

Changing the Game: Monthly Technology Briefs

February 2012

**Big Data: The Next Frontier for Innovation,
Competition, and Productivity**

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People matter, results count.

Big Data: The next frontier for innovation, competition, and productivity

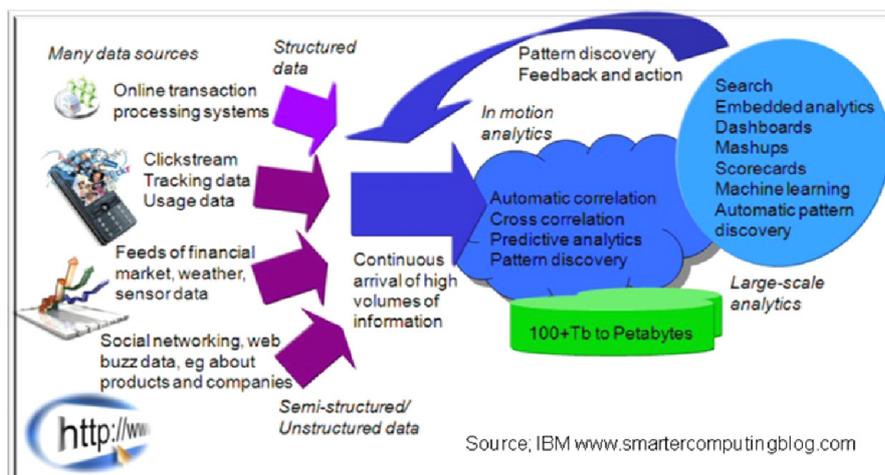
McKinsey's report on Big Data published in May 2011, suggests that Big Data has the power to redefine how businesses can generate value from the enormous amounts of data that are now being created. Indeed, so important did they think this would be that they recently predicted: *"there will be a shortage of talent necessary for organizations to take advantage of Big Data. By 2018, the US alone could face a shortage of 140,000 to 190,000 people with deep analytical skills and 1.5 million managers and analysts with the know-how to use the analysis of Big Data to make effective decisions."*

What is Big Data?

Wikipedia definition: *Big Data is a term applied to data sets whose size is beyond the ability of commonly used software tools to capture, manage, and process the data within a tolerable elapsed time.* Wikipedia also offers the Gartner Group method (Gartner 2001 report) to express the challenges that are based on three dimensions: *increasing volume (amount of data), velocity (speed of data in/out), and variety (range of data types, sources).* Gartner continues to use this model for describing Big Data. The real challenge to understanding Big Data is that its meaning can either be expressed in terms of the issues it addresses in existing Enterprise IT, or as a different set of capabilities around unstructured data arising from Web and Cloud services.

The McKinsey report is based on the latter. It highlights how capturing new and unique insights by exploiting the huge amount of data generated by people, services, smart devices, and telematics can refine competitiveness. As much as 80% of the world's data is now in unstructured formats, which is created and held on the web. This data is increasingly associated with genuine Cloud-based services, used externally to the Enterprise IT. A significant proportion of the data is created in semi real-time as a result of 'streams' of activities. This environment is very different from the Enterprise IT and Business Information internal environment, where the data is structured mostly around transactions and is historic. This unstructured data can now be analysed more deeply with the pooling of resources from virtualized servers. IBM call the former 'streaming data analytics' and the later 'internet scale analytics' offering two different InfoSphere product families as part of their Big Data Platform, in addition to a Hadoop-based NoSQL database called 'BigInsights'. An excellent representation of the entire Big Data environment can be found as a public publication on the IBM.

www.smartercomputingblog.com



The part of Big Data that relates to the expected explosive growth and creation of new value is the unstructured data mostly arising from external sources. Ideally, the ability should include the capability to correlate the ‘insights’ it provides with an enterprise’s own existing indexed knowledge management and Business Intelligence.

Recently an article in ‘*IT Business Edge*’ attempted to bring together various published ‘numbers’ that illustrated the overall interest in the topic.

- 94% - Hadoop users who perform analytics that weren’t previously possible on large amounts of data, according to a recent survey by Ventana Research.
- 60% - Amount of margin improvement by retailers using Big Data, according to a McKinsey & Company report.
- 34% - Enterprises using or planning to use Hadoop within 12 months, according to an international survey of 160 executives and IT officers by Ventana Research.

The big industry players - all of them have their strategies for entering the new unstructured Big Data market. IBM offers its Big Data Platform, InfoSphere in two parts for structured and unstructured data plus InfoSphere BigInsights NoSQL database. HP acquired Autonomy - long famed for its complex ability to find and match unrelated data in widely different formats including media - for its attack on the unstructured Big Data Market. In addition, it has Vertica, a columnar Database that can connect to Hadoop-based NoSQL databases. The HP strategy is to enable ‘hardware’ computational resources with software that delivers the common elements that bind this together as functional ‘platforms’ on which specific ‘services’ can be developed by third parties. Big Data associated with Clouds and Services is seen as one, if not the most important, of the core platforms.

Oracle made its move to address the unstructured Big Data market with its acquisition of Endeca, seen as a leading player in Content Management. It is a good fit to the Oracle Exadata stack of products and capabilities, which enables Oracle to offer the ‘Big Data Machine’ appliance. For SAP, the focus is HANA, its ‘in-memory’ database that combines the real time unstructured data with existing structured data to analyse ‘insights’ with a new generation of tools. Microsoft continues to develop its existing range of products to include more support for unstructured data, notably SQL Server 2012 and increasing capabilities for unstructured data based on Hadoop in Azure and Windows Server.

Teradata acquired Aster Data to enter the unstructured data market, while EMC has Greenplum HD with Hadoop connectors and is working with Intel and Cisco in a partnership to provide a competitive alternative to IBM and HP. In addition, there are a host of new start-ups with innovative products for the Big Data market; Cloudera – the most advanced Hadoop solution; Rainstor and ZL Technology – both offering Big Data Archiving; and MarkLogic – offering Real Time Big Data with ACID properties.

In summary, 2012 looks like being the year when Big Data will come into its own, with customers demanding competitive benefits new and innovative insights into their markets, the rise of Social CRM, and the technology industry introducing new products.

The impact of this and other technologies is discussed in the [Capgemini CTO Blog](#).

Leading Company Results (Revenues)

Leading Company Results (Revenues)			
Full Year	SAP ↑ 14% @ €14.2bn	Intel ↑ 24% @ \$54bn	Google ↑ 34% @ \$37bn
	IBM ↑ 2% @ \$29.5bn		
Q4	SAP ↑ 11% @ \$5.7bn	AMD ↑ 7% @ \$1.3bn	
Q3	RedHat ↑ 23% @ \$290mn	TCS ↑ 2% @ \$2.58bn	
Q2	Oracle ↑ 2% @ \$8.8bn	Microsoft ↑ 5% @ \$20.89bn	
Q1	Apple ↑ 57% @ \$46.33bn		

Movements by Industry Leaders

Cisco UMI Video Conferencing system for High Definition televisions will be closed after low take up of home subscription. www.cisco.com

Oracle Big Data Appliance that was pre-announced at the Oracle Open World is now shipping. It includes Cloudera Hadoop and a package of hardware and software to form a pre-integrated high performance solution for Big Data. **Oracle Netra Sparc T4 Servers** update is aimed at supporting the next generation communication networks. **Oracle Times Ten In-Memory Database Release 2** supports both OLTP and analytical requirements with mission critical levels of operation. **Oracle Retail Point of Service** update adds new functions and increased integration with third party applications. **Oracle Insurance Revenue Management and Billing 2.2.4** adds group and list bill conciliation. **Oracle Database Firewall** adds MySQL support and new management tools. **Oracle Insurance Claims Adjudication for Health** is stated to be the first application in a new suite. **Oracle PeopleSoft PeopleTools 8.52** has a wide range of upgrades and adds iPad deployment as well. **Oracle PartnerNetwork Solutions Catalogue** has been re-released with new products from the claimed 21,000 partners of Oracle. www.oracle.com

HP Omni 27 PC is positioned as a ground breaker, offering a 27 inch screen with HP Magic Canvas to provide the ultimate media experience. **HP TouchTablet WebOS** operating system has an online update release offering various improvements to its interface. www.hp.com

Intel Atom 3rd Generation processor is now shipping. A key feature is the low power consumption for various mobile devices ranging from notebooks to specialized devices in various industry sectors. **Intel and Samsung plan to merge their Smart Phone platforms**, Tizen and Bada respectively with the focus on Intel Tizen as they move forward. **Intel plans to acquire the InfiniBand assets** of Qlogic to strengthen its high performance computing initiative. www.intel.com

IBM CEO Virginia Rometty has picked her new management team to align to her strategy and focuses. **IBM plans to acquire Green Hat**, a provider of tools to automate testing of software deployments and an existing IBM software partner. The major update from **Lotus Connections** is in its social tools and collaboration capabilities. It is adding live stream integration of social site threads, together with topic analysis based on Cognos tools. IBM Social Business Strategy Director in contrast to other analysts views says the **IT department role will grow as it manages Social Networking**. www.ibm.com

Microsoft has signed further deals around Google Android. In the latest case with LG, all together some 70+% of Android users have signed license deals with Microsoft. **Microsoft System Centre 2012 Release Candidate** is now available with the seven parts of the management centre suite combined in a single cohesive package. The Windows 8 blog site has described how **Windows 8 Resilient File System, ReFS**, will extend the previous NTFS based capability to provide new levels of protection against data loss or corruption. On the same site, there is the claim that **Windows 8 Broadband Mobile in a box driver** will provide a single driver that will cover all drivers for significant broadband suppliers. www.microsoft.com

SAP plans to acquire Datango Ag, a specialist provider of tools and trainings to help ERP rollouts in enterprises. SAP stated that it will be an independent product and will not interfere with the relationship with other SAP services providers. **SAP BusinessObjects Sales Analysis for Retail** has added new prebuilt data models, dashboards, and reports to support merchandising. www.sap.com

Google is introducing a new home page that is designed to make the connections and the use of its wide range of services more obvious, as compared to the simple search oriented page of the past. Google is also **acquiring more than 200 patents from IBM** in a deal that covers several technologies. **Google+ Social Network** is claimed to have more than 90 million users. **Google is continuing to remove six more minor services** with support for Microsoft Exchange under 'Message Continuity being closed' and users offered a migration to Google Apps. **PicNik Online Photo Editor** requires users to download or lose their files, **Needlebase, Urchin and the Social Graph API** will all close and **SkyMap App** will become open source. www.google.com

Apple free iBooks 2 App was previewed at an educational event. It was described as placing school text books onto a tablet with an ability to be integrated with interactive media. www.apple.com

Amazon Kindle sold over 1.1 million eReaders out of the total 1.3 million sold in the Christmas period. This makes Amazon Kindle a clear market leader, attracting the highest growth in its library of books offered in a similar manner to the iPad accounting for more apps. **CheckPoint Security Gateways products** are being made available as 'virtual appliances' to Amazon Web Services users to protect their assets on the Amazon Cloud. **Amazon Kindle File sharing with PC** through an App for Windows has been added to the Amazon online store. **Amazon Web Services EC2** has made additions to its free usage of a virtual machine for one year a Windows Server instance. **Amazon DynamoDB** has added a scalable manageable online NoSQL Database service that can be used to store data or to complement the use of Amazon computational resources for heavy duty analysis. www.amazon.com

Open Source Update

Apache Hadoop v1.0 is now available after a six year development with the active support of several major technology vendors to provide a new 'database' capability for unstructured Big Data. www.apache.org

Oracle Java NetBeans Integrated Delivery Environment, IDE, 7.1 is now available for free download with support for Oracle Solaris, Oracle Linux, and most major Linux distributions as well as Oracle WebServer 12c, all of which gain full JavaFX2.0, JDK7 amongst other features. www.oracle.com

HP TouchTablet WebOS operating system has an online update release offering various improvements in interfacing as it is moved by HP into Open Source and continues maintenance. www.hp.com

RedHat Enterprise Server Virtualisation RHEV, 3.0 remains based on the KVM Hypervisor and is claimed to now scale up and compete with VMware in supporting more than 1000 virtual machines with up to 8TB of memory.

www.redhat.com

Standards Watch

The European Commission Online Payments Green Paper asks for all interested parties in various forms of online payment including mobile to submit views on exactly what should be addressed in a series of standards to ensure EU wide consistency. <http://europa.eu.com>

Icann new top level domains, gTLDs, registry is now accepting applications to establish more domains beyond the existing 22 such as the familiar .com, or.org

www.icann.org

The Internet Society announced June 6, 2012 as the IPv6 changeover day.

From this day the default on equipment will be IPv6 and all new equipment will be IPv6 permanently enabled. www.internetsociety.org

More Noteworthy News

Gartner Q4/11 report revealed that World PC sales declined by 1.4%. In Europe the decline was 9.6%, a slight improvement over Q3, which reported 11% decline, and a big improvement over Q2, which was pegged at -19%.

www.gartner.com

IDC report EAME reported PC Sales down in 2011 by 7% with 7 million less units being sold and Q4 drop accounting for more than 2 million of those units.

www.IDC.com

Apple iOS and Google Android device activations over Christmas to new year period were 6.8 million with 242 million App downloads, claim Mobile Analysts Flurry. **Tablet sold 72.7 million pieces in 2011- a growth of 256%** against a 30% growth of Notebook PCs to reach 258 million. www.flurry.com

Nielsen say Apple iPhones growth is higher than Google Android in December 2011 shipments, with sales up to 44% of the total Smartphones sales, boosted by the new 4S unit. www.nielsen.com

Dell Compellent Storage Center 6.0 update extends storage capacity to 16 exabytes and provides 64 bit block addressing with the management of the Dell Compellent Storage Arrays and support for VMware vSphere Storage APIs for Array Integration, VAAI. www.dell.com

Lenovo IdeaTab S2-10 running Android 4.0 is claimed to be one of the lightest thinnest Tablets. More **Lenovo IdeaPad UltraBooks** versions have been added to the range, and a new updates to Notebooks and desktops at the Consumer Electronics Show. www.lenovo.com

The European Union eCommerce initiative aims to double online commerce as a move to create jobs and drive growth through a sixteen point action plan. <http://europa.eu.com>

Acer Aspire and Timeline Ultrabooks offer the thinnest in class, plus wide ranging connectivity options including the new Thunderbolt standard.

www.acer.com

Nokia is withdrawing the Symbian brand name from use, so the previous Symbian Belle user interface is now upgraded and renamed as the Nokia Belle.

www.nokia.com

Samsun will invest \$41.8bn in 2012 to continue 'leadership' in smart phones and tablets with more R&D, New Factories, and new Chip Sets.

www.samsung.com

RIM Blackberry PlayBook price cuts are being made due to low sales volumes. **RIM new Mobile Fusion Platform** advanced information states that it will integrate Blackberry and Playbook fully into existing IT systems and provide management capabilities for Apple and Google devices. **Co CEOs Balsillie and Lazaridis have resigned** after shareholder pressure though both remain on the board with COO Heins becoming the new CEO. www.blackberry.com

Yahoo has a new CEO in Scott Thompson, an ex PayPal executive with the mission to turn round the company. **Yahoo Founder Jerry Yang** has resigned from the board of Yahoo and all other Yahoo subsidiaries completely ending his relationship with the company he founded following the appointment of a new CEO. www.yahoo.com

CheckPoint Security Gateways products are being made available as 'virtual appliances' to users of Amazon Web Services to protect their assets on the Amazon Cloud. www.checkpoint.com

Orange Tahiti Tablet is its own brand tablet based on Android 3.2 aimed at providing an ultra low capital cost in exchange for a monthly contract.

www.orange.com

AvePoint DocAve 6 Platform for deploying and managing Microsoft Sharepoint as a customized user experience has new user interaction and more scale, plus strong governance in the use of the collaboration environment that SharePoint creates. www.avepoint.com

Infor 10 Road Warrior is a mobile CRM and BI package including integration with Skype and FaceTime that claims to provide unique levels of insight onto mobile devices. www.infor.com

Twitter plans to acquire Summify, an aggregator and distributor of news feeds with management. www.twitter.com

Sourcefire FireAMP threat - analysis claims to be able to identify new and complex Malware by using a combination of Cloud Resourcing and Big Data to carry out more analysis than previously possible. www.sourcefire.com

Meraki Ethernet Switches MS series add new edge of network 24 and 48 port units together with **MX series** for branch use security appliances. It claims differentiation around the ease of automatic management, including recognition and auto inspection of new devices while connecting. www.meraki.com

The Consumer Electronic Show CES in the USA took place in the second week in January 2012 where a large number of new products were released from 'hardware' oriented vendors. The following are some of new launches from the best known brand:

Lenovo Yoga IdeaPad, a multi form and function device claimed to be able to be a notebook with a keypad. It is a tablet with touch control, self supporting itself as a display that will run Windows 8 when released in order to provide the different form factor functionality. www.lenovo.com

Cisco Videoscape TV Service Providers Platform has new services for its 'media from the cloud' technology, as well as announcing several new deals with major service companies. www.cisco.com

Samsung Series 9 Notebook and Series 5 Ultrabooks have been given a makeover with new features and a smaller size. www.samsung.com

Asus Tegra 3 Tablet is a low cost circa €150 tablet running Android 4.0. www.asus.com

HP Envy 14 Spectre Ultrabook is aimed at the style conscious buyer with its slick finish, slim profile, and low weight. HP claims that its 14 inch display and high spec will also offer performance and a unique wireless link to remote speakers that will support good music and media playback quality. www.hp.com

Sony adds to its Walkman, Vita, and Tablet P product ranges along with new features. www.sony.com

Netgear Home Networking announced a complete and comprehensive home solution combining a wifi system with a router and a backup unit. www.netgear.com

Huawei Ascend P1S smart phone claims to be the thinnest in the market and runs on Android 4.0. www.huawei.com

Intel Atom Medfield SmartPhone reference design is announced to take Intel into a market that historically they have not competed in, together with the **Intel Clover** Trail Tablet reference design. www.intel.com

Acer Aspire S5 Ultrabook claims to be the thinnest ultrabook, complete with Solid State Drive and Intel Processors as well as HDMI, USB 3.0, and Thunderbolt connectivity. www.acer.com

RIM Blackberry Playbook OS 2.0, an updated version of the existing tablet, was previewed together with new smartphone models running Blackberry 7.1 to add new features such as Blackberry Tag that allows phones to swap information when tapped together. **Blackberry Bold 9790** with the new 7OS operating system is now shipping. www.blackberry.com

Audi Cars will be fitted with LTE and Near Field Connectivity that will link a wide variety of in car features to the wider Internet and Services. www.audi.com



About Capgemini

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