ORLANDO, FL — Gartner today asserted mobile devices will supersede the PC as the preferred Web surfing device, one of 10 technologies and trends the firm identified as strategic for most organizations in 2013. The research firm defines a strategic technology as one with the potential for significant impact on the enterprise in the next three years. Factors that denote significant impact include a high potential for disruption to IT or the business, the need for a major dollar investment, or the risk of being late to adopt.

A strategic technology may be an existing technology that has matured and/or become suitable for a wider range of uses. It may also be an emerging technology that offers an opportunity for strategic business advantage for early adopters or with potential for significant market disruption in the next five years. These technologies impact the organization's long-term plans, programs and initiatives.

“We have identified the top 10 technologies that will be strategic for most organizations, and that IT leaders should factor into their strategic planning processes over the next two years,” said David Cearley, vice president and Gartner fellow. “This does not necessarily mean enterprises should adopt and invest in all of the listed technologies; however companies need to be making deliberate decisions about how they fit with their expected needs in the near future.”

Cearley said that these technologies are emerging amidst a nexus of converging forces - social, mobile, cloud and information. Although these forces are innovative and disruptive on their own, together they are revolutionizing business and society, disrupting old business models and creating new leaders. As such, the Nexus of Forces is the basis of the technology platform of the future.

The top 10 strategic technology trends for 2013 include:

Mobile device battles. Gartner predicts that by 2013 mobile phones will overtake PCs as the most common Web access device worldwide and that by 2015 over 80% of the handsets sold in mature markets will be smartphones. However, only 20 percent of those handsets are likely to be Windows phones. By 2015 media tablet shipments will reach around 50% of laptop shipments and Windows 8 will likely be in third place behind Google’s Android and Apple iOS operating systems. Windows 8 is Microsoft’s big bet and Windows 8 platform styles should be

evaluated to get a better idea of how they might perform in real-world environments as well as how users will respond. Consumerization will mean enterprises won't be able to force users to give up their iPads or prevent the use of Windows 8 to the extent consumers adopt consumer targeted Windows 8 devices. Enterprises will need to support a greater variety of form factors reducing the ability to standardize PC and tablet hardware. The implications for IT is that the era of PC dominance with Windows as the single platform will be replaced with a post-PC era where Windows is just one of a variety of environments IT will need to support.

Mobile applications and HTML5. The market for tools to create consumer and enterprise facing apps is complex with well over 100 potential tools vendors. Currently, Gartner separates mobile development tools into several categories. For the next few years, no single tool will be optimal for all types of mobile application so expect to employ several. Six mobile architectures – native, special, hybrid, HTML 5, Message and No Client will remain popular. However, there will be a long term shift away from native apps to Web apps as HTML5 becomes more capable. Nevertheless, native apps won't disappear, and will always offer the best user experiences and most sophisticated features. Developers will also need to develop new design skills to deliver touch-optimized mobile applications that operate across a range of devices in a coordinated fashion.

Personal cloud. The personal cloud will gradually replace the PC as the location where individuals keep their personal content, access their services and personal preferences and center their digital lives. It will be the glue that connects the web of devices they choose to use during different aspects of their daily lives. The personal cloud will entail the unique collection of services, Web destinations and connectivity that will become the home of their computing and communication activities. Users will see it as a portable, always-available place where they go for all their digital needs. In this world no one platform, form factor, technology or vendor will dominate and managed diversity and mobile device management will be an imperative. The personal cloud shifts the focus from the client device to cloud-based services delivered across devices.

Enterprise app stores. Enterprises face a complex app store future as some vendors will limit their stores to specific devices and types of apps forcing the enterprise to deal with multiple stores, multiple payment processes and multiple sets of licensing terms. By 2014, Gartner believes that many organizations will deliver mobile applications to workers through private application stores. With enterprise app stores the role of IT shifts from that of a centralized planner to a market manager providing governance and brokerage services to users and potentially an ecosystem to support apptrepreneurs.

The Internet of things. The Internet of Things (IoT) is a concept that describes how the Internet will expand as physical items such as consumer devices and physical assets are connected to the Internet. Key elements of the IoT which are being embedded in a variety of mobile devices include embedded sensors, image recognition technologies and NFC payment. As a result, mobile no longer refers only to use of cellular handsets or tablets. Cellular technology is being embedded in many new types of devices including pharmaceutical containers and automobiles. Smartphones and other intelligent devices don't just use the cellular network, they communicate via NFC, Bluetooth, LE and Wi-Fi to a wide range of devices and peripherals, such as wristwatch displays, healthcare sensors, smart posters, and home entertainment systems. The IoT will enable a wide range of new applications and services while raising many new challenges.

Hybrid IT and Cloud Computing
As staffs have been asked to do more with less, IT departments must play multiple roles in coordinating IT-related activities, and cloud computing is now pushing that change to another level. A recently conducted Gartner IT services survey revealed that the internal cloud services brokerage (CSB) role is emerging as IT organizations realize that they have a responsibility to help improve the provisioning and consumption of inherently distributed, heterogeneous and often complex cloud services for their internal users and external business partners. The internal CSB role represents a means for the IT organization to retain and build influence inside its organization and to become a value center in the face of challenging new requirements relative to increasing adoption of cloud as an approach to IT consumption.

Strategic big data. Big Data is moving from a focus on individual projects to an influence on enterprises' strategic information architecture. Dealing with data volume, variety, velocity and complexity is forcing changes to many traditional approaches. This realization is leading organizations to abandon the concept of a single enterprise data warehouse containing all information needed for decisions. Instead they are moving towards multiple systems, including content management, data warehouses, data marts and specialized file systems tied together with data services and metadata, which will become the "logical" enterprise data warehouse.

Actionable analytics. Analytics is increasingly delivered to users at the point of action and in context. With the improvement of performance and costs, IT leaders can afford to perform analytics and simulation for every action taken in the business. The mobile client linked to cloud-based analytic engines and big data repositories potentially enables use of optimization and simulation everywhere and every time. This new step provides simulation, prediction, optimization and other analytics, to empower even more decision flexibility at the time and place of every business process action.

In memory computing. In memory computing (IMC) can also provide transformational opportunities. The execution of certain-types of hours-long batch processes can be squeezed into minutes or even seconds allowing these processes to be provided in the form of real-time or near real-time services that can be delivered to internal or external users in the form of cloud services. Millions of events can be scanned in a matter of a few tens of millisecond to detect correlations and patterns pointing at emerging opportunities and threats "as things happen." The possibility of concurrently running transactional and analytical applications against the same dataset opens unexplored possibilities for business innovation. Numerous vendors will deliver in-memory-based solutions over the next two years driving this approach into mainstream use.

Integrated ecosystems. The market is undergoing a shift to more integrated systems and ecosystems and away from loosely coupled heterogeneous approaches. Driving this trend is the user desire for lower cost, simplicity, and more assured security. Driving the trend for vendors the ability to have more control of the solution stack and obtain greater margin in the sale as well as offer a complete solution stack in a controlled environment, but without the need to provide any actual hardware. The trend is manifested in three levels. Appliances combine hardware and software and software and services are packaged to address and infrastructure or application workload. Cloud-based marketplaces and brokerages facilitate purchase, consumption and/or use of capabilities from multiple vendors and may provide a foundation for ISV development and application runtime. In the mobile world, vendors including Apple, Google and Microsoft drive varying degrees of control across and end-to-end ecosystem extending the client through the apps.

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