

Changing the Game: Monthly Technology Briefs

January 2012

**Ten Game-Changing Technology
Shifts for 2012**

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People matter, results count.

Ten Game-Changing Technology Shifts for 2012

There are three terms that are at the center of the hype cycle at the moment; **Cloud, Mobility, and Big Data**. None of these are a single technology; instead a clutch of new technologies make up these three headline changers. In addition, there is one other mega trend referred to alternatively as the 'bring-your-own-revolution', 'the tablet revolution', 'the consumerization of IT', or even 'the 'post-PC era'. It can be summed up as the **shift from the computer being at the core of technology development to people becoming the central focus**.

It is important to align this change to Capgemini's TechnoVision and its interpretation of the business impact of different clusters of technology under the following headings: "Invisible Infostructure," "Sector-as-a-Service," "Thriving on Data," "Process-on-the-Fly," "We Collaborate," "You Experience," and the complex, but important, notion of "LiberArchitecture" – the freedom to use an open and constantly available environment. The following ten technology groupings provide a view based on technology that does not necessarily align to a business driven change in the manner of TechnoVision, though there are some obvious similarities.

1. The Core Change - People rather than IT are the new focus

New forms of connection and delivery enable users to drive their own choice of place and manner of working, finding information, and even in choosing what software they download and use. This intensely personal use of technology supports more intellectually based and decentralized activities. It has also started a revolution in how the 'front office' activities of a business and its staff can function independent from the restraining infrastructure of an enterprise desktop and office.
Example: The Consumerization of IT, Bring Your Own, and the Post-PC era.

2. Intuitive presentation and usability

There has been shift away from the PC, and its attendant keyboard and mouse, towards more portable devices used whenever and where ever to suit circumstances. This has introduced new, interactive techniques based on touch screens and gestures that also suit a change in using wider media for interactions beyond mere text using a keyboard. The drive to display information in optimal ways for interpretation and interaction by a human rather than data for a computer is boosting a new generation of 'services' called 'apps'.
Example: Smartphones and Tablets, Gesture Driven, and increasing use of Multi-Media.

3. From big IT to small services

The shift towards personal choice and assembly of small granular services rather than enterprise level deployment of monolithic applications changes the development methods and methodology. Large numbers of small services can be rapidly orchestrated into chosen processes, and, in a similar manner, quickly changed again. Solutions can be small, experimental and innovative. Even deployments don't have to be big-bang, everyone-at-once affairs. These new services will present new challenges and organizations need to make sure they don't underestimate the numbers of services or the complexity of managing this environment.

Example: The creation of App Shops and creative developers of services.

4. User-driver Environments

The three previous groupings have given rise to completely new user centric environments, brought about by Web 2.0. Now social networks allow the person to define their topics of interest and involvement with the ability to 'receive' selectively, as opposed to emails where the sender is in control. Huge networks are developing around the 'topic' linkages as information moves to include 'collective consciousnesses of the social network.

Example: Social CRM, Social Networks, and external web-based services.

5. Big Data means more than a lot of data

Location and context-aware Rich Internet Applications are bringing both new requirements in collection and use of information. This, in turn, means a wide range of data formats including blending multi-media in with existing traditional data definitions. Intelligence takes on a new meaning around the rapid searching and assembly of unstructured data triggered by an event or circumstances.

Example: NoSQL databases, Search Engines, and image recognition.

6. Tight-coupled computers to loose-coupled people

Computers and applications 'push' structured process data integrated through a predetermined set of fixed 'tight-coupled' connections, as defined by client-server architecture. In contrast, people interact and 'pull' unstructured information and services on a cloud or web architecture that is defined as 'loose coupled'. The former is supported by technology-based integration of computer systems through enterprise architecture. For the latter, the user and devices become the focus, with management of 'services' the new integration issue. When using the 'loose-coupled' Web/Cloud, the user chooses where to go as against a traditional enterprise application environment, which offers only predetermined transactional paths.

Example: The 'true' cloud based on the Internet/Web, second generation browsers.

7. Development and deployment methods

Small personalized services, which will run on cloud platforms and are, therefore, simple scripting assemblies, require a radically different approach to development than traditional monolithic applications with the need to interface with operating systems to ensure performance and security. The time taken for development and deployment is also a reflection on how long it will stay in service, i.e. a six-month traditional application development may stay in service for many years with ongoing maintenance requiring full documentation, whereas a week-long services development and deployment may have a life of only a few months and then be scrapped rather than maintained.

Example: Agile Development, Force.com, and the rise of Platform-as-a-Service.

8. Next generation data centers deliver true cloud

The shift from deterministic number of applications and systems in a traditional IT environment to the ability to provide totally flexible allocation of computational resources on demand defines the 'next generation data center' - an industry recognized term. In addition to the obvious flexibility required to support the people inside the enterprise working in new ways, the radical shift in requirements towards participation in a common external environment with other enterprise data centers, as part of the 'true' cloud environment, creates the need for a new 'cloud services' layer. The work of the Open Data Center Alliance and other similar bodies focuses on developing common standards for next generation data centers to host services from internal and/or external sources.

Example: Standardized and online, 'bare metal' based running cloud layer, and increasingly Green.

9. Mobility in every sense of the term

The rich variety of devices using wireless connectivity either 3G or WiFi severs the old 'fixed' understanding of what and how a device, usually a PC, is connected into a corporate enterprise network. The term **Mobile** has been used to describe a traditional client-server application onto an external device with intermittent connectivity requiring complex synchronization and resulting data held on the device outside the enterprise. Mobility is usually referred to as being browser cloud based with little or no data being held on the device allowing any browser connectivity and interaction with any cloud service at anytime by any connection type e.g. total mobility in all the elements.

Example: Android Smartphones and Tablets, Apple iPod, iPhone and iPad and SAP Mobility Platform.

10. The redefinition of Security

Security is clearly a major issue as the expansion of activities moves outside the enterprise invoking wider interactions in semi-public environments with many unknown combinations of people and services. However, traditional IT based on transaction (i.e. enterprise data rich, environments inside the firewall) demands its own approaches to protecting the enterprise data center model around firewalling techniques. At the same time, the new external world cannot function if its devices are subjected to the locked down (or VPN connected) demands necessary to protect both PCs and the enterprise data. A new and very vibrant set of approaches and technologies is delivering an appropriate governance and security model.

Example: Jericho Security, Closed App Shop models, etc.

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

Leading Company Results (Revenues)

Leading Company Results (Revenues)		
Q3	Oracle ↑ 8% @ \$8.73bn	Redhat ↑ 23% @ \$290mn
Q1	Accenture ↑ 17% @ \$7.1bn	

Movements by Industry Leaders

Cisco CloudVerse leads the Cisco positioning on Clouds and is a new packaging of existing and new products into a cohesive approach by including Unified Data Center, Cloud Intelligence Network, Cloud Applications, etc.

www.cisco.com

Oracle Primavera Contract Management Business Intelligence Publisher Edition for construction contract managers now including all templates and documents tools to eliminate the need for additional Office toolsets. An upgraded version of **Oracle WebLogic Server 12c application server** is positioned as the central product in the Oracle Cloud Application Foundation. **Oracle University** is offering new courses based on Solaris 11 to help system administrators to understand how to achieve optimum capabilities with Clouds. **Oracle Sun Solaris Cluster 4.0** update for Solaris 11 adds new features around deploying and managing virtualized and cloud services. **Oracle JDEdwards EnterpriseOne Tools 9.1** upgrade features a complete redesigned user interface as well as better work management to increase productivity. **Oracle Financial Services Liquidity Risk Management** supports all the aspects of Basel III including the new Liquidity Coverage Ratios. **Oracle Solaris Studio 12.3** update supports software development of C, C++ and Fortran solutions on Solaris. **Oracle Tuxedo 11g** provides integration with Oracle Exadata Elastic Cloud for updating Mainframe applications. **Oracle Siebel Public Sector CRM 8.2.2** is designed to support new online citizen services. www.oracle.com

HP Project Odyssey Road Map for its Server business shows a gradual merging of the capabilities for any system to run Windows, Linux, Hp-UX and OpenVMS including mission critical systems. **HP B6200 StoreOnce Backup System** is a new massively high speed de-duplication, storage and backup system. **HP x5000 G2 Network Storage System**, co-developed with Microsoft, supports up to 26,000 users. **HP Data Protector Upgrade** includes HP Labs StoreOnce in a new integration of services. **HP Idol 10 update** blends Autonomy with Vertica to bring the handling of structured and unstructured, and its use into a new level of capability. HP will be launching a **range of cloud hosted enterprise apps** in 2012 to extend their current IaaS, and PaaS services to cover SaaS as well. **HP Application Lifecycle Intelligence (ALI)** product has been added to the **HP Application Life Management** portfolio and allows dynamic tracking of changes to lifecycles. **HP Social Intelligence Solution** provides online tracking of an enterprises name on social sites. **HP and Microsoft partner** to offer cloud communications and collaboration tools as an integrated bundle for use either on a private cloud or on a hosted public cloud; the package includes Office, Exchange and SharePoint. **HP Thin Clients with MS Windows Embedded Device Manager** is a first that allows management of conventional PCs with MS System Center Configuration Manager 2007 to be extended to thin client devices. **HP is to acquire Hiflex Software**, a 'web to print' and information systems vendor. **HP AppSystem for SAP HANA** packages a converged infrastructure of ProLiant BladeSystem, and HP X9300 IBRIX Network Storage and an HP P6500 Enterprise Virtual Array. www.hp.com

Intel and Micron claim breakthrough in Flash Storage with new 128Gbit achievement and the launch of a mass produced 64Gbit version. **USB Implementers Forum has certified** Intel 7 Series for PCs and C216 Series for Servers has being compliant with the SuperSpeed USB 3.0 standard. **Intel Graphic Performance Analyzers 4.3** update for its development tool set for performance optimization has got new features including support for Microsoft DirectX. www.intel.com

IBM is to acquire Curam Software, a specialist in government social programs software. In a further **acquisition**, **DemandTec** adds new cloud based analytics capabilities focused on commerce. **IBM Strategic IP Insight Platform (SLIP)** supports rapid insights into complex patents and research data to find new possibilities. The **EU has ruled** that IBM must make information and spares for Mainframes more freely available following an investigation into its 'anti-competitive' stance with Mainframes. **IBM is to acquire Emptoris Inc**, a vendor of 'spend management' tools for procurement and supply chain. **IBM Smarter Computing Workload Analysis** an online tool to help a CIO analyze ways to save money. www.ibm.com

Microsoft is to acquire VideoSurf, an Israeli start-up in applying Video Technology. **Microsoft and Yahoo** have signed a confidentiality agreement thought by some analysts to be the beginning of new discussions on the acquisition of Yahoo by Microsoft. **Microsoft Office 365** service has been extended to include a version for Apple Mac. A developers' preview version of **Microsoft Internet Explorer (IE) 10** is now available and introduces new handling for accessing and combining feeds from multiple sites CORS or Cross-Origin Resource Sharing. **Microsoft Exchange Server 2010 Service Pack 2** is now available to be downloaded but does have some preconditions before deploying, including an Active Directory update. **HP and Microsoft partner** to offer cloud communications and collaboration tools as an integrated bundle for use either on a private cloud or on a hosted public cloud; the package includes Office, Exchange and SharePoint. **Microsoft Xbox LIVE** introduces gesture control including voice as well as hand movements. **Microsoft Silverlight 5** is now shipping with improvements to security and performance. **Microsoft Azure Database Service** adds Node.js Javascript with new Software Development Kit as well as new affordable charging options. **Microsoft OneNote 1.3** for Apple iOS devices adds new iPad specific features. **Microsoft Office 365 meets EU cloud data and privacy requirements** claims Microsoft, stating it will be signing the EU Model Clauses Framework. www.microsoft.com

SAP is acquiring SuccessFactors, a major US based provider of SaaS based services with a base of 3,500 enterprises, who is a specialist in 'talent management' or people-centric services. SuccessFactors will operate as a separate SAP company and offer a new route to the market to deliver cloud based solutions that offer a front office and HR extension to the current SAP offerings. **SAP Banking Services 8.0** updates mandatory compliance and makes mergers and acquisitions easier to achieve as well as other feature updates. **SAP HANA is being offered as a platform** for software developers and vendors to develop a new generation of solutions around. **SAP Social Media Analytics** is based on NetBase real-time analytics software being resold by SAP. www.sap.com

Open Source Update

Eclipse EGL Web Developer Tools v0.7 is positioned as a completely new 'ground up' set of tools and capabilities based on the IBM donated tools but with many additional tools included to build Rich Internet Applications or RIA that will run on most, if not all, popular browsers. www.eclipse.org

RedHat Storage Software Appliance for Unstructured Data adds the Gluster FS 3.2 Filing System to RedHat Enterprise Linux 6.1 to create a full standalone appliance image for x86 servers and associated storage. www.redhat.com

HP webOS will be released as an Open Source for tablets and smartphones, with HP continuing development. www.hp.com

Standards Watch

The European Commission Open Data Strategy has been launched with a new portal to provide access with the data initially free but in time the EU expects to generate €40 million of revenue from selling access to its own data. <http://europa.eu.com>

Wireless Gigabit Alliance (WiGig) has completed its Protocol Adaption Layer (PAL) specifications for the short-range high bandwidth standard that will compliment next generation WiFi. <http://wirelessgigabitalliance.org>

More Noteworthy News

Gartner Q311 Server Shipments by revenue makes IBM number 1 but going by the units shipped HP is number 1. Both, however, saw a small drop in their performance in a market with a shift towards X86 servers and a small amount of global growth, against a drop in European demand. www.gartner.com

NPD Analysis of the Tablet market showed a surprise result for HP after its price reduction of its ill-fated HP TouchPad placed it number 2 in the Tablet market last quarter. Apple iPad still leads massively with sales of 11.12 million but in the non-Apple iPad market of 1.2 million units HP TouchPad led at 17%, followed by Samsung at 16%, then Motorola and Acer each with 9%. www.npdgroup.com

Statcounter Browser shares for November sees Microsoft Internet Explorer maintain first place with its share now down to 40%, mostly due to Google Chrome moving to second place at 25.69%, just overtaking Firefox for the first time at 25.23%. **NetApplications report for the same period** shows Chrome still trailing Firefox but both agree that Chrome is taking market share very rapidly. <http://gs.statcounter.com/>, <http://www.netapplications.com/>

Salesforce.com Social Workflow adds the thread conversations analysis capabilities of newly acquired Radian6 technology together with social media analysis of a claimed 150 million sources. www.salesforce.com

VMware Zimbra Collaboration Platform gains the Huddle email indexing and archiving service via a connector tool to the Huddle service and embeds it natively in Zimbra. www.vmware.com

EMC Unified Analytics Program (UAP) combines its Greenplum database with Hadoop NoSQL over their storage products into a single solution. www.emc.com

Dell Streak 7 innovative crossover between a tablet and a smartphone based on a 7 inch screen has been discontinued, as customers seem to want to smartphones to be smaller and tablets to be larger. www.dell.com

Nokia Siemens Network (NSN) aims to cut 17,000 roles worldwide over the next two years as it concentrates on its core offerings.

www.nokiasiemensnetworks.com

Nokia wishes to delist from Frankfurt Stock Exchange due to low trading volumes. www.nokia.com

Fujitsu Cloud Connect Collaborate provides a range of Fujitsu hosted services for unified communications and collaboration tools on a pay per use basis with the ability to provide connections to other cloud based services. www.fujitsu.com

RealVNC Viewer v2 allows an Apple iPad user to gain remote control over their PC loaded with VNC Server. The iPad element comes from the AppStore and VNC Server is distributed conventionally. This enables the user to have both an outside the firewall personal iPad and an inside the Firewall Enterprise Governance PC, and use both simultaneously with full security of the enterprise PC. www.realvnc.com

Acer Liquid Express Smartphone adds Near Field Communication to an Android 2.3 smartphone, which is otherwise an updated version of the previous model. www.acer.com

RIM BlackBerry Mobile Fusion is a new move by BlackBerry to manage mobility devices including Apple and Android together with its own products including PlayBook. www.blackberry.com

Spiceworks is opening in Europe, where it already has a quarter of its users for its 'free' IT management platform combined with paid for services supplied on a SaaS basis in its model of acting as a virtual IT department to SMEs.

www.spiceworks.com

Bitdefender Mobile Security extends the threat management from the Bitdefender online scanning service to cover Android devices with update protection delivered as a service. www.bitdefender.com

Riverbed Steelhead RiOS 7 operating system upgrade aims to support a new generation of apps that are based on Silverlight and Flash by controlling and managing various streams of data. www.riverbed.com

Polycom CX700 video conference system offers full integration with Microsoft Lync Unified Communications products and functionality. www.polycom.com

Facebook is acquiring Gowalla, a location-based social networking start-up solely for its technology, and may well shut the existing Gowalla social network down. www.facebook.com

Texas instruments RamSan 720 brings flash memory storage to a new level complete with RAID redundancies and between 6 and 12 Terabytes of storage. www.ti.com

Aruba is acquiring Avenda, an enterprise WiFi provider that supports the necessary security for employees to bring their own devices (BYO). www.aruba.com

Sophos Mobile Control 2.0 extends the limited original version that provided remote administrative management and security policies to cover an Apple iOS, Android, BlackBerry and Windows Mobile devices. www.sophos.com

AMD A series Accelerated Processing Units now have unlocked clocks to allow new high performance web/cloud services to be developed that load processors in different ways. www.amd.com

Logica is to cut 1,300 roles in UK, Benelux, and Sweden due to its belief that conditions in Europe are 'worsening'. www.logica.com



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