

AMERICA'S NATIONAL  
SECURITY ARCHITECTURE:  
REBUILDING THE  
FOUNDATION

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*“Our nation seeks major change, and the next president can set in motion a transformative initiative to expand digital economy jobs and dramatically reshape how the government operates.”*

—ZOË BAIRD

# Government For A Digital Economy—In A Time Of Deeply Intertwined Economic And National Security Imperatives

**Zoë Baird**

CEO and President  
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The private sector is transforming at record speed for the digital economy. As recently as 2008, when America elected President Obama, most large companies had separate IT departments, which were seen as just that—departments—separate from the heart of the business. Now, as wireless networks connect the planet, and entire companies exist in the cloud, digital technology is no longer viewed as another arrow in the corporate quiver, but rather the very foundation upon which all functions are built. This, then, is the mark of the digital era: in order to remain successful, modern enterprises must both leverage digital technology and develop a culture that values its significance within the organization.

For the federal government to help all Americans thrive in this new economy, and for the government to be an engine of growth, it too must enter the digital era. On a basic level, we need to improve the government’s digital infrastructure and use technology to deliver government services better. But a government for the digital economy needs to take bold steps to embed these actions as part of a large and comprehensive transformation in how it goes about the business of governing. We should not only call on the “IT department” to provide tools, we must completely change the way we think about how a digital age government learns about the world, makes policy, and operates against its objectives.

Government today does not reflect the fundamental attributes of the digital age. It moves slowly at a time when information travels around the globe at literally the speed of light. It takes many years to develop and implement comprehensive policy in a world characterized increasingly by experimentation and iterative midcourse adjustments. It remains departmentally balkanized and hierarchical in an era of networks and collaborative problem solving. It assumes that it possesses the expertise necessary to make decisions while most of the knowledge resides at the edges. It is

bogged down in legacy structures and policy regimes that do not take advantage of digital tools, and worse, create unnecessary barriers that hold progress back. Moreover, it is viewed by its citizens as opaque and complex in an era when openness and access are attributes of legitimacy.

Americans can see that the economy is changing, the government is not keeping up, and the government is not helping them find their place in the future. Only 20 percent of Americans would describe government programs as being well-run.<sup>1</sup>

The challenge of growing the digital economy is more than an issue of jobs and wages. It is a national security imperative as well. An effective digital-age government is essential to economic growth and the broad distribution of its benefits, which is a critical building block of America's power and influence in the world.

### **Pursuing the President's Digital Economy Strategy Through a Virtual Reorganization of Government**

The next president needs to lead the change by creating a national digital economy strategy. Such a strategy begins with repositioning the federal government to act with the nimbleness and wisdom of the digital age, drawing on the resources and talent of the nation as a whole. This effort should include a "virtual reorganization" of government and the establishment of digital policy objectives that cross agency lines and engage the entire government to work toward their implementation with all the resources and expertise needed from both the domestic and national security communities.

A virtual reorganization does not require creating new agencies or an expansion of government. It requires innovating, collaborating, and coordinating in new ways. To jump-start this agenda, the president should create a White House Digital Economy Initiative to work with the cabinet—in conjunction with the White House offices that reach out to state and local governments, civil society, students, the private sector, unions, faith-based groups, and others—to articulate a path forward in the digital economy. The initiative would coordinate the development of the policy priorities and technology architecture of a virtual reorganization of government and a framework for its execution. And after one year, it should turn full responsibility over to the cabinet, where operation of the program belongs for the long term.<sup>2</sup>

The policy priorities and technology architecture, elaborated on below, should be designed to:

- I. Grow jobs in the digital economy by:
  - o closing the gap between the capacity of large and small businesses to participate in the digital economy, and
  - o powering the skills-based labor market so people can get the skills they need for the growth jobs.
- II. Evolve the role of government by:
  - o shifting the culture of government operations, and
  - o substantially changing how government works with the tech sector.

We must reimagine the structures and culture of government for a digital era. The rest of the country recognizes that we are at an inflection point. The government needs to catch up.

## I. Growing Digital Economy Jobs

### Closing the New Digital Divide

America is facing a growing gap in digital capabilities between large companies that have effectively digitized their operations and small and medium-sized enterprises (SMEs) that lack the money, resources, and skilled talent to do so. McKinsey estimates that U.S. digital industries have three times faster profit and margin growth and two times faster wage growth than the economy as a whole.<sup>3</sup> Boston Consulting Group estimates that UK digital industries grew 2.5 times faster than the economy as a whole between 2003 and 2013.<sup>4</sup>

That is a problem because large businesses are not America's primary job creators. SMEs are estimated to drive over 60 percent of new jobs created in the United States.<sup>5</sup> We need to spur a tremendous public-private collaboration to create digital platforms for SMEs, and from this initiative, a large number of good digital economy jobs.<sup>6</sup>

This digital divide—one in which businesses are lumped into technological haves and have-nots—has profound consequences. Digitization delivers new efficiencies, new opportunities, and even new customers. The effect is not linear; it is exponential.

SMEs would obviously benefit from these tools—but they are often cost prohibitive. When a major retailer uses census data to optimize product lines by region, or uses weather data to change inventory in real time, smaller stores simply cannot keep up.

The solution is a new digital economic agenda that gives SMEs access to the digital tools, technologies, and services driving the next wave of prosperity: online banking and payroll, supply chain management, data analytics, e-invoicing, and the many other basic means of digital intelligence and efficiency available to larger businesses that can power growth and thereby job creation.

There are many policies that the federal government can adopt across agencies to encourage SMEs to digitize, such as:

- Expand efforts by the Small Business Administration to train SMEs in, and incentivize them to use, digital tools that will optimize their business;
- Foster new public-private partnerships and collaborative efforts between SMEs (by providing infrastructure, tools, and investment) to help them better share data, analyze data, and gain better market intelligence;
- Open up more free federal data sources to SMEs and expand the work of the Commerce Data Service to serve small businesses; and
- Develop new approaches to data governance and privacy, examine the context of how the data is being used, and develop a set of guiding principles that build public trust.

Government can also enable SMEs to connect with rapidly growing global markets over the Internet, playing to our strengths in producing and exporting goods and, increasingly, services that could bring billions of potential new buyers to America's computer screens.

Research has shown that more than 90 percent of SMEs that sell goods and services on the eBay platform engage in overseas exports, compared with less than 5 percent of all U.S. SMEs.<sup>7</sup>

What's more, by 2022, China's middle class is expected to grow to an estimated 630 million people. These consumers will demand better health care, growing educational opportunities, and a cleaner environment—all services that the Chinese economy does not have the current capacity to supply at the necessary scale and quality, and which American companies can export.<sup>8</sup>

Public-private strategies can help develop digital platforms that reduce friction from customs, taxation, and shipping and help SMEs reach customers in every corner of the world.

## Power the Skills-Based Labor Market

As America has moved into the digital economy, the labor market has changed—not just creating new types of jobs (e.g., programmers, developers, data analysts) but also rapidly changing the required skills in most other fields.

A recent study of labor market data by economists at the Pew Research Center, in association with the Markle Foundation, found that jobs that require highly skilled employees are growing at a significantly higher rate than jobs that require less education and training. What’s more, the study found that higher-skill jobs (particularly jobs that require a high level of analytical or social skills) pay more than nonskilled jobs. In other words, skills have a direct link to higher-paying jobs. It’s no surprise then that more than 54 percent of workers surveyed by Pew for the same study say that it will be “essential” for them to get more skills training throughout their career, and another 33 percent say it will be “important” to do so.<sup>9</sup>

The problem, though, is that while the *realities* of the labor market demonstrate the value of skills, it is enormously difficult to learn new skills in an affordable manner, demonstrate those skills to potential employers, or understand how to find jobs that require those specific skills. This is particularly true for the middle-skill worker who, like almost 70 percent of Americans, does not have a college degree.<sup>10</sup>

However, there is a solution. Digital platforms can further the transition toward a skills-based labor market by giving employers the opportunity to post open jobs in a transparent manner on the basis of the specific skills they need, not only diplomas obtained or previous jobs. This enables job seekers to demonstrate their skills and educators to see where the skills they teach are needed. Increasingly, these skills are both hard and soft skills, like critical thinking and collaborative problem solving. In such a labor market, those who do not have a college diploma, but do have the skills necessary for their job, become eligible to apply. Of course, it is also possible that we may see an increase in the number of people who, over a lifetime, acquire a college degree as well.

One example of such a platform is *Skillful*, an initiative of the Markle Foundation, in partnership with the state of Colorado and city of Phoenix and with LinkedIn, Arizona State University, edX, and local employers in Colorado and Phoenix. *Skillful* is a digital platform that provides job seekers a window into the growth jobs employers have available in their area, the skills needed and how to get them, easy access to local skills-training courses, and coaches to help them get on a better career path.

Platforms like *Skillful* are just beginning to develop. The federal government can accelerate their growth and national impact. The president should lead this effort—promoting the adoption of similar platforms and joining with employers, governors, educators, and local leaders who are creating skills-based labor markets.

In addition, the federal government ought to:

- Work together with other leading employers and associations toward developing more flexible, low-cost, and useful systems of skills credentials;
- Provide vouchers to take skills-training classes along with food stamps or unemployment checks—putting those who use government assistance in a better position to compete in the job market;
- Adjust financial aid systems to make them portable and flexible enough to encourage educational institutions to innovate;
- Use government buildings after hours and digital platforms for skills-training classes;
- Teach in-demand skills to federal employees (classes could even be open to the public);
- Incentivize government employees to act as mentors or coaches;
- Expand funding for apprenticeship programs between employers and schools, and work with unions to expand training and apprenticeship programs;
- Develop incentives for businesses to expand employee training, and encourage them to form partnerships with community colleges to offer affordable classes that teach skills tailored to a particular sector.

## II. Evolving the Role of Government

Government itself must quickly begin to change the way it works or become increasingly irrelevant to everyday life. To make government more effective for the digital age, we must shift the culture of government operations and improve relations between the government and the tech sector.

### **Shift the Culture of Government Operations**

To seize the opportunities presented by the digital economy, the federal government must embrace the management ethos of the digital economy: rewarding

experimentation even if it can result in failure, decentralizing the processes, embracing open innovation and crowdsourcing of solutions, having competing teams working on the same problems, using data sources and advanced analytics to simulate a program's effectiveness and then optimize it for its target population, and testing different programs in different parts of the country to see which are most effective.

It is essential to create an effective regulatory environment for a digital economy, preserving the important values that regulations are meant to protect while updating the rules to reflect the modern digital era. Some regulations should be innovative in nature, leveraging, for instance, insights from behavioral economics, reputation management, data science, and gamification. We can make policy more data driven and iterate based on what we learn. For example, a new regulation intended to create jobs can have a specific jobs target against which data is collected. If the result is not achieved, regulators should challenge themselves to understand why they missed the metric and adjust the program to meet the goals.

In addition, we should not limit comment and input to those who know their way around the regulatory process. Regular citizens should be encouraged to participate via crowdsourcing platforms. The federal government should tap into the skills and talents of a wide cross-section of citizens for the co-creation of innovative solutions. Open or more targeted calls using digital platforms around specific challenges and policy questions, potentially prize-induced, have proven to incentivize citizens to engage with government in new and meaningful ways. More experimentation with crowdsourcing digital policy formulation is needed. And we should go beyond that to engage Americans to work with government employees in creative ways that introduce them to the challenges government faces in meeting their needs and draw on public input to make programs more effective. We should be able to show the American people that we can apply America's collective creative genius to make the federal government come alive to serve them.

### **Improve the Relationship Between the Federal Government and the Tech Sector**

Relations between the federal government and the tech sector have been at a nadir since the Edward Snowden revelations. As a result, policy makers have not been able to adequately collaborate with the tech community—a dangerous position considering that a larger and larger share of the problems we need to address will require technological know-how and expertise. And a growing amount of the information the government needs in order to understand the world is going to be in the hands of the tech sector and otherwise unavailable to the government. We have

a profoundly strong interest in better collaboration between the government and the tech sector.

We need to recognize that the government, tech sector, and the American public all share the same goal: a healthy, robust, and secure digital economy. Similarly, we ought to appeal to the great patriotism present in the tech sector, begin a new dialogue, and embark on a full-scale redefinition of the federal government's position on issues of importance to the tech sector, such as economic security policy. And we need to embark on collaborative thinking on policy issues that involve the public interest broadly in arenas like artificial intelligence and the Internet of things, and its relationship to privacy generally as the Internet evolves and grows more important in people's lives.

It is not enough for policy makers to turn to the private sector for collaboration or information, or even to have tech experts in government who are at the table. Today, policy makers have to become more tech literate themselves. In a larger sense, technology needs to become a *common* language throughout the federal government. In an earlier period, it was expected that all national security officials, regardless of their background or purview, had an understanding of Cold War geopolitics. While not everyone can know every technology, policy makers can learn about digital technology and have a context for the key issues facing the country.

As in the private sector, our concept of digital technology must shift from being viewed as a tool for economic growth to being seen as the very *foundation* upon which our economy will grow and in which national security decisions will be made.

## Conclusion

The global digital economy is racing ahead, and our next president faces a historic choice: either assert a clarion call of leadership or miss the moment to impress upon the nation the importance of adapting to this new era. Other countries have robust national digital economy strategies. Our nation seeks major change, and the next president can set in motion a transformative initiative to expand digital economy jobs and dramatically reshape how the government operates. America led in building the foundation for this tremendous growth; let's not cede leadership now.

**Zoë Baird** is CEO and President of the Markle Foundation, which focuses on realizing the potential of information technology to address challenging issues in national security, health care, and the economy. She currently leads Rework America, a Markle initiative of more than 50 diverse national leaders focused on creating more paths to opportunity for all Americans in the digital economy. She wrote the preface to the group's collectively authored book, *America's Moment: Creating Opportunity in the Connected Age*, and is leading a national partnership to create a skills-based labor market, Skillful.com. Ms. Baird previously led Markle's efforts to reform the intelligence community and convened The Markle Task Force on National Security in the Information Age. The Task Force reports reframed the role of intelligence in protecting the nation while preserving civil liberties. Ms. Baird also spearheaded Markle's efforts to catalyze improvements in health care, helping drive changes that enabled information to be shared securely and privately. Prior to Markle, she served as Senior Vice President and General Counsel at Aetna; Counselor and Staff Executive at GE; partner at O'Melveny & Myers; Associate Counsel to President Carter; and as Attorney-Advisor at the U.S. Department of Justice. Ms. Baird is founding co-chair of the U.S. Commerce Department's Digital Economy Board of Advisors, a director of the Council on Foreign Relations, an Honorary Trustee of the Brookings Institution, and a member of the Defense Policy Board. Ms. Baird holds an A.B. Phi Beta Kappa and a J.D. from the University of California, Berkeley. She is a member of the Aspen Strategy Group.

<sup>1</sup> See Pew Research Center. November 23, 2015. "Public Trust in Government: 1958-2015." <http://www.people-press.org/2015/11/23/public-trust-in-government-1958-2015/>

<sup>2</sup> The initiative could be led by the National Security Council, National Economic Council, Office of Science and Technology Policy, Office of Management and Budget, or a special assistant to the president.

<sup>3</sup> See Manyika, James, Sree Ramaswamy, Somesh Khanna, Hugo Sarrazin, Gary Pinkus, Guru Sethupathy, and Andrew Yaffe. December 2015. "Digital America: A Tale of the Haves and Have-Mores." McKinsey Global Institute. <http://www.mckinsey.com/industries/high-tech/our-insights/digital-america-a-tale-of-the-haves-and-have-mores/>

<sup>4</sup> See Boston Consulting Group. 2016. "The Internet Economy in the G-20." <https://www.bcg.com/documents/file100409.pdf>

<sup>5</sup> See <http://www.sbecouncil.org/about-us/facts-and-data/>.

<sup>6</sup> See Baird, Zoë. January 14, 2016. "Dangerous Digital Divide Looming for Small Businesses." *The Hill*. <http://thehill.com/blogs/congress-blog/economy-budget/265787-dangerous-digital-divide-looming-for-small-businesses>

<sup>7</sup> See *Ebay 2015 US Small Business Global Growth Report*, [http://www.ebaymainstreet.com/sites/default/files/2015-us-small-biz-global-growth-report\\_0.pdf](http://www.ebaymainstreet.com/sites/default/files/2015-us-small-biz-global-growth-report_0.pdf).

<sup>8</sup> See Baird, Zoë and Parker, Emily. May 29, 2015. "A Surprising New Source of American Jobs: China." *Wall Street Journal*. <http://www.wsj.com/articles/a-surprising-new-source-of-american-jobs-china-1432922899>

<sup>9</sup> See Pew Research Center. 2016. "The State of American Jobs." The data used in this report were based upon both a national public opinion poll and a Pew Research Center analysis of O\*NET and Current Population Surveys by the Bureau of Labor Statistics from 1980 to 2015. <http://www.pewsocialtrends.org/2016/10/06/the-state-of-american-jobs/>

<sup>10</sup> Ryan, Camille L., and Kurt Bauman. March 2016. *Educational Attainment in the United States: 2015*. Washington, DC: U.S. Census Bureau. <http://www.census.gov/content/dam/Census/library/publications/2016/demo/p20-578.pdf>