commerce websites suffered several outages on its special offer day. The site witnessed unprecedented 1.5 million people on a single day, leading to website crash. Market analysts say that the e-commerce giant could have achieved more sales, but could not scale due to server glitches.

To be fair to the e-commerce website, it prepared hard for the big day. As the founders noted in a blog post, it took enormous effort from everyone and many months of preparation to push its systems to be able to handle the huge traffic expected during the launch. The online shopping giant had deployed nearly 5,000 servers and had prepared for 20 times the traffic growth. Even after extensive preparation, the site crashed. The reason — the volume of the traffic at different times of the day was much higher than the anticipated growth.

Most e-commerce firms do conduct stress tests to gauge their preparedness for surges in traffic. However, stress

tests do not necessarily capture the unexpected volumes in traffic. A simple search on Google shows that on big traffic days, many e-commerce websites have experienced outages.

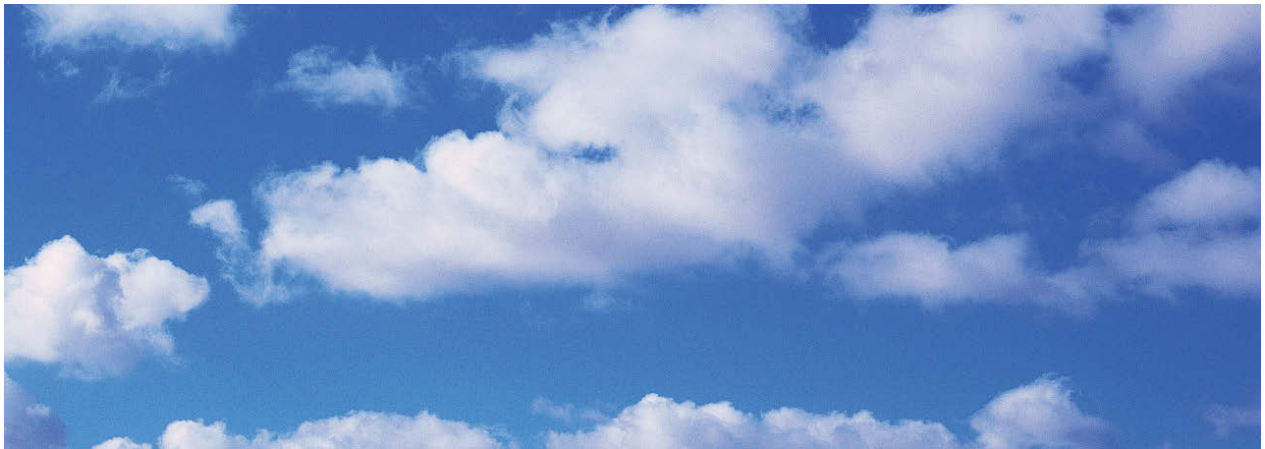
TYPICAL IT INFRASTRUCTURE CHALLENGES FOR E-COMMERCE COMPANIES

A typical e-commerce website consists of a web server and multiple servers taking care of different functions such as database and applications (catalog, content management, storefront, fulfillment). All these servers need extensive planning from a capacity point of view. Capacity planning is typically done by looking at the average traffic patterns on a particular website for a specific period.

However, website traffic can vary for a variety of reasons. If a particular website lists a hot product, and that product does phenomenally well, the website may momentarily experience a surge in traffic. You see this phenomenon on multiple e-commerce websites during new smartphone launches. That said, success of a product can vary, and it is not likely that e-commerce websites have blockbuster product launches every day. This is a classic situation where the variation in website traffic leads to confusion in planning or sizing the infrastructure. Scaling up the infrastructure and deploying a huge number of servers is also not a practical idea as any e-commerce firm would have substantial number of servers that would be underutilized during offseason periods.

Not scaling up is also not a wise idea as it can lead to huge losses due to missed sales that are caused due to the inability of the website to cater to the huge traffic surge. Scaling up infrastructure is not easy and quick as buying traditional servers requires a due diligence process to be followed, which involves the co-ordination of multiple departments such as finance





or management. This is a long process and depending on the organization and workflow, the time period could be a minimum of a few weeks to even months.

In such a situation, e-commerce firms are faced with two fundamental problems:

- 1. Hardware is costly to own and maintain:** Not only is hardware costly to maintain, hardware also becomes obsolete over a period of time. Additionally, in a dynamic environment, hardware resources cannot be scaled up or modified dynamically. For example, it is extremely difficult to predict how many servers, CPU power, RAM or storage will be required in the near future.
- 2. Capacity planning is complex:** Capacity planning is a complex activity, as under-provisioning can lead to loss in business, while over-provisioning can be expensive leading to unutilized resources in non peak periods.

HOW AUTO-SCALABLE CLOUD SOLUTIONS HELP

With the elasticity offered by a technology like cloud computing, an e-commerce website can spin up servers virtually on the cloud to manage peak demand cycles, and can similarly decrease servers when demand goes down. Additionally, policies can be setup to determine thresholds, which can be based on parameters like CPU utilization and disk space. For example, you could set a pre-condition to add

virtual instances or virtual servers when average CPU utilization goes above 80%.

Auto-scaling on the cloud allows e-commerce firms to scale resources according to the load on the server. This capability also allows e-commerce firms to adjust server's RAM and CPU on-the-fly with zero downtime. As firms only pay for what has been consumed, it eventually leads to lower TCO, while simultaneously ensuring highest utilization of resources.

A case in point is ESDS' eNlight, which allows firms to start-up and run resources smoothly with sophisticated algorithms. The service proactively activates scaling before a website falls short of any resources, while proactively shutting down the scaling process to save costs in case of a drop in demand. Auto-scaling in the cloud also enables smaller e-commerce players to compete with larger firms due to the pay-per-use model of cloud.

In summary, auto-scaling in the cloud can help e-commerce firms achieve the fine balance between provisioning too little (leading to possible outages) and provisioning too much (under-utilization of resources and risk of wasting money). The cloud makes it possible for e-commerce players to scale up the infrastructure according to the volume of traffic. This flexibility can help e-commerce firms cut down infrastructure costs and improve site availability by a huge margin, leading to better customer satisfaction, which in turn can lead to better revenues and profits. [IW](#)

Auto-scaling in the cloud can help e-commerce firms achieve the fine balance between provisioning too little and provisioning too much

► Piyush Somani is MD & CEO, ESDS

'Limited awareness about Big Data's potential is one of the major challenges'

? According to you, how important is the role of Big Data in the telecom sector?

The telecom sector is expected to consistently deliver new and compelling revenue generating services, while keeping the operating costs under control. For this, the sector demands efficient data management and analytics capabilities, which can help telecom operators



An understanding of how Big Data analytics works has just started seeping into the fundamental functioning of enterprises, says Ashish Pachory, Chief Information Officer at Tata Teleservices in an interview. He highlights the need and potential of Big Data in the telecom sector

make informed and accurate decisions on customer preferences in real-time. In the telecom sector, Big Data plays an important role of making information accessible and uniformly assembled to allow for easy correlation for generating relevant insights. Big Data also provides location-based data that enables operators to better target users in the form of geo-fencing or location-based advertising.

Big data analytics allows telecom players to make smarter business decisions, manage cost and time reductions and aid in new product development and optimization of offerings. For instance, by combining big data and high-powered analytics, it is possible to determine root causes of failures, issues and defects in near-real time, potentially saving billions of dollars annually. Big Data solutions are capable of generating relevant retail coupons at the point-of-sale based on the customer's current and past purchases, send location-specific offer recommendations to mobile devices, recalculate entire risk portfolios in minutes and immediately identify customers who matter the most. Companies can also use analysis and data mining to detect fraudulent behaviour.

? How in your view, data-driven analytics can help companies across verticals improve their business?

Big data analysis is a cost-efficient and accurate means of gleaning insights that can help improve efficiency across business verticals.

HR managers can look at the data points for a potential candidate, to analyze the benefits and possible drawbacks of bringing that person on board. The data set could include: What sectors, domains, project-types has this person worked on, and for how long? This can be correlated with the company's (or division's) growth or decline during the period to yield insights that are not apparent in the CV!

Better data analytics could thus mean better hires and enabling the shaping of a more specific company HR culture.

Marketing demographics have a lot to do with the company's success rates. One can't waste money and time on advertising to people who don't care about the product, hence streamlined data analytics helps companies shed inefficient practices and focus only on what brings in customers and makes money. Finance and banking transactions too seek help from big data analytics. The complex mathematical equations necessary to keep an informed eye on trading patterns and investment patterns can finally be stored, explored and interpreted, which equates to less wasted money and time.

Application of big data analytics by companies also

result in significant gains for customers through increasingly personalized solutions devised for their specific needs. We also expect to see an influential trend in the deployment and adoption of big data analytics for business operations, primarily in customer experience management.

? What is the scale of data your firm handles? What is the complexity from a data analytics point of view?

For any telco, data is an asset under creation at every moment. To put this in perspective, every call, SMS or online activity generates a data record; every interaction with the call-center (including IVR interactions) generates data; and each time a recharge or payment is transacted, data is generated. There are numerous other sources and these are growing fast. Given the millions of customers and transaction-types the scale of data generated over, say one year, can be truly mind-boggling. Several terabytes of actionable data is being generated every month. It is only recently, with the advent of Big Data Analytics, that this asset-base has been recognized as driver of business value.

There are certainly complexities involved in effectively storing, mining and analyzing this vast and ever-growing reservoir of data. Drilling down for specific records from among billions, pertaining to say forensic investigations, is a necessary but challenging task. Another complexity arises from the need to dedupe, compress and store this data in a way that it is amenable to available analytic techniques. A lot of the data is often in unstructured format making it difficult to analyze quickly. The good news is that while these may be very daunting issues for traditional desktop analytics tools, they are business-as-usual for big data analytics and are easily addressable. It is also important to remember that it is not Big Data, but its intersection with advanced analytics that can give a fresh insight into a completely new worldview.

? For a telco, what are some of the biggest challenges in deployment? What has been your experience?

The limited extent of awareness about big data and its potential is one of the major deployment challenges that businesses in India face. An understanding of how big data analytics works has just started seeping into the fundamental functioning of enterprises.

Other challenges for big data analytics adoption are the same as would be expected with any novel transformational concept. Firstly, several organizational

Challenges for big data analytics adoption are the same as would be expected with any transformational concept. There are several organizational barriers and unavoidable ROI worries. Although the questions are fair, they are no different from, for instance, when ERP was launched

barriers – questions such as ‘Who owns it?’ ‘Is it IT/CIO, Business/Marketing, or a completely new ‘department’ for Big Data analytics?’ ‘How do we ramp up the skills to design, establish and run a moderately functional Big Data analytics?’ ‘Do we need to engage expensive consultants?’ pop up immediately after we think of deploying these solutions.

Secondly, there are the unavoidable ROI worries – sponsorship, business case, TCO. There is also worry that the current database is too messy, or unstructured, to lend itself to Big Data analytics. Although the questions are fair, they are no different from, for instance, when ERP was launched. It is a transformational step towards structuring the unstructured and hence will take its own time to be integrated as a smooth function at an enterprise level.

? How is Tata Teleservices using Big Data to improve its competitiveness?

We have been using Big Data Solutions for quite some time now, in various capacities. While the solutions enable us to leverage structured data, we are also looking at best ways to mine a vast amount of unstructured data.

Applications of big data analytics lead to noteworthy gains for customers increasingly through solutions personalized for their specific needs. There is a growing emphasis across Tata Group companies on adopting big data solutions to enhance customer experience across the value chain and Tata Teleservices is an active player in this initiative.

We use predictive tools for mining information based on the latest technology. In addressing the very granular/ transactional business and regulatory requirements over longer retention periods, data life-cycle management plays a key role. This requires tiering of data based on its age and criticality. Big Data plays a significant role in this.

As data volumes grow exponentially, the need to deploy additional storage infrastructure also grows. Big Data solutions, which are very cost effective and also provide timely information were found very effective in dealing with this scenario. Given the success of the deployment, we now aim at leveraging the technology for other business benefits such as granular segmentation and predictive analysis to improve the overall customer experience. [IW](#)

► **Rashi Varshney**
rashi.varshney@ubm.com

'CIOs need to realize that cloud is not a remedy, but a journey'



In an interview with Rashi Varshney, Govind Desikan, Business Development Head – Cloud Services, Netmagic discusses how cloud market is shaping up in India, why hybrid cloud is going to be the future, and the company's growth plans post NTT Communications association

? Please share your assessment of cloud market in India?

If we look at reports from research firms like Gartner and IDC, they have been showing good numbers. Although there is definitely a huge market, the sad part is that these research reports do not really segregate and tell us what part of cloud is going to mature.

For us it has been less than 4 years to reach 400 customers, and reach about 4,000 servers. A good benchmark for us would be if these numbers could be doubled in lesser time. And there is further potential – we believe that cloud will be the biggest revenue line for NetMagic in the near future.

? What is your take on hybrid cloud? Do you agree that the future of cloud is hybrid?

Hybrid cloud is definitely the future, the key reason is that the customers have made investments before cloud had come and they have their legacy to carry forward. On the other hand, they also want to latch onto to the new trend of public cloud that is evolving. The marriage between these two becomes very essential for anybody to get things together and this is where the hybridness comes in. We have three to four customers who are already on hybrid cloud today and we are seeing that customers are increasingly switching over to hybrid cloud as a model.

? Can you talk about Netmagic's strategy in targeting the public/private cloud domain?

We have traditionally been strong in addressing the private and the public cloud and will continue to focus on the mid-market customers. On an average, every Netmagic customer on a private cloud uses 10 to 15 servers on a minimum; we don't want to get into a segment where customers use us for an instant and move away. Hence, we focus more on the enterprise markets.

The mindset on the adoption of cloud has also changed over the years — the question is no more "Why cloud?" It has changed to "What can I do with the cloud?" In the past few months a lot of customers have put their mission-critical workloads like ERP on the public cloud.

Coming to the private cloud, it commercially does not make sense if the customer wants to start small, the commercial justification both for the customer as well as us is becoming increasingly challenging.

? Could you talk about the significant business changes and Netmagic's growth trajectory post association with NTT Communications?

We are now global. The same cloud stack is available in Australia and the US and a lot of global customers and projects are now leveraging Netmagic solutions. On the product development side there is a lot of collaboration and synergy on knowledge; we share best practices from our experiences. In addition, it has given a lot of our employees the opportunity to become global. However, India will continue to be the focus for Netmagic.

? In your interaction with CIOs, what are the some of the common challenges you come across in terms of cloud adoption?

CIOs though are convinced about the need of the cloud, their biggest challenge is where to start from. Seldom do they realize that cloud is not a remedy, but a journey. Further, by adopting cloud, CIOs sometimes start feeling irrelevant as they lose control over their environment. CIOs need to understand that cloud basically takes away the management headache, while the environment still remains with them.

? Can you elaborate on Netmagic's strategy to boost cloud

adoption in India?

To popularize the concept of cloud in India, we are taking massive education exercises with each of our customers. We believe that Indian customers need a physical touch point, a face to speak to someone before they make an IT purchase. This is the area that Netmagic fills in, which some foreign players may lack. We tailor make clouds for our customers the way they would require it.

? How many customers do you have in the cloud domain?

Which verticals are the prime adopters of cloud?

We have 1,200 plus customers and within cloud we have close to 400 customers. We have clients from almost all the verticals — in e-commerce we have fashionandyou, Jabong, Myntra; in media entertainment we have Business Standard, NDTV, Star TV; and in manufacturing we have UB spirits, Johnson Tiles etc.

? Please update us about Netmagic's new technology developments in the cloud space?

We have launched a performance tiered storage, which is not only new in India but quite new globally. We provide a performance guarantee on the storage that we offer. In cloud, everything is on a shared platform and hence nobody will be able to guarantee a specific performance for a specific environment. The Netmagic Tiered Secure Storage Service (NTSS) is a secure Storage-as-a-Service offering guaranteed IOPS for enterprise's performance-sensitive applications. Customers give us their requirements and we are able to customize it for them and match their demands. Traditionally, the problem faced by any storage vendor is that if you meet the capacity the IOPS is lost, and if you match the IOPS the capacity is way over size. So we have tried to bridge that gap and launched the service. NTSS ensures that your applications get the read-write performance they need while maintaining complete end-to-end security.

Just before this, we launched the Storage as a Service. If one needs a SaaS or a NaaS kind of environment,

we can provide that, if one needs object storage, we can provide that too. We are also the first ones to launch the object storage, which is comparatively an inexpensive way for all your corporate file leads. So you can actually think of it as an enterprise Dropbox and pay for per GB per month. The best thing about this is that it is resilient; we provide 99.99% of availability which means that loss of data is not going to be an option for sure. Hence, we assess the market from time to time and try to come up with unique services.

? What advantages do you think Netmagic has over other players in this space?

One of our key strengths is that we are carrier neutral, which means that anyone could be our last mile connectivity provider. The second is the way we have layered our networking and the way we switch over among multiple providers. Also, we are the only cloud vendor in the country where one could even terminate an MPLS connection as a last mile to the cloud.

One great advantage Indian customers have is that all the data is within the country. Lastly, we have customers who are very particular about compliance and audit requirements, such customers can request us for the same and we allow them to audit only their cloud bit. We can isolate them although they are on a shared drive and allow them to audit only their instances, so they get a physical access though it is on cloud.

? Please tell us briefly about Netmagic's existing data centers and plans in the pipeline for upcoming data centers?

Today, Netmagic operates 8 data centers out of which four are in Mumbai, one in Saki Naka, two in Vikroli and one within the Bombay Stock Exchange, which is in collaboration with Thomson Reuters. There are two more data centers in Bangalore, one in ITPL and one in Electronic City. The Electronic City is the latest one, which we launched in March 2014. We also have one in Chennai and one in Noida. We have plans to come up with one more in Mumbai which will be our 9th operational data

CIOs though are convinced about the need of the cloud, their biggest challenge is where to start from. The mindset on the adoption of cloud has also changed over the years — the question is no more "Why cloud?"; it has changed to "What can I do with the cloud?"

center in India. It should be operational around October next year.

? What new approaches are CIOs following to manage their data?

The new approaches CIOs are looking at are innovative services and also applications which are social and more mobile ready. Recently, we had a request of even a CRM kind of service which the client wanted to use on the mobile. Application vendors are reworking towards making their applications social, mobile and more analytical.

We also have Big Data as an environment, primarily from an analytical stand point. We are piloting Big Data on cloud with some customers. [IW](#)

► **Rashi Varshney**
rashi.varshney@ubm.com

IT hiring process: 8 survival tips

Navigate past early cuts in the IT hiring process and make it to the “serious candidate” stage, using this advice from recruiters

You got that first foot in the door. Now don’t shoot yourself in that foot before you get to take the next step.

The tenuous space between the early stages of a hiring process — the first email reply or callback from HR, for example — and an offer letter can be difficult to navigate, fraught with all manner of trials and tribulations, both real and imagined. Things sometimes happen that you can’t control — personnel changes, sudden budget freezes, bad luck, whatever. Don’t fret too much over those unpredictable factors.

Instead, worry about the ways you might be hampering your own path to the IT job you want, particularly at that critical juncture between “paper” candidate — your mix of skills, experience, and other attributes look good enough on paper to get you out of the slush pile and into the second-look pile — and serious candidate, as in: someone the company might actually want to hire. It could be an early-stage phone call, a technical test, a Skype interview, your LinkedIn and GitHub accounts, or other elements of the hiring game. Whether a first prescreen step or farther along in the vetting process that just about every employer performs, you must ensure you’re sending the right signals. Otherwise, IT pros with sought-after skills will find their phone rings plenty, but actual offers rarely follow.

“There are [some] common mistakes that come up over and over again that you’d think would be intuitive, but I don’t think they are,” said Hallie Yarger, recruiting manager for the central region at Mondo, told us in an interview.

Let’s look at them — and moreover look at some positive ways to survive and thrive within the often-mysterious machinations of corporate hiring processes.

1 CUSTOMIZE YOUR FIRST IMPRESSION

If you read a job description, you should be able to extract several key responsibilities of the position. And if you can do that, you can definitely tailor your initial approach to the company. Don’t embellish or flat-out lie, but do shape your resume and other materials for the audience. “Take those main responsibilities and then inject those into how the resume is written or how it’s organized — that’s the first step,” Yarger said.

Similarly, understand the corporate personality. If you’re keen on working for a startup, for instance, keep in mind that the startup might not be as keen on old-school, traditionally formatted resumes. A large, long-established firm with an entrenched white-collar environment, on the other hand? “They’re probably going to look for a more traditional-style resume,” Yarger said. “Understanding your audience is really important.”

2 DON’T SKIP THE COVER LETTER

“A lot of people don’t do cover letters

anymore, and I think a well-written cover letter can make a difference,” Yarger said. “It shows a candidate who really understands the role and who can speak to their experience.”

Resumes and LinkedIn profiles might open the door, but they won’t actually get you the job — it’s how you communicate your interest and value that ultimately matter.

3 DON’T LET LOGISTICS DERAIL YOU

Successful phone interviews and early digital interactions with a potential employer depend on clean, clear logistics — don’t let a bad connection sink you before you’ve even had a chance to be seriously considered for the gig. Take every precaution to ensure a clear connection, don’t use a speakerphone, and don’t do the call from somewhere with background noise. Moreover, Yarger recommends that you’re aware of how your voice sounds over the phone.

“I recommend candidates leave themselves a voicemail so that they know how they come across on the phone, and that they practice their basic



introduction of themselves," Yarger said. "Your first impression on the phone is pretty important with an employer, so you have to make sure you're setting it up right from the beginning."

4 DON'T TREAT PHONE SCREENS AS EASY OR UNIMPORTANT

Early-stage phone calls and other first-impression steps exist for a reason: Candidates who appear strong on paper, but might end up being a manager's worst nightmare, tend to weed themselves out. Believe it or not, Yarger said IT recruiters commonly face the problem of would-be candidates who confirm a phone prescreen and then are either woefully unprepared for the call or miss the appointment altogether. "That's a big way to get your name crossed off with a company — forever," Yarger said.

5 GET DOWN INTO THE DETAILS

If you really want the job, do the homework — on the position, the hiring manager, the company. Know the job description inside-out and have some talking points as to how your recent experience fits, Yarger advises. Research the people you're dealing with on LinkedIn. Understand what's going on with the business: read recent press coverage, press releases, and other public material on the company.

"Hiring managers will be impressed to see that you went above and beyond to understand what the state of the company is right now and what the main objectives are and how you can fit into that," Yarger said.

6 EXPECT SURPRISES

As with No. 4, too many times an otherwise viable candidate will undermine him or herself by assuming early steps are simply formalities. Treat every step as the step if you want the gig. A perfect example for IT pros: Always be prepared for technical questions or tests, even if the setup for a call, video chat, or face-to-face meeting is simply to "get to know one another" or "see if it's a good fit."

Yarger pointed out that many prescreening calls and similar vetting steps occur under the assumption that

questions will be informational and behavioral in nature, but IT pros should always expect things to turn technical in a snap, even if it's supposedly a background call from HR.

"Don't let yourself get thrown off if it gets technical," she said. "We do have hiring managers that like to surprise candidates, because they want to see how they'll do in an environment where things are constantly changing — which is the state of a lot of IT

Gulp. So, how do you make those three seconds count? Grooming and appearance matter; no, your workout attire isn't appropriate, nor is bed-head or other signs of the too-casual candidate. "I definitely recommend both men and women to be wearing blazers, men wearing a tie, women to make sure their hair is done [and] out of their face, no dangly earrings to distract from them, [and] for men: making sure they've shaved," Yarger said. Bottom line:

It is recommended to dress formally even for remote interviews as it puts you in the right frame of mind and helps you come across as more confident and professional

departments. Things come up and you have to be able to roll with it and not lose your cool."

7 DRESS FORMALLY EVEN FOR REMOTE INTERACTION

Conventional wisdom dictates that you dress up for face-to-face interviews. Yarger recommends the same for phone interviews and other remote interactions; moreover, she advises standing up for phone calls to keep focused.

"You might think that you're just having a laid-back conversation with a hiring manager, with somebody in HR, but the reality is they're assessing a lot more than your background," Yarger said. "It's all about the presentation, and I think when you put yourself in the right frame of mind you can come across as more confident and more professional."

8 TAKE SPECIAL CARE WITH VIDEO CHATS

Skype interviews and other online video meetings are increasingly common — and increasingly perilous for job-seekers who lack the appropriate self-awareness. "Your presentation is still really everything and people usually assess whether they want to move forward with you within the first three seconds of seeing you," Yarger said.

Prep for online meetings like you would for an onsite interview.

Some related advice: Do the video chat in front of a blank background to keep the focus on you. Keep children and other family members out of sight and out of earshot. Treat everything like you've walked into corporate HQ. In some ways, hiring managers can be even more harsh in their judgments online than in person.

Another pitfall of the video chat: naturally, you're in front of your computer during the meeting, and Yarger said some candidates run into issues because it becomes apparent they're Googling answers to questions as they arise or otherwise multitasking, for better or worse, because we're so used to doing that.

"You want to be able to show you can think on your feet and you're not taking advantage of the situation of being remote," Yarger said. "How well you handle that Skype [call] might lead to you being able to work remotely in the future, or, if they don't have a good first impression of you, not only are they probably not going to move forward with you but who knows what kind of connections they have and what kind of reputation you're creating for yourself." [TV](#)

Source: InformationWeek USA

How e-commerce companies can take their IT infrastructure to the next level

E-commerce industry in India is booming by leaps and bounds. According to Gartner, the Indian e-commerce market is growing at approximately 60-70% every year and is expected to reach \$6 billion in 2015. In this fast paced growth environment and a radically changing marketplace, the storage and infrastructure needs of the e-commerce industry are increasing manifold and they need to prepare themselves for the next big leap.

To discuss the trends emerging in the e-commerce space and talk about the technologies that can help e-commerce firms take their IT infrastructure to the next level, *InformationWeek* along with Avnet held editorial roundtable discussions in Delhi and Mumbai recently.

The discussion in Delhi, which was moderated by Nivedan Prakash, Assistant Editor, *InformationWeek*, clearly brought out that the companies in this space, irrespective of their size, are aggressively contemplating new technologies.

IT heads of leading companies in the e-commerce space participated in the discussion and highlighted key issues and challenges and how disruptive technologies like cloud and analytics can address these concerns.

Kapil Agarwal, Founder and CEO, UrbanHomez, said, "Being a startup the biggest challenge arises when the business starts expanding as our existing IT infrastructure doesn't support the expanding workload. However, with the emergence of cloud computing, the scenario has completely changed."

While all the panelists highlighted cloud computing as a revolutionary technology for e-commerce platforms, they also agreed that for small organizations it is difficult to understand the technicalities attached to it.

In this context, Mrinal Chatterjee, Founding Member, Corporate Vice President of Engineering & Technology at ShopClues, stressed on the importance of selecting the right vendor. "It is very important for IT heads to find out the right technology partner who can understand their business and help with such applications and technologies that can help business in blooming," he said.

Customized infrastructure that can be used according to

the workloads was one thing that was mutually agreed upon by everyone as the need of the hour.

Another interesting point was raised by Anurag Seth, CTO, Liquid on having robust security. "These days DOS attacks are very common and to avoid such attacks it is important for all of us to understand the emerging technologies properly so that no loopholes are left and at the same time these technologies can help us grow," he said.

Panelists also debated the importance of analytics for e-commerce companies. Chatterjee spoke at length about Big Data analytics initiatives within his firm and how insights obtained through analyzing huge chunk of data has helped them gain a competitive edge.

In the roundtable, Viswanath Ramaswamy, VP- Power Systems (India/South Asia) at IBM India gave a peek into IBM Watson technology and how it can prove helpful for e-commerce firms. Watson is a cognitive technology that processes information more like a human than a computer—by understanding natural language, generating hypotheses based on evidence, and learning as it goes. "Watson Engagement Advisor helps organizations know their customers better based on their past history. As a result, organizations can drive better decisions and faster outcomes



Roundtable discussion in Delhi on role of technology in e-commerce



Viswanath Ramaswamy, VP- Power Systems (India/South Asia) at IBM



Panelists in active discussion

through personalized, contextual and evidence-based interactions," Ramaswamy said.

The roundtable discussion in Mumbai focused on the aspects of infrastructure planning for e-commerce companies especially as scale of traffic is huge for e-commerce firms. The panelists represented large conglomerates like Reliance and Mahindra, and pure play e-commerce firms such as Purplle.com, Giftkarting.com and coinbazaar.com. Panelists included P K X Thomas, CIO e-commerce, Reliance Brands; Pritam Vartak, DGM e-Commerce, Mahindra & Mahindra; and Ajay Poddar, AVP-Technology, Shaadi.com.

The importance of planning and scaling for growth was discussed and debated at length in the roundtable discussion. P K X Thomas, an experienced veteran in the world of e-commerce spoke about the importance of predictability and planning for ensuring that e-commerce websites scale up comfortably with respect to user demand.

Pritam Vartak from Mahindra spoke about how the Mahindra group is planning to scale its e-commerce initiatives in the coming months by adequately planning for infrastructure. Pure play e-commerce firms like Purplle.com spoke about how the cloud made it extremely easy for e-commerce firms to scale up according to the needs of the market.

All the panelists were unanimous in their decision about

the ability of the cloud to substantially reduce upfront investments in server and networking infrastructure and direct that to other areas that can drive growth. The elasticity of the cloud was a big differentiating factor for enterprises as they could use the cloud according to variable workloads.

The event was extremely interactive, with the panelists posing questions and experts from IBM and Avnet India answering them. Representatives from IBM included Viswanath Ramaswamy, VP-Power Systems, India & South Asia, IBM and Sanjay Lulla, Associate Director – Sales, IBM India, while Avnet Technology Solutions was represented by Deepak Singh, National Product Manager at Avnet Technology Solutions.

Ramaswamy from IBM spoke about how Cloud, Big Data & Analytics were being fueled by open innovation, wherein 85% of the new software was now being built for the cloud, 80% of the top public clouds ran on Linux, and 3 out of 4 organizations had Big Data activities underway.

Presenting excerpts from an IBM study, Ramaswamy said that digital consumerization had fundamentally changed consumer behaviors with respect to brand loyalty. Consumers are adopting technology at an unprecedented rate. Led by brand enthusiasts, consumers are starting to establish direct relationships with brands via digital channels. Thus, a new level of consumer understanding and engagement through brand enthusiasm is essential in today's digital age. [IW](#)



Ajay Poddar, Shaadi.com; Suyash Katayani, Purplle.com; and P K X Thomas, Reliance Brands discussing importance of planning & scaling for growth



Deepak Singh, National Product Manager at Avnet Technology Solutions giving snapshot of the company



Viswanath Ramaswamy, VP, Power Systems, India & South Asia, IBM India & Sanjay Lulla, Associate Director – Sales, IBM India



Mumbai-based E-commerce companies sharing their insights & experiences

Big Data Analytics conference generates huge interest

Big Data has been the buzzword in the technology space for quite some time now, with analysts and service providers discussing numerous benefits that can be derived by crunching the huge data sets available.

A joint study by NASSCOM and CRISIL Global Research & Analytics suggests that by 2015, Big Data is expected to become a USD 25 billion industry. The report estimates that the Indian Big Data industry will grow from USD 200 million in 2012 to USD 1 billion in 2015 at a CAGR in excess of 83 percent. While the domestic market is still nascent, the potential for Big Data is huge.

Taking cue from this market scenario, InformationWeek organized a Big Data & Analytics Summit across 3 cities i.e. Delhi (Nov 25), Bangalore (Nov 27) & Mumbai (Nov 28). The summit was a common platform to bring together key decision makers and thought leaders in the enterprise analytics domain. The leading CIOs & IT Heads across verticals attended the Summit in all the 3 cities.

Besides the industry-focused tracks and real-world use cases, the major highlight of the Summit was panel discussions, titled, "Turning Data-Driven Insight into Actions".

The panel discussion brought together Big Data champions from different industries that have successfully leveraged data to transform their companies. The panelists also threw light on how to really ignite Big Data ambitions and turn raw data into real customer insight.

The panelists for the Delhi event included Harish Chandra, GM – IT, Sarovar Hotels; Kapil Mehrotra, CIO, Artemis Health Sciences; KK Chaudhary, SVP – IT, Lanco Infratech; Manoj Shrivastava, Director – IT & Head – Integrated Technology, MTS India; and Pertisth Mankotia, Head – IT, Sheela Foam.

And while in Bangalore, the Summit witnessed an active participation from Deepak Warrier, VP – Pricing & Personalization Analytics, Myntra; Sandipan Chattopadhyay, CTO, JustDial; and Rohini Srivathsa, CTO, Janalakshmi Financial Services, the panelists for the Delhi event were Hiren Shah, AVP – IT, ICICI Lombard General Insurance; Markandey Upadhyay, Head – Risk, Collections & Fraud Analytics, Axis Bank; Sudeepta Chaudhuri, Head BI & Advanced Analytics, IDEA Cellular; Prasad Patil, VP – IT, Essar Group, and Sanchit Vir Gogia, Chief Analyst & CEO, Greyhound Research.

The Summit was well supported by Tableau Software & Greyhound Research. [IW](#)



Prashant Momaya, Pre-Sales Consultant, Tableau India talking on how to achieve business insights using data



Deepak Ghodke, Country Manager, Tableau India sharing insights on effective utilization of data



Audience in full attendance at the Bangalore Summit



Big Data champions from Bangalore sharing views on leveraging data & turning it into real customer insight



Chris Murphy

GE CEO Jeffrey Immelt shares three quick insights and explains why he sees no chance of the CIO's role diminishing

LOGS

Chris Murphy blogs at InformationWeek. Check out his blogs at:

GE CEO talks economy, CIOs & tech

I heard GE's Jeffrey Immelt speak recently, and I thought our IT community members would like to hear what the CEO of a \$150 billion-a-year company is thinking about technology, and the role of the CIO.

Here are three nuggets I pulled out that I think CIOs will find interesting.

1. ECONOMIC OUTLOOK: HUNKER DOWN FOR MORE OF THE SAME

Immelt's one-sentence economic forecast: "I'd learn to love the world we're in today, because we're going to be in it for awhile." That world is characterized by relatively slow economic growth globally, with a ton of volatility.

The US is in better shape than anytime since the financial crisis, he said. China is growing, but the opportunities there are a "micro versus a macro story." Countries focused on natural resources are still investing, and there are pockets of high growth across the world, but Europe and Japan still are sluggish. Overall, companies must "make their own growth, manage risks," but there are plenty of opportunities for companies that can do that, he said.

2. CIO'S ROLE: TEACH BUSINESS LEADERS TO LOVE ANALYTICS

"All our leaders are becoming as expert as possible in analytics," Immelt said. He described a central role for the CIO in getting business leaders to use analytics more, but also the need for companies to bring in new technology skills.

"This has to be led by the CIO in many cases, but it also has to be led by people inside and outside your company. We've gone through this. We have brought people into GE from other companies -- Oracle, Cisco, other companies -- because we knew we couldn't get to where we needed to on our own. Cultural transformation, talent transformation are absolutely critical."

Two other nuggets Immelt shared about the role of the CIO at GE caught my attention. He's pushing his own CIOs for "more standardization in the name

of flexibility," using the example of going from 600 ERP systems down to 34 (interesting that the CEO knows those numbers). And Immelt has the CIO leading GE's "factory of the future" initiative, which involves increased automation, new manufacturing techniques, and networking of sensor-packed production gear so managers can better analyze their operations and avoid breakdowns.

3. GE'S BIG STRATEGIC BETS

"In order for us to be successful, we've got to invest in big themes," Immelt said. GE's first big bet is on an "energy transition," particularly driven by the natural gas boom in North America and worldwide.

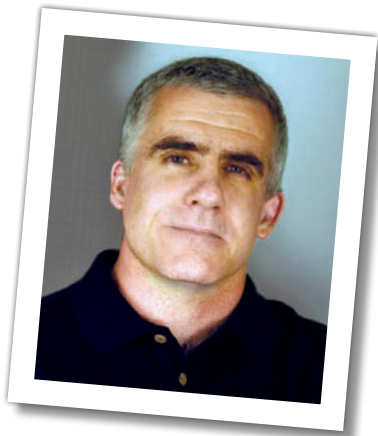
The second bet is on advanced manufacturing: "We think the nature of manufacturing is changing dramatically," he said. Improved automation tools, 3D printing, new materials, and the increased importance of analytical data coming off the factory floor and the supply chain mean that making stuff is increasingly dependent on IT.

The third is the Industrial Internet, GE's term for applying the Internet of Things to its industrial gear, medical equipment, and appliances.

Does Immelt's world sound like one where IT leadership, and the importance of centralized, integrated, secure information systems, are diminished? Do any of these functions sound like ones a chief marketing officer or chief digital officer is keen to take over?

Immelt focused on industries in which GE sells goods, but the demand for data-fueled business decisions holds just as true in retail, biotech, hospitality, media -- you name it. Immelt may have been selling, but I think companies had better be buying when it comes to this line: "Who uses that data the best I think will increasingly determine who's successful in the 21st century." **IW**

▶ **Chris Murphy** is Editor of InformationWeek. Write to Chris at cjmurphy@techweb.com



Rob Preston

Marketing-minded chief digital officers aren't technical enough to lead the changes that companies need to make

LOGS

Rob Preston blogs at InformationWeek. Check out his blogs at:

CDOs replace CIOs? I'm not buying it

There's nothing like a provocative analyst prediction to get people talking. Several years ago, it was Gartner's prediction that marketing organizations will outspend IT organizations on technology by 2017. Not to be outdone, the provocateurs at IDC last week weighed in with their own headline-grabber: By 2020, chief digital officers (CDOs) will "supplant" 60% of CIOs at global companies "for the delivery of IT-enabled products and digital services."

In other words, most CIOs — if the position still exists at their companies in five years — will be relegated mostly to managing and securing infrastructure and applications, according to the IDC prediction, one of 10 that the research firm laid out as 2014 comes to a close. CDOs, meantime, will take on the more strategic (and fun) role of applying digital technologies — mobile, cloud, analytics, social, robotics — to boost revenue, maximize profits, and delight customers. CIOs = back office. CDOs = front office. It's 1989 all over again.

Here's my prediction: By 2020, chief digital officers will be yesterday's fad, joining the ranks of chief innovation, learning, and culture officers. Sure, a handful of them will still exist, but the CIO — customer-focused and product-savvy — will drive the corporate digital agenda in partnership with CEOs, CMOs, CFOs, and other business leaders. CIOs won't go back to being order-takers. "What good CIO would let that happen?" says Cathy Bessant, head of Bank of America's 100,000-person Global Technology and Operations unit, which includes six or seven CIOs.

Those CIOs who can't cut it as digital innovators and customer pleasers will go the way of CFOs who can't think outside of their spreadsheets and CMOs who can't move beyond direct-mail marketing

and banner ads. That is, they'll lose their jobs because of their failure to keep up with the times and corporate priorities.

But that doesn't mean roughly 60% of current technology chiefs aren't up to the challenge of leading the next great technology movement. You can already size up the CIO of tomorrow by looking at the top CIOs of today — the likes of Rob Carter at FedEx, Lynden Tension at Union Pacific, John Halamka at Beth Israel Deaconess Medical Center, Karenann Terrell at Wal-Mart, and Gordon Wishon at Arizona State University — all technically astute, customer-focused, business savvy. They're not MIS chiefs; they're strategists.

Getting to that level isn't a bridge too far even for CIOs who today may be spending too much of their time in the weeds. In a recent Gartner survey of more than 2,800 CIOs in 84 countries, 73% of respondents said they have changed their leadership style over the last three years, and 75% said they need to change their style over the next three years, to meet the demands of digital business. "The exciting news for CIOs," Gartner maintains, "is that despite the rise of roles such as the chief digital officer, they are not doomed to be an observer of the digital revolution."

Despite its optimism about the future role of the CIO, Gartner issued a warning: "Through both nature and nurture, CIOs have evolved into control-style pragmatic leaders," Gartner VP Graham Waller said in a statement. "Given the characteristics of the new digital era, this bias is dangerous. CIOs must invert their style to be more vision-led and inspirational." **IW**

► **Rob Preston** is VP and Editor-in-Chief of InformationWeek. You can write to Rob at rpreston@techweb.com.