

## Experts' 2014 tech predictions: High-tech shopping, life in the cloud

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We're poised for a new year and more tech advances that will help you to shop and work smarter, store more data on the cloud and see chips become more of your personal lifestyle. Here's a rundown of how local experts see the hot new technology coming in 2014:

**Martin Slark, CEO of Molex Inc. in Lisle:** Wearable devices, particularly those for consumer and medical uses, are likely to be some of the technologies we see taking off in 2014. As a global manufacturer of many of the world's smallest connectors, we continue to see customers requesting smaller, thinner interconnects that offer more capabilities. This is critical for wearable devices such as smart watches and smart eyeglasses that are likely to become the next evolution of the many mobile devices such as smartphones and tablets that are already part of people's daily lives. But wearable devices are very complex because they must be compact and lightweight while preserving signal and power integrity. Another use for this wearable technology is in medical monitoring applications. The requirements for smaller, lighter and more feature-rich electronic devices is migrating into the health care space with the development of wearable devices that wirelessly convey data to hospitals and doctors in real-time.



The cloud will be used more for data storage that will help various devices.

**Phil Fleming, chief technology officer of North America at Nokia Solutions and Networks in Arlington Heights:** 4G small cells will be a hot new technology in 2014. Similar to the cellular base stations you see mounted on top of tall masts, these much smaller cells are mounted on light poles and the sides of buildings. They bring the wireless Internet closer to your smartphone or tablet, providing high data rates and fast response times. This means that in 2014 you may be able to download videos faster and even play multiplayer interactive games with your friends using ubiquitous 4G wireless technology. You will no longer have to search for a Wi-Fi hot spot. Everywhere will be a hot spot for you. And the best part is that this technology is being developed in Arlington Heights at the NSN facility.

**Paul Steinberg, senior vice president and chief technology officer for Motorola Solutions in Schaumburg:** The shopping experience is a retailer's biggest differentiator. In 2014, brick-and-mortar stores and what's in them will become as connected as their online counterparts with radio frequency identification readers and video analytics that will continuously monitor and locate inventory. Shoppers and store employees will be equipped with contextually-aware applications on their mobile devices that will leverage the connected store and provide them with the right information when they need it. Smart kiosks will determine who is standing in front of them and their likely interests. Everything and everyone will be increasingly connected in real time for a personalized experience.

**Brian Balduf, CEO of VHT Studios in Rosemont:** When it comes to engaging consumers, Google Business Photos has become the hottest must-have for restaurants, salons, shops, sports bars, medical offices — all kinds of local businesses. The new business photos program uses Google's high-tech Street View technology to create panoramic virtual tours of retail businesses that can be found on Google Places and Google Maps. Business owners get to showcase all their amenities, from their decor and amenities to their merchandise, even their food and menus. Consumers can use tablets and mobile phones to actually see inside a business and preview what it has to offer.

**Todd Thibodeaux, president and CEO of CompTIA, an association for the information technology industry in Downers Grove:** Here are five technology areas to keep an eye on in 2014: Health care and aerospace are two industries that have embraced 3-D printing technology. Over the next 10 years this is going to be something ubiquitous with mass adoption across the board. "IP-ization" is changing the way buildings work; interconnected systems and the number of devices that can be managed in areas of this size are tremendous. High-bandwidth connectivity is growing exponentially and wireless connectivity has taken the cloud outside the four walls of the office. Also, we're seeing a huge increase in the number of temporary workers, contract workers and workers who don't work in the central office location. And security is even more critical as the threats become smarter and the points of vulnerability expand.

**David P. Williams, vice president of sales and marketing at Comcast in Schaumburg:** All of your content will be stored in the cloud, making it accessible anytime from any device. But to access your content in the cloud, you have to have the fastest Internet speeds available — at home and on the go. Initiatives to provide high-speed access to the cloud on the go will continue in 2014 and allow Comcast to do things like expand the number of TV channels customers can watch live on their tablets and smartphones, as well as make it even easier to stream recorded and On Demand movies, TV shows and other content on their tablets and smartphones. Faster and greater access to the Internet also will help customers communicate with their employers, their colleagues and their friends and families. In addition, faster Internet and greater access also increases our Xfinity Home customers' ability to manage their homes remotely. In 2014, the Xfinity Home platform will continue to expand and add functionality that will help families stay safe and give them more options.

**Paul La Schiazza, president of AT&T Illinois in Chicago and Hoffman Estates:** In 2014, the mobile Internet will improve lives by connecting people in new and exciting ways. Our network will serve as the platform for a host of exciting new technologies from connected cars to automated homes to wearable devices to detect if a senior has fallen to smart wrist watches that look like something out of a science fiction movie. To meet the growing consumer demand for high-speed Internet access and new mobile, app and cloud services, AT&T is enhancing and expanding our wireless and wireline Internet Protocol broadband networks with Project Velocity IP over the next three years. We plan to expand AT&T's 4G LTE wireless network to cover 300 million people in the United States by the end of 2014.

**Stu Benington, director of technology and strategy at Tellabs Inc. in Naperville:** We're excited to see how technologies, such as fiber optics and software-defined networking, or SDN, will reshape the telecom industry. While fiber is already making headway across telecom networks, I expect 2014 to be the year of the first SDN network deployments, a trend that will accelerate dramatically in the years ahead. Service providers need fiber and SDN to handle surging data traffic, driven by users of mobile, video and cloud services. Inside the network, service providers are beginning to virtualize networks and apply SDN.

**Russell Stokes, president and CEO of GE Transportation in Chicago and Hanover Park:** The Energy Information Administration has released its Annual Energy Outlook 2014, which said natural gas production is expected to increase by 56 percent. We are entering a new energy age — the Age of Gas. Natural gas is poised to answer a larger share of the world's energy demand thanks to the shale gas revolution, and the innovative pairing of technology and software to improve how gas is produced and used. It is also leading to improvements in the transportation system, whereas rail, shipping and roads are now linked for a more sophisticated meshed network. Specific to GE Transportation, we believe liquefied natural gas could transform the rail industry much like the transition from steam to diesel fuel in the 1950s. We're developing technology to harness the power of LNG, as in the case of our recently unveiled NextFuel Retrofit Kit, which will be piloted in 2014.

**Andrea Bradshaw, general manager of mobility solutions at CDW in Vernon Hills:** In 2014, mobile devices and the processes they enable will continue to grow in popularity for consumers and businesses. We anticipate a growing interest in mobile apps at a business level that will transform engagement with customers, suppliers, and employees. It will take some time for businesses to catch up to consumers, as the biggest business opportunities require a re-engineering of workflows and business processes. We expect to see a surge in demand for mobile apps that enable key business functions such as sales support, customer relationship management, human resources systems and more — across all industries and job functions. And many innovations we will see in 2014 won't be about mobile devices — but rather the business innovations that mobility enables.

David Ginsburg, president of The Northwest of Us: Cloud computing continues to be a technology that evolves and I look for it to become even more a part of everyday life. If you look at Google, Microsoft and Apple and their cloud based services each one of them are placing many of their products in the cloud including Google docs, Office 365 and iCloud. Each one of these products allow consumers to have all of their documents and storage online in the cloud without any worries of losing files as well as access these documents across any mobile device. Tablet technology has grown like crazy especially with the Apple iPad and its popularity. I look to see Microsoft expand even further with their Surface 2 tablets as well Google and their tablet products. Touch technology has now been added to laptops and look for many more laptops providing this and more and more users will be touching their way through navigation with less typing with the use of Windows 8.1 and the modern interface. Also, look for Apple to potentially release an iPhone with larger screen and other smartphone makers to make their phones even larger. Processing power will continue to increase and the cameras in these devices continue to take better pictures than some DSLR cameras.

**Jody S. Jankovsky, managing partner of Black | Line Consulting in Naperville:**

In 2014, we will continue to see a much greater adoption of cloud-based technologies to run business applications. We anticipate the trend to gain momentum because the small and mid-size business market traditionally lags in technology adoption and the maturity of the toolsets, functional robustness, stabilized cost and fully documented success stories has softened their stance. Even for hardened veteran business owners, the cloud is not as mysterious as it once was providing the appropriate backdrop when we make recommendations to transition technology to the cloud. To provide some context, cloud-based backup systems have been transitioning for years but now we see email systems being number one followed closely by productivity/collaboration tools and, most recently, accounting systems.

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