




Iowa's App Economy: A Summary

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OCTOBER 2017

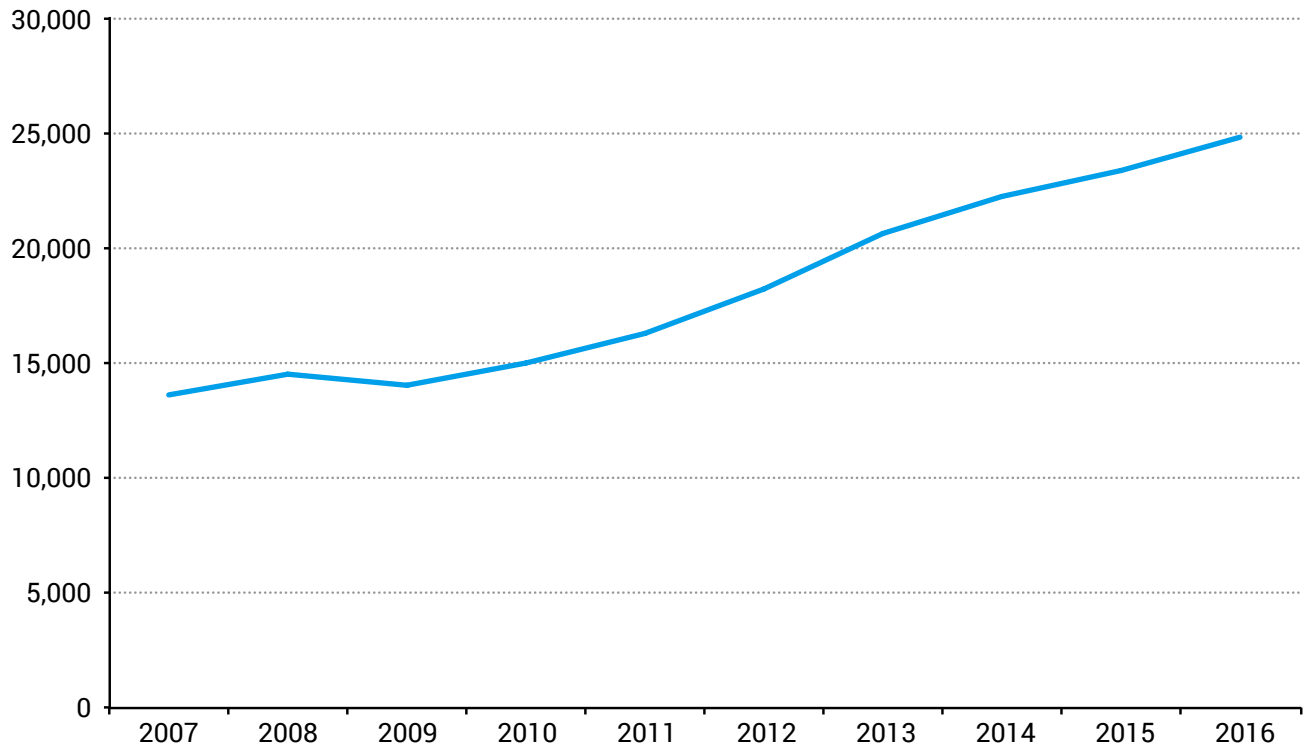
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INTRODUCTION

When it comes to tech jobs, global hubs like Silicon Valley, New York, and Austin get all the attention. But, to an increasing degree, our research shows tech-driven employment growth is not restricted to those high-profile areas.

For example, our widely-cited March 2017 report “How the Startup Economy is Spreading Across the Country—and How It Can Be Accelerated” demonstrated that the startup mentality could be found in many regions. And our new report (“The Next Ten Million Jobs”) finds that tech and tech-related jobs grew by 51% in the “Heartland” states from 2007 to 2016, only slightly slower than the nation as a whole. In Iowa, tech and tech-related jobs grew by 83% over the same period (Figure 1), accounting for almost one-quarter of private-sector nonfarm job growth (Table 1).

FIGURE 1: Tech and Tech-related Jobs in Iowa



*Includes NAICS 4541 (electronic shopping), 5112 (software publishing), 51913 (Internet companies), 5415 (computer systems design), 5416 (consulting), and change in 493 since 2007 (picking up growth in fulfillment centers).
Data: BLS, PPI*

TABLE 1: What's Driving Iowa's Economy?

	IOWA EMPLOYMENT CHANGE 2007-2016, THOUSANDS	
TOTAL PRIVATE NONFARM	49.9	4%
PRIVATE HEALTH, EDUCATION AND SOCIAL ASSISTANCE	26.9	14.1%
TECH AND TECH RELATED*	11.2	82.7%
EVERYTHING ELSE	11.7	1.1%

**NAICS 4541, 5112, 51913, 5415, 5416, and change in 493 since 2007.
Data: BLS, PPI*

The key is that tech is beginning to transform physical industries such as manufacturing, healthcare, agriculture, and distribution (see, for example, Mandel and Swanson, “The Coming Productivity Boom”). For example, telemedicine is an essential new technology for rural areas, where medical specialists may be few and far between. That’s why Senator Joni Ernst of Iowa is the lead sponsor of the “Veterans E-Health and Telemedicine Support Act of 2017” to improve the ability of healthcare professionals to treat veterans through the use of telemedicine. Similarly, the Iowa Agritech Accelerator in Des Moines is focused on applications of technology to agriculture.

In this short report we focus on one particular aspect of the information revolution in Iowa: The App Economy. When Apple introduced the iPhone in 2007, that initiated a profound and transformative new economic innovation. While central bankers and national leaders struggled with a deep financial crisis and stagnation, the fervent demand for iPhones and the wave of smartphones that followed was a rare force for growth.

More than just hardware, the smartphone inaugurated a new era for software developers around the world. Apple’s opening of the App Store in 2008, followed by Android Market (now Google Play) and other app stores, created a way for iOS and Android developers to write mobile applications that could run on smartphones anywhere.

The iPhone and the App Store were the beginnings of a global App Economy: an army of app developers writing mobile applications for billions of users.¹ As more and more people are linked to the Internet through their smartphone and mobile data connections, mobile apps have become an essential way for businesses, nonprofits, and governments to interact with their customers, members, and citizens.

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Moreover, the long-term growth prospects of the App Economy are still strong. The rise of the Internet of Things means more and more objects and physical processes will be connected to the Internet. Increasingly, individuals will be using mobile apps as their interface to their home, their travel, their entertainment, their car, their schools, their health providers, and their state and local governments. These apps will be highly functional and sophisticated, serving an essential role in interacting with our environment.

The term “App Economy” was being used as early as 2009, in a BusinessWeek cover story “Inside the App Economy,” October 22, 2009. <http://www.bloomberg.com/news/articles/2009-10-22/inside-the-app-economy>

THIS PAPER

In May 2017, PPI released the report “U.S. App Economy Update.” As the name suggests, this report represented an estimate of App Economy jobs for the entire economy, building on previous reports.

As part of the analysis done for that report, we estimated the Iowa App Economy employment totaled 12,000 jobs as of December 2016. This includes core App Economy jobs, indirect App Economy jobs, and a conservative estimate of spillover jobs. For this study, a worker is in the App Economy if he or she is in:

- An IT-related job that uses App Economy skills—the ability to develop, maintain, or support mobile applications. We will call this a **“core” app economy job**. Core app economy jobs include app developers; software engineers whose work requires knowledge of mobile applications; security engineers who help keep mobile apps safe from being hacked; and help desk workers who support use of mobile apps.
- A non-IT job (such as sales, marketing, finance, human resources, or administrative staff) that supports core app economy jobs in the same enterprise. We will call this an **“indirect” app economy job**.
- A job in the local economy that is supported either by the goods and services purchased by the enterprise, or by the income flowing to core and indirect app economy workers. These **“spillover”** jobs include local professional services such as bank tellers, law offices, and building managers; telecom, electric, and cable installers and maintainers; education, recreation, lodging, and restaurant jobs; and all the other necessary services. We use a conservative estimate of the indirect and spillover effects.

Our methodology is based on a careful examination and analysis of online help-wanted ads, which are benchmarked to government statistics. For a detailed explanation, see the methodology section of “U.S. App Economy Update.”

We note that employers looking for App developers often specify in which operating system or systems they want their hires to have expertise. This enables us to assign jobs to either the iOS ecosystem or the Android ecosystem, or both. We find that roughly 10,000 jobs belong to the iOS ecosystem, and 9,000 jobs belong to the Android ecosystem. The numbers sum to more than 12,000 because many jobs specify more than one operating system—say, both iOS and/or Android skills.

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EXAMPLES

Blue Compass, an app developer in West Des Moines, was founded in 2007 right after the launch of the iPhone and has 26 employees. President & Co-Founder Drew Harden told PPI “the market for mobile apps is strong and only getting stronger. We started to see clients interested in our apps five to seven years ago and, in the last few years, more clients have been asking about apps or telling us their idea for an app.” Drew said that Blue Compass recently finished an app for Iowa State University to digitize agricultural field records and has had conversations with a major farming equipment manufacturer about creating apps for farmers that communicate via Bluetooth with equipment in the field. Another industry that Blue Compass is seeing on the rise in terms of apps is

healthcare as people gain interest in learning about and tracking their health.

Far Reach Inc., an app developer in Cedar Falls, Iowa, was founded in 2007 and has 20 employees. Chris Rouw, a partner at Far Reach, told PPI “the trend is definitely up in recent years as more and more companies are thinking about apps.”

As of August 2017, farming equipment manufacturer John Deere was hiring a Mobile App Developer in Urbandale to work on projects digitizing the farming industry. UI Community Medical Services, Inc., was hiring a Software Engineer with mobile app development experience to work on mobile health and e-health interventions designed to improve patient care in Coralville.

As of September 2017, EMC Insurance was hiring a Mobile Application Developer in Des Moines. Global software developer Xpanxion was hiring a Mobile Developer in Ames. The Printer, Inc. was hiring a Front End Developer with iOS and Android development experience in Des Moines. Also as of September 2017, InfraDrone—which provides inspection, monitoring and testing solutions for the agriculture, construction and transportation infrastructure industries—was hiring a Software Developer with mobile app development experience in Des Moines. TriTech Software Systems was hiring a Delphi Programmer with experience in Android and iOS in Decorah.

CONCLUSION

Tech jobs, and App Economy jobs in particular, are part of the future of Iowa. As tech gets applied to the physical industries, apps will become an essential interface for both customers and workers in areas such as manufacturing, agriculture, and healthcare. Moreover, app developers will be a crucial part of the product design team.

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We see that tech jobs no longer have to be located in the existing tech hubs. Skilled workers can do their jobs remotely, while ecommerce is creating jobs all across the country—with more coming as companies build out their fulfillment networks. Finally, telemedicine is going to place an even greater emphasis on mobile applications.



The Progressive Policy Institute is a catalyst for policy innovation and political reform based in Washington, D.C. Its mission is to create radically pragmatic ideas for moving America beyond ideological and partisan deadlock.

Founded in 1989, PPI started as the intellectual home of the New Democrats and earned a reputation as President Bill Clinton’s “idea mill.” Many of its mold-breaking ideas have been translated into public policy and law and have influenced international efforts to modernize progressive politics.

Today, PPI is developing fresh proposals for stimulating U.S. economic innovation and growth; equipping all Americans with the skills and assets that social mobility in the knowledge economy requires; modernizing an overly bureaucratic and centralized public sector; and defending liberal democracy in a dangerous world.

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