



Charting Your Digital Agenda: Six Technology Trends Driving Competitive Advantage, Now and in Years to Come

Executive Summary

Whether they serve consumers, businesses or both, companies today need to create an agenda that outlines how they will capitalize on the latest developments in the consumerization of information technology. In particular, organizations need to consider how to incorporate six technical developments for profitable use:

- Mobile devices
- Game dynamics
- Augmented reality
- Social currency
- Location-based applications
- Virtual goods

These technological developments first emerged in the consumer world, but business applications are becoming prevalent. This white paper will discuss the six key technologies that will work individually and in concert to engage and delight customers and prospects.

Embracing Consumer Technologies

Consumer technologies such as smart devices, social networks and intuitive Web interfaces began in the consumer world and quickly transformed the way we socialize, interact, shop, relax, consume entertainment and reading material and

explore the world. Somewhat more slowly, but just as surely, these consumer-oriented technologies are forcing traditional business models to mutate, presenting both unprecedented opportunity and massive disruption in affected industries.

Organizations of all sizes are grappling with how best to leverage these consumer technologies to advance business objectives and experience breakthroughs in competitive advantage. The six technologies discussed in this report are not necessarily new in terms of having just appeared, but companies are beginning to use them in innovative ways that will drive profits for years to come.

Now more than ever, technology reflects that we are social creatures, whether interacting for business or pleasure. No matter which industry you operate in, your organization needs to outline how it will use mobile platforms, social capabilities and virtualization to achieve its potential in the digital economy.

In our view, there are six key technologies and developments that businesses should embrace to stay competitive in the near term. Leading companies are already infusing these technologies into the core of their digital agenda – singly or in combination – using them to offer richer, more interactive user experiences that will keep customers coming back for more.

1. **Mobile devices.** Mobile devices have exploded in the last five years due to widespread consumer adoption of smartphones (notably the iPhone) and tablets (chiefly the iPad). In fact, according to IDC, sales of smartphones surpassed those of PCs last year, with smartphone shipments growing 87% from 2009 to 2010, while PC shipments rose only 3%.¹ Consumers now expect to be able to consume data anywhere, any time, on any device, and business user expectations are only slightly behind consumers'.



Mobile

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A notable B2B example: The real estate arm of the insurance and financial services giant Prudential recently launched a listing app for the iPad.² Forward-thinking companies are offering their own mobile apps stores a la iTunes so both internal and external users can download and use their applications. Any organization that has not already enabled mobile consumption of its data (or does not have an active project in the works to do so) is in danger of failing to provide a critical aspect of customer experience.

This does not imply, of course, that the mobilization of data is a straightforward proposition, especially in a B2B context. On the data consumption side, organizations are grappling with creating processes and governance policies for employees to use mobile devices like the iPad in the workplace. Security and privacy are major concerns that must be addressed sooner rather than later.

Get ready: Every future IT project or program will build in smartphone and/or tablet integration as the primary means for consuming data. Organizations that have not considered this should revisit their IT roadmaps.

2. **Game dynamics or "gamification"** techniques involve the application of game design techniques and mechanisms to create compelling, interactive content. Game dynamics will be a large part of strategies that involve consumer engagement. The use of such game dynamics will be the next wave of generating loyalty and advocacy among consumers.



Gamification

Business applications will come, as well. After all, effective collaboration requires a breaking down of barriers such as inertia and mistrust, which is difficult to achieve without offering participants an incentive for doing so. Many organizations are now applying game dynamics to influence collaboration and community with employees, partners and even customers, both within and outside their corporate boundaries. Companies have created platforms to incorporate game dynamics so people can engage more effectively with their content and also to motivate desired behaviors among their constituencies.

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For example, with its Humana Games for Health (HG4H) site, health insurance giant Humana Health Insurance has used games – video games, among others – to encourage its members to exercise their minds and bodies for better health. Members can participate in challenges, earn points toward rewards and engage in friendly competition with friends and family. Theoretically, Humana will reduce healthcare claims from its members, while members benefit from being healthier. Another potential health application: a daily game that prompts patients to take their medications while engaging them in entertaining play.

Gamification enables organizations to make their content more compelling – and fun – so people want to come back. Research has shown that online users are highly motivated by the prospect of earning currency – money, rewards points or social currency. Companies could harness this concept to encourage employee interaction. Beyond tangible rewards, most people appreciate recognition of their expertise, whether shared via reviews, online bulletin boards or an e-knowledgebase. Users could earn points in these venues, allowing them to make a name for themselves by being a frequent reviewer or commentator.

In a B2B context, customer service personnel could earn recognition for sharing product-quality information with the product development team, enabling ongoing collaborative process improvement. Entrenched corporate cultures have created roadblocks to collaborating; gamification may be the lubrication that greases the wheels. And gamification platforms (such as Nitro from Bunchball⁴) will make it easier for companies to inject game techniques into their content and applications, whether B2B or consumer-oriented.

3. **Augmented reality (AR).** AR has enormous potential in both the consumer and business worlds. Advanced companies are already putting AR to countless innovative uses – everything from a virtual mirror to check out how clothes and hairstyles would look on you, to virtual worlds on your smartphone that orient you to your surroundings using floating icons. AR is a natural for the consumer world, but enterprises will also embrace AR-based applications and solutions en masse in the next few years. Vendors offering AR platforms will be in high demand.



Augmented Reality

For consumer applications, AR can add much sizzle to the user experience. Visitors to the BMW Web site, for example, can explore their desired model, for example the Z4, in a highly realistic way and can even configure their dream car via an AR-powered configurator.⁵ But AR need not be confined to luxury goods; it can be used effectively for simple goods, too. Children, for example, can scan the code from their Doritos Sweet Chili chips package on the Doritos Web site to access a special cartoon, a fun experience that has a cache of exclusivity.⁶ Another example: the Topps “3D LIVE” baseball card line features a baseball that leaps from the card onto the user’s desk, as viewed via a webcam.⁷ While viewing miniature holographic representations of a player, users can control the player’s signature moves via the keyboard.

Beyond the fun of exploring a virtual world, AR has a highly practical side. A business that buys a high-end printer, for example, might get up to speed on its features via an AR application. Field service personnel could access AR tutorials to better understand how to repair a piece of equipment. Virtual agents already welcome visitors to a variety of Web sites, in hopes of making users feel a personal connection with the material presented there.

It is only a matter of time – and not much time, at that – before AR applications will become entirely routine for consumer and business experiences, from the sublime to the mundane. The U.S. Postal Service now offers a “virtual box simulator” that allows users to scan the items they want to ship on a PC’s camera and then virtually place them in a box of certain

dimensions.⁸ The simulator will quickly and elegantly say whether or not the user’s goods will fit in the box. Augmented reality has enormous potential for both fun and practical business and consumer uses.

4. **Social currency.** Related to the “gamification” trend noted previously, social currency involves a form of currency (points, ratings and the like) that users earn in an online social context. The rewards points that credit cards offer in exchange for meeting certain purchasing levels were an early form of social currency. E-community sites are already offering social currency in exchange for posting user-generated content. Sites like Amazon.com could offer currency to influential reviewers; these elite users could then use points to pay for or reduce the cost of purchases. Many companies that have employed games to sweeten the use of their content also offer social currency as a reward for participation.



Social Currency

In addition to virtually limitless consumer application possibilities, businesses can offer social currency to motivate their employees toward preferred behaviors, such as collaboration. Consumer and B2B marketplaces will be built on social currencies.

Enterprises will increasingly adopt strategies that tap into the geo-social behavior of consumers to maintain the loyalty of their consumer base. Social currency will become one of the most popular and lucrative approaches.

5. **Location-based applications.** Yelp, Four-square and the like have been on the scene for years now, but they will come to greater prominence (even ubiquity) in coming years. Many organizations, especially those serving consumers, are examining how they can use location-based applications to delight their customers.



Location Strategies

Location-based apps require a particularly thoughtful approach, as they necessarily impact the user’s privacy. Many people are not comfortable with letting an application use their current physical location as the

basis for serving more information. We believe this concern will lessen, however, especially among millennials and their younger counterparts, as users see the value of swapping some privacy rights for information (such as the nearest Indian restaurant) and value (including immediate coupons for the very item the shopper seeks). Organizations will do well to implement location-based applications with sensitivity to privacy concerns and to embed ways to mitigate those concerns (for example, allowing users to turn location-based capabilities on and off at will).

6. **Virtual goods.** Unimaginable just a few short years ago, virtual goods are just that – online incarnations of things that people want in the



Virtual Goods

real world (flowers, clothing, jewels, pets and cars are a few), as well as entities that exist only virtually (such as avatars). Online consumers have embraced virtual goods with a passion. Ephemeral as they are, virtual goods clearly have emotional meaning for consumers.

Case in point: This year for the first time, a Chinese insurance company, the Sunshine

Insurance Group, offers insurance to secure virtual property.⁹ Many consumers have built extensive collections of virtual goods – with the associated online status – and they do not want to risk losing them to a computer crash or other mishap. According to the Inside Virtual Goods report, the U.S. virtual goods market will reach \$2.1 billion this year.¹⁰

With such a significant market size, virtual goods are an increasingly viable way of earning revenue. One possibility is for companies to offer virtual and physical goods in a marketplace. At this moment, it is hard to fathom that there is equal potential for B2B virtual goods, but the emotional lure is such that this may come to pass.

Enterprises of all types and sizes must build a digital agenda to remain competitive today and survive in tomorrow's marketplace. The six technologies and developments in this white paper work together or separately to engage consumers and workers, now and in the future. Most of the technologies have a playful aspect that does not preclude their use in business applications – far from it. The future of work will look much like play at present, with enhanced virtual interactivity to make work compelling for all types of users and applications.

Footnotes

- ¹ "Slowing Consumer Demand Reduces PC Growth for 2011 While Longer Term Growth Will Remain in Double Digits," IDC, June 6, 2011, <http://www.idc.com/getdoc.jsp?containerId=prUS22861211>; "Android Rises, Symbian 3 and Windows Phone 7 Launch as Worldwide Smartphone Shipments Increase 87.2% Year Over Year," IDC, Feb. 7, 2011, <http://www.idc.com/about/viewpressrelease.jsp?containerId=prUS22689111§ionId=null&elementId=null&pageType=SYNOPSIS>
- ² "Check Out the Prudential iPhone/iPad App," Real Estate Connect, Feb. 11, 2011, <http://realestateconnect.wordpress.com/2011/02/11/check-out-the-prudential-iphoneipad-app/>
- ³ Humana Games Web site, <http://www.humanagames.com/>
- ⁴ Bunchball Web site, <http://www.bunchball.com>
- ⁵ BMW Z4, BMW Web site, http://www.bmw.co.uk/bmwuk/augmented_reality/homepage?bcsource=vanity
- ⁶ Doritos Web site, <http://www.doritos.com.br/sweetchili/site/>
- ⁷ Topps Web site, <http://www.toppstown.com>
- ⁸ U.S. Postal Service Web site, <https://www.prioritymail.com/simulator.asp>
- ⁹ Jeremy Hsu, "Video Game Property Insurance Protects Virtual Goods," *Innovation News Daily*, July 7, 2011, <http://www.innovationnewsdaily.com/insurance-virtual-items-games-2105/>
- ¹⁰ Dean Takahashi, "U.S. Virtual Goods Market to Hit \$2.1 Billion in 2011," *GamesBeat*, Sept. 28, 2010, <http://venturebeat.com/2010/09/28/u-s-virtual-goods-market-to-hit-2-1-billion-in-2011/>

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