

# Changing the Game: Monthly Technology Briefs

April 2012

**Clouds, Mobility and Big Data Together  
Create a Revolution in Business Capabilities**

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[www.capgemini.com/ctoblog](http://www.capgemini.com/ctoblog)



People matter, results count.

## **Clouds, Mobility and Big Data together create a revolution in Business Capabilities**

In their 2012 predictions three major industry analysts focused on what IDC described as the twenty year shift in technology eras. They cited the introduction of the PC, Client Server, and ERP as the last era. Forrester focused on the vulnerability of many of the leading technology vendors to the change. Gartner, always the more conservative of the two, was prepared to predict that up to 35% of technology purchase and use would move away from the control of the traditional CIO and IT department by 2015.

The challenge is that these statements coupled with an unfulfilled set of expectations on Cloud, new hypes on Mobility and Big Data, don't offer any description of what will be bought, by whom and most of all for what business purpose. Examining each technology on its own doesn't show the potential either as it will then be used as an extension of existing enterprise IT capabilities, the cause of much of the disillusionment in Clouds. When these three technologies are used together, plus new software Apps, or Services, they create an entirely new set of capabilities with a focus on the Front Office of an enterprise. This focus is on doing business externally around new 'innovative' business models, rather than the traditional role of IT in supporting the automation of Back Office internal processes and transactions.

A business example makes this much easier to understand and what follows is an extract from the new Capgemini White Paper entitled 'Clouds; Time to Deliver', on how Clouds, Mobility and Big Data create a new set of business capabilities. This introduces the terms 'Inside-Out' to define internally oriented traditional IT where the focus is 'inside' the Firewall and any activity 'out' side the Firewall is managed on the internal governance model around locked down, encrypted PCs. 'Outside – In' refers to business activities where the value is generated externally from the Firewall through interactions with other people and services which typically will not be part of your Enterprise.

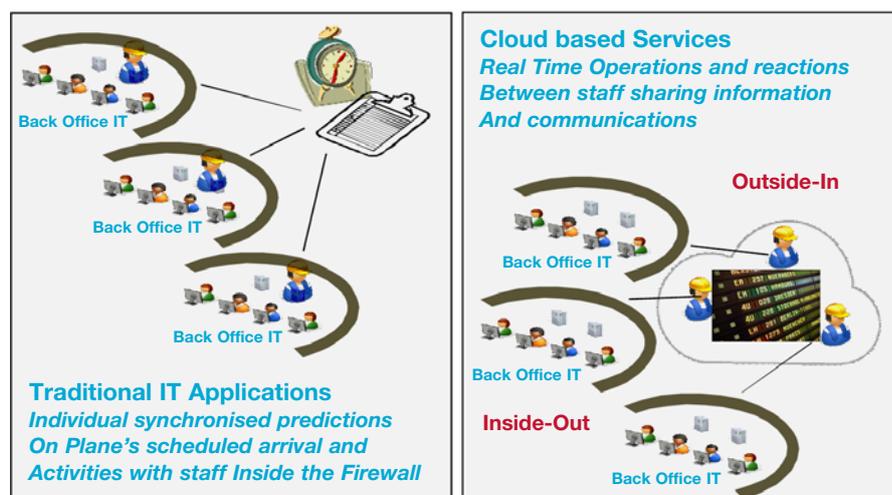
Business Managers see huge value in these areas which bring the application of new technologies to new business areas, usually it is thought that these will be sales or Social CRM focussed and this is true. However as this use case illustrates the business applications are much, much, wider.

### **A Use Case for Understanding New Capabilities**

The operating authority of a major airport is facing demands to improve the operational management of its increasingly congested airport, both to improve real time efficiency in the face of the increasing number of unplanned events, (late arriving aircraft, lost baggage, etc), and the expectations of passengers and airlines that information flows will be provided both in a more timely way and in different people-orientated formats, or feeds. Already in the airline industry there have been several announcements of airlines individually deploying large numbers of Tablets, or Smart Phones to improve 'operating efficiency' to front line staff. In plain language, this means using Mobility to allow staff to deal with the many unplanned events, from missing passengers to lost luggage, finding the passenger, steps to replenishing food and drink, or a last minute change in the gate an aircraft arrives at etc.

The existing, and traditional 'Inside Out' IT systems of all the various members of an airport ecosystem; airport operator, airlines, baggage handler, food services, etc, etc, will show each separately their individual enterprises planned activity from their secure and closed enterprise IT. In each enterprise the data comes from the central ERP systems out to the edge of the enterprise in the form of structured non real time information to show what should happen and if it does happen then the whole ecosystem will be synchronised and 'resource planning' will have succeeded. Deploying Mobility based on existing Enterprise Applications may allow more freedom to permit staff to work away from fixed desks, but still limits the information to the supposed 'schedule' of activity.

The operational improvement challenge that needs to be addressed is that in the 'real' world a series of unforeseen events occur that, to be solved, require the staff involved to be notified of each event and to be able to interact together to solve each event in an optimal way. The better any business can do this the higher their customer satisfaction and most likely the lower their costs through optimising their responses. However to do so is both highly people-centric as it requires using real time data ending in a 'work around' solution or process to suit the circumstances, and a shift in the technology or IT model. This is where the crucial difference lies between 'inside-out' enterprise IT and its governance and security limitations and the new 'outside-in' model based on Clouds, Mobility and Big Data, which provides all the answers in the above scenario.



Shifting the 'on tarmac' front office operational staff outside the firewall and supporting them on a common shared cloud with the other members of their working ecosystem, creates a revolutionary improvement in operational capability in their prime function. The above diagram describes this process visually. The individual enterprise employees are now able to function as a collaborative team sharing information, communicating, planning and organising in real time using information and data that is not part of their enterprise internal IT systems and therefore by passing the necessary restrictions imposed by 'Inside-out' traditional IT. Neither does this approach require any of the people involved to be present in each other's existing enterprise IT systems, the current barrier to addressing this kind of transformation.

There is still a need for those working 'outside-in' to handle the 'in' part even if it is a secondary focus, for instance to see what was planned to happen for comparison purposes, or to update records on what has been the final outcome. This does not necessarily mean providing a full enterprise application on their machine with the corresponding concerns of access and security; instead it means the adoption of thin clients models working solely in the presentation layer of the browser. Browser based 'representation' of data avoids the issues concerning moving enterprise data outside the enterprise and placing it at risk.

Outside-in workers are free to use new sources of information from the cloud/big data environment too, such as the very successful iFly app. iFly can be loaded on a smart phone or tablet and on initiating connects to the iFly cloud service which in real time orchestrates the unstructured information on any particular flight and answers queries that airline staff are unable to answer through their own internal IT systems. There are many stories of passengers using iFly to inform airline staff of the status of their own aircraft and flights at chaotic times such as winter storms creating havoc with the planned schedules.

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

## Leading Company Results (Revenues)

Leading Company Results (Revenues)	
Q3	<b>Oracle</b> ↑ 3% @ \$9.0bn
Q2	<b>Accenture</b> ↑ 13% @ \$6.98bn

**Cisco is to acquire Lightwire** a provider of advanced optical interconnect technology to support the growth of optical based networking. **Cisco and NetApp FlexPod** provides a validated design architecture for providing a Microsoft private cloud. **Cisco Next Generation Hotspot** is a software upgrade for existing Cisco WiFi access points that provides a seamless handoff between adjacent WiFi cells based on the **Wireless Broadband Alliance NGH Hotspot 2.0** specification. **Cisco Adaptive Security Appliance CX** context aware firewall allows micro management of 1000 plus applications. **Cisco TrustSec and Cisco Identity Services Engine** have also had upgrades as part of an overhaul of the entire **Cisco SecureX Framework**. **Cisco Unified Computing System** has been up dated with the new intel Xeon E5-2600 processors and a massive increases in memory as well as boosts to network and management capabilities. **Cisco is to acquire NDS** a UK based video delivery platform aimed at the service providers and media markets. **Cisco Bring Your Own Device, BYOD, initiative** will link a number of products together in order to provide a cohesive set of enterprise tools to support the rising number of user owned devices. **Cisco Prime Infrastructure 1.1** adds a new management platform to monitor end to end application and apps performance across both wired and wireless links. **Cisco Unified Network Software 7.2** upgrade supports up to 30,000 devices on IPv6. [www.cisco.com](http://www.cisco.com)

**Oracle Enterprise Healthcare Analytics** has been upgraded to include mobility and big data analytics together with other improvements. **Oracle RightNow CX Suite** providing 'great customer experience' has new capabilities including a Knowledge KPI, Facebook conversion interaction, etc. **Oracle Mobile Project Portfolio Management** adds iPhone and Web access for collaboration using Primavera P6 Team Member and Web Interface. **Oracle Airline Data Model** consolidates and analyses passenger information to find new insights. **Oracle Communications Converged Application Server** linked to Oracle Exalogic Elastic Cloud offers Communication Service Providers a high volume data centre for IP based multimedia services. **Oracle Exalytics In-Memory Machine** has been introduced to support 'real-time' data analytic requirements. **Oracle Business intelligence Foundation Suite** adds a claimed 87 new product capabilities for better performance, wider analysis and simpler interfaces. **Oracle JDE EnterpriseOne Mobile Expense Management** supports mobility based workers with remote expense entry and management. **Oracle announced compliance with TM Forum Framework Solution** for several products claiming to be the first vendor to achieve this. **Oracle Linux Unbreakable Enterprise Kernel Release 2** based on the Linux 3.0.16 Mainline kernel upscales memory and resource management as well as being designed to be a virtual guest. Additional Oracle features include DTrace, Btrfs file system and Linux Containers a new isolation capability. **Oracle AutoVue 20.2** extends the visualisation of the elements of a decision by incorporating different data into 'Augmented Business Visualisation', ABV. [www.oracle.com](http://www.oracle.com)

**HP Enterprise View Risk Management System** aims to be able to provide a total monitoring and management of every risk type from unpatched software to firewall deficiencies and report violations. **HP Cloud Connections Partner Program** will offer reference designs that will build in compliance and security requirements. **HP Fortify Mobile Security Platform** update includes adding iOS and Android devices and a new server side tool to check security before deployments. **HP Z series Workstations** have gained new performance by upgrading to the Intel Xeon E5 chip family. **HP Proliant Servers** range of six servers gain new management features, more memory and improved network connectivity. **HP Always On Support Services** have been upgraded to offer quicker support for virtualised infrastructure. **HP LeftHand P4900 SSD Storage System** adds a new solid state virtualised Storage Area Network, SAN, array that can be standalone or part of a LeftHand storage group. **HP Application Lifecycle Intelligence tools** have been reworked as a comprehensive set to monitor and manage social applications and mobile apps. **HP Enterprise Collaboration Service** offers capabilities to integrate social networks into enterprise IT allowing external collaboration with internal applications. **HP PC and HP Imaging and Printing Groups are to be merged** as the HP Printing and Personal Systems Group, PPSG, rationalising the costs and focussing all the products towards end user computing services for a stronger market positioning. [www.hp.com](http://www.hp.com)

**Intel SmartPhone Chips** gain their first major customer with Orange deciding to launch a Europe- wide range based on the Intel design. **Intel Sandy Bridge Roadmap** will include the addition of the networking architecture to the processor architecture as a new move in computing chip functionality. **Intel Cloud SSO** 'identity and access management as a service' is being beta on the Force.com platform and is linked with the Intel owned **McAfee Cloud Security Platform**. Intel and **Visa will collaborate on Mobile Commerce** to develop new solutions around financial services on Mobility devices. **Intel E5-2600 Server family of processors** is now shipping with a range of performance and energy usage improvements plus nineteen new motherboard designs. **Intel UltraBook platforms** will be offered as 'white label' packages to enable small niche suppliers to launch and sell own brand UltraBooks. [www.intel.com](http://www.intel.com)

**IBM has reduced its headcount by 1000 to 1200** people spread across a variety of activities including delivery, services, and marketing as part of its normal 'management of costs'. **A new set of Analytic tools** are aimed at supporting CFOs with the new USA Financial Accounting Standards Board demand for leased assets to be shown on balance sheets. **IBM Secure Enterprise Desktop** was a preview at CeBIT of a new cloud based desktop service supported from Cloud resources that will be launched later in the year. **IBM Smart Cloud Foundation Platform** offers a comprehensive set of tools for managing and troubleshooting all aspects of cloud based services together with mobility and desktop devices. **IBM Smarter Analytics Signature Solutions** is a packaging of IBM products into a single integrated set of solutions for predictive analytics. [www.ibm.com](http://www.ibm.com)

**Microsoft Visual Studio 11 beta plus .Net Framework 4.5 Beta** are now available for download with new features for collaborative and workflow use. **Microsoft msnNOW** is a new service to deliver at one place news from social networks across the web on technology topics. **New Healthcare joint venture with GE** called Caradigm plans to link technology and clinical expertise to develop solutions. Microsoft owned **Skype showed a beta for Windows Phones** of an equivalent to Apple FaceTime at the Mobile World Congress. **A preview of Windows 8** at the Mobile World Congress attracted great interest and praise for its combining into a single operating system, phone, Tablet, PC, gamer and TV. Claimed to have more than 100,000 code changes and offering touch, mouse and keyboard inputs plus a new Windows Store open now for developers to create Apps. **Microsoft Windows Server 8** is now available as a first beta for developers

to test. **Microsoft Azure Outages** were caused by the February 29<sup>th</sup> leap year date being poorly handled. **Microsoft Trustworthy Computing Next, TwC, project is a re-launch** of the original initiative to improve client-server security, but this time aimed at Cloud-based computing and including Privacy for People as well as Security for Computers. **Microsoft PocketWeb** is claimed to significantly improve searching from Mobility Devices by predicting web addresses and preloading the pages whilst the search is in progress. **Microsoft SQL Server 2012 database** is now released to manufacturing for release on 1<sup>st</sup> April and is claimed to be a 'big data' supportive version. **Microsoft Windows 8 developers** are being offered support via a new Microsoft developers site to port iPad and iPhone Apps to Windows 8. Microsoft and Nokia are partnering in AppCampus, a three year €18 million new program at Finland's Aalto University to develop a new range of Windows 8 based applications. [www.microsoft.com](http://www.microsoft.com)

**SAP Afaia 7 Mobile Management Tool** update includes a new user interface with other changes to make managing mobiles simpler and more effective. **SAP Recalls Plus** is available from the USA Apple App shop and uses HANA to collect and collate consumer product recalls from USA agencies, the shift to consumer apps is a new move from SAP. **SAP Business One onDemand Cloud based edition** brings a new small business version to the existing mid-range enterprise version. **SAP Business Objects Planning and Consolidation 10.0** claims to run faster and allow greater agility in how it is used by incorporating HANA linked the SAP NetWeaver Business Component Warehouse. **SAP ActiveEmbedded Services** and **SAP Rapid Prototyping Services** add two new engagement models for SAP to offer its in-house specialist skills to solve new customer requirements. **SAP Finance and Controlling Accelerator** is the latest offering to be updated to work with HANA and is claimed to offer financial management overviews faster and more comprehensively complete. [www.sap.com](http://www.sap.com)

**Google is offering hackers prizes** to find any security issues in the Chrome browser at various levels with \$60,000 for a full exploitation hack and a total of \$1 million on offer in total. **Google Privacy Policy** changes have now been enacted following their announcement in January and robust discussion across the industry on their acceptability. **Google Android Apps are being upgraded** to suit the new high end devices with a new size limit of 4Gbits on two expansion files that can run with the existing 50Mb Android Package Files, or APK, that remain the limit for on device storage. **Google Secure Search** is being rolled out globally to all its local country site urls after trials on the main .com site in using the Secure Sockets layer based encryption have proved successful. **Google Play Service** will combine the existing Android Market, eBookstore, and Music services into a single set of web-based services. [www.google.com](http://www.google.com)

**Apple is to acquire Chomp** a specialist in app store searching tools to incorporate in the Apple App Shop and help users find exact fits for their requirements. **Apple App Store's 25 billion downloads** have been reached, with 215 million registered users and more than 550,000 apps on offer. **Apple iPad 3** with higher resolution screen and camera together with faster processor and improved use of various Apple services all selling for the same price as the current iPad2. Apple **announced 3 million iPads 3 sold** by the end of the first week of launch. [www.apple.com](http://www.apple.com)

**Amazon Web Services DynamoDB** NoSQL database has been made available globally after a USA only launch in February. [www.amazon.com](http://www.amazon.com)

### Open Source Update

**Mozilla Open Source phone Project** based on Gecko has signed Telefonica and Deutsche Telecom as new partners. **Mozilla Firefox 11** is available for download as Windows, Linux and MacOS versions adding Firefox Sync for added apps together with performance and security upgrades. **Firefox 13 and onwards** will feature 'silent updates' to avoid the user having to manage the patches and updates cycles. [www.mozilla.org](http://www.mozilla.org)

**EMC Greenplum Chorus** preannouncement of the integration tool for the Greenplum Big Data platform will be released as an Open Source toolset prior to its release later in 2012. [www.emc.com](http://www.emc.com)

### Standards Watch

**Major players in Mobile Industry agree on Privacy Standard** by accepting that most major companies will conform everywhere with the Californian privacy laws on the collection of personal data; the six signees are Google, Apple, Microsoft, Blackberry, HP and Amazon. <http://arstechnica.com/tech-policy/>

**The European Commission Data Protection Directive** consultation period on the first draft closed with a number of submissions concerning the severity of the law and the level of fines. [http://ec.europa.eu/justice/data-protection/index\\_en.htm](http://ec.europa.eu/justice/data-protection/index_en.htm)

**The Domain based Authentication, Reporting and Conformance group, DMARC**, which includes Microsoft and Google in addition to Security vendors, has decided to develop an anti-phishing system to authenticate the sender of an email. [www.dmarc.org](http://www.dmarc.org)

### More Noteworthy News

**IDC have released Qtr 4 2011 Tablet sales figures** and in the continued volatility of the market Android show growth at the expense of **Apple with the iPad dropping to 55%** against 62% in the previous quarter whilst Android-based Tablets grew to 45% from 32%. But there are some key underlying factors the figures; firstly that the Android figures were significantly boosted by the first quarter **sales of Amazon Fire which on its own took an amazing 17%** taking the rest of the **Android based Tablet shipments down 28%** more in line with the previous quarter, whilst Apple shipments were felt to be impacted by expenditure being directed to the latest Apple iPhone 4S. [www.idc.com](http://www.idc.com)

**Salesforce.com Site.com** is a new move into Website design and creation with templates and tools to connect to social networks and embed multimedia content. [www.salesforce.com](http://www.salesforce.com)

**Juniper Networks has acquired Mykono Software** a provider of web application security products to add to its expanding security products portfolio. [www.junipernetworks.com](http://www.junipernetworks.com)

**Sophos Safeguard Enterprise Platform** update adds new features for Cloud-based environments including encryption for data stored on clouds. [www.sophos.com](http://www.sophos.com)

**Dell PowerEdge Server** family 12<sup>th</sup> edition based on Intel Xeon E5 new generation of processors brings a whole range of updates to build systems including SSD based storage with Dell Fluid Drive Architecture. **Dell OpenStack Powered Cloud Solution** is a reference platform to build an enterprise or a service provider cloud platform using the Open Source OpenStack and Ubuntu software on a Dell Platform. [www.dell.com](http://www.dell.com)

**Adobe Integrated Runtime, orAIR, 3.2** adds 3D graphics to a range of upgrades for developers requiring to embed advanced content into applications. **Adobe Photoshop Touch** now supports Apple iPad and can be purchased through the Apple App Store. [www.adobe.com](http://www.adobe.com)

**AMD are acquiring SeaMicro** a provider of low power micro data servers and associated networking technologies. **AMD has sold its Global Foundries share** and paid to end the exclusive manufacturing deal as it quits being in the fabrication business. **AMD Opteron 3200 series** extends the Opteron range to include new ultra low cost CPU Chips for low cost basic cloud servers. [www.amd.com](http://www.amd.com)

**RiverBed Technology Steelhead Cloud Accelerator** WAN optimizer now links with Akamai Server Facilities mapper for the data centre to optimize both parts of the service to web connected devices. [www.riverbed.com](http://www.riverbed.com)

**Voltage is adding Mobility encryption** as an extension of its existing PC based Identity and Format based Encryption products. [www.voltage.com](http://www.voltage.com)

**Sage CRM 7.1** is a Software as a Service offering hosted by RackSpace and replacing the previous SagaCRM.com product. [www.sage.com](http://www.sage.com)

**The RSA Cloud Trust Authority** gains the Zscaler Cloud Security Platform in a new partnership that addresses management of compromised connections and is claimed to be suitable for Cloud-based services. [www.emc.com/emc-plus/rsa-thought-leadership/cloud/cloud-trust-authority.htm](http://www.emc.com/emc-plus/rsa-thought-leadership/cloud/cloud-trust-authority.htm)

**Intralinks Connect** has been extended to give policy management rights to authorized users of documents stored and shared over the Cloud, including authentication, audit trails and role based management. [www.intralinks.com](http://www.intralinks.com)

**Aerohive Cooperative Control Platform** has been extended to support Apple Bonjour Gateway with its zero configuration network topology to use multiple networks in an enterprise site. [www.aerohive.com](http://www.aerohive.com)

**Centrix WorkSpace iQ5.3 and WorkSpace Universal 5.3** offer improvements by linking Windows Active Directory to authentication single sign on for Windows 7 and Cloud access by thin clients. [www.centrix.com](http://www.centrix.com)

**Wyse T10 Client** supports virtual desktops using the new ARM System on a Chip, SOC, technology to provide a new level of processor intensive capabilities. [www.wyse.com](http://www.wyse.com)

**Toshiba Satellite Pro C and L series** provide updated new business note books with the usual update to processor power and battery life from the latest generation of Intel chipsets. [www.toshiba.com](http://www.toshiba.com)

**SAS Data Integration Server** provide integration to Hadoop data bases for unstructured data and can link this data to the structured data in a conventional data base for composite analytics. [www.sas.com](http://www.sas.com)

**Brocade is entering the Enterprise Networking Products market** with a new range of products that it states will be competitive with Cisco and HP. [www.brocade.com](http://www.brocade.com)

**SafeNet is acquiring Cryptocard** and will merge its existing Trust Authentication Services with Cryptocard Backshield Cloud Platform security manager for legacy servers to combine security for both existing legacy and new on cloud servers or images. [www.safenet.com](http://www.safenet.com)

**Citrix XenDesktop 5.6** desktop virtualization platform update supports a migration to and use of Windows 7. **Citrix AppDNA** the development tool for XenDesktop is similarly updated to support a wider variety of physical and virtual migration and testing requirements. [www.citrix.com](http://www.citrix.com)

**Western Digital My Book Thunderbolt Duo** is a new twin disk array that can support RAID 0.1 at levels of 4 or 6 TBytes. [www.westerndigital.com](http://www.westerndigital.com)

**ARM Cortex MO+** micro chipset claims to use less power than anything else and can be embedded into a new range of devices to make them Internet connected 'smart devices'. [www.arm.com](http://www.arm.com)

**The Raspberry Pi**, a \$30 single board Linux-based computer with an ARM processor to encourage UK students to start to program, and comparable with the Indian student low price tablet, has gone on sale. [www.raspberrypi.org](http://www.raspberrypi.org)

**Egnyte Hybrid Cloud** combines on and off premise cloud-based storage to allow users to find, store, and exchange data externally as well as hold data internally on a secure private cloud. [www.egnyte.com](http://www.egnyte.com)

**Twitter has acquired Posterous** the multi-media blogging site stating that there were shared goals in 'making sharing across the web and mobile devices simple'. [www.twitter.com](http://www.twitter.com)

**Symantec is to acquire Nukona** to use its security products and expertise to extend its mobility offerings and support securing the Bring Your Own Device, BYOD, high growth market. [www.symantec.com](http://www.symantec.com)

**Mobile World Congress witnessed many announcements;**

**Google** Claim 300 million devices are now live and running Android with 850,000 new activations a day.

**Samsung** showed several new models including the Galaxy Beam incorporating a slide show projector into a Smart Phone package and a 10.1 inch version of the Galaxy Note crossover between a smart phone and a tablet.

**Nokia** confirmed the Windows-based Lumia 900 will go on global sale and in US and Canada LTE versions will be offered and a Cheaper Lumia 610 was added to the range. A Pureview 808 featuring a 41 megapixel camera using Symbian OS added a new niche around the high-end camera phones.

**Sony Xperia Smart Phone** claims to offer a unique user experience in touch screen called 'floating touch' that makes browser navigation easy, and initially comes with Android 2.3 but with later upgrade to 4.0. [www.sony.com](http://www.sony.com)

**Huawei the Chinese telecoms giant** has signed a deal with Vodafone to launch its Ascend G300 Android 2.3 Smart Phone in Europe. [www.huawei.com](http://www.huawei.com)



## About Capgemini

With around 120,000 people in 40 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services. The Group reported 2011 global revenues of EUR 9.7 billion. Together with its clients, Capgemini creates and delivers business and technology solutions that fit their needs and drive the results they want. A deeply multicultural organization,

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### Andy Mulholland

Global Chief Technology Officer, Capgemini  
Tel. +44 (0)207 434 2171  
[andy.mulholland@capgemini.com](mailto:andy.mulholland@capgemini.com)

