



EQUITY

Smartphones and Software Keys to Realizing “Dot-Com Dreams”

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When the Internet burst on the scene about 20 years ago, some tech experts vowed the Web would soon

infiltrate all aspects of our lives. It took almost two decades, but Jonathan Curtis, vice president and research analyst, Franklin Equity Group, says many of the promises made during the dot-com era are finally being realized. Here, he discusses the advances he believes have helped keep those promises and explores a technology—artificial intelligence—that may change lives in the near future.

We believe many of the unfulfilled dreams of the dot-com era are finally being realized as the convergence of hyper-connected consumers and increasingly sophisticated technology and software has allowed companies to provide services that seemed impossible even 10 years ago. Such changes are creating opportunities within many industries such as transportation, financial services and agriculture which are often not thought of as technologically advanced.

Take, for example, ridesharing companies. The services they provide are only possible with the advances in GPS, cloud and payment technologies that are available today, along with the ability of consumers to utilize the service through their smartphones. Their success is also partly due to its intuitive software, which most people find easy to utilize.

In the financial services area, banks are no longer as reliant on their physical branches, as customers are conducting an ever-increasing amount of their business online—particularly from their smartphones. With the push of a button, customers can deposit checks or transfer funds between accounts. Banking via smartphone has become so prevalent that for most consumers a bank branch is largely unnecessary; most activity can easily be done from home, work or even a commuter train.

These advances have even spread to the farming industry, where growers are using technology to increase their crop yields and better manage their operations. One smartphone application, for example, leverages both GPS technology and proprietary software that uses a piece of land's elevation, climate and geology to predicts its soil quality, and can interact with ground-based temperature and moisture sensors to determine the best time to plant.

Artificial Intelligence Gets Real

The soil-quality data generated by a grower is, of course, useful to that grower, but it also may be helpful to other farmers. What if the information gathered—and other bits of data about myriad topics worldwide—could be easily collected and analyzed? Many tech giants have begun to do just that with the help of another technology that has significantly improved from the dot-com days: artificial intelligence (AI).

In short, AI technology allows computers to perform tasks that usually require human intelligence, such as data analysis, speech recognition, decision-making and translation. AI technology can help make sense out of vast amounts of data so humans can leverage it.

In our view, one of the more important areas where AI technology is being employed is in the fight against cancer. One large technology company, for example, is helping doctors provide their patients with effective and individualized cancer treatment by providing an intuitive way to sort through the cancer research that is available online.

A large online retailer is investing in AI technology, and not only to predict the products users are likely to buy next. The company is enhancing one its products, a voice-controlled speaker that can answer questions, play music and read the news, to better understand the intent of a command that a user gives.

We believe these and other companies could benefit as AI technology becomes more deeply embedded in services that we all use today. Better AI will allow our devices to better understand what we are using them for and perform those tasks more effectively.

Additionally, the advancements driven by AI technology would likely pull along demand for cloud computing infrastructure, payment infrastructure and security infrastructure.

Security companies are incredibly important to the success of AI-based endeavors. As consumers become more digitized, and there's more data about those consumers in places where it was never kept before and more transactions are being conducted online, cyber attacks on consumers will likely increase dramatically. We believe security infrastructure vendors and security service companies are well-positioned to meet those new challenges.

Semiconductor Consolidation

Of course, there are areas of technology that are more established and not experiencing such rapid changes. The decidedly mature semiconductor area has experienced challenges as growth in the desktop computer and cellphone markets has slowed. However, the sector has experienced more positive performance recently. Although some interesting

trends may eventually spur further growth in the semiconductor space—the “[Internet of things](#)” and self-driving cars come to mind—we think the recent improvement in the sector has been the result of consolidation in the industry.

We believe investors have been rewarding companies that have participated in that consolidation, and we expect that trend to likely continue. In the face of a slower-growth environment, many companies are undertaking strategic merger-and-acquisition (M&A) activity to either reduce costs, increase efficiencies or gain access to a higher-growth market. Areas where we see better potential growth include semiconductor companies with exposure to integrated controllers or analog-to-digital converters, two technologies that are heavily utilized in the connected devices I discussed earlier.

Overall, we think the outlook for M&A in the tech sector remains positive. Interest rates remain low, and many larger companies are extremely cash rich. We believe the tech giants may be seeking to amplify their businesses by acquiring talented teams and/or innovative technologies.

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