



New Directions for Government in the Second Era of the Digital Age

Strategy, Policy, and Action for the Biden-Harris Administration

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Executive summary

This research aims to assist governments in exploiting the next era of technology in their own operations, within their economies and society, and with their allies and global partners. To make the report more concrete, we focus on the opportunities and challenges facing the new administration in the United States as an exemplar of what government could do.

Creating strategy and policy for the digital age: It's time for a turn in America

The Biden-Harris administration arrives at a unique time for government market-making. The pandemic exposed and exacerbated problems at all levels of government, creating a *demand pull* for transformation. The advent of the second era of the digital age, with artificial intelligence, the Internet of Things, and blockchain technologies at the core, are creating a *supply push* for innovation.

America's problems are many: a pandemic leading to a crushing recession, hardship, disruption to many industries, and unprecedented levels of debt, social injustice, right-wing extremism, and a country divided. The former administration has delayed the battle against climate change by four years and left a crisis of legitimacy in government, the free press, elections, and democracy itself.

At the same time, the pandemic has accelerated the inexorable march of the digital age, as people work, learn, shop, communicate, and entertain themselves online. Technology is also entering a second era, after 40 years of mainframes, minicomputers, the personal computer, the Internet, the Web, the mobile web, social media, the cloud, and big data.

In this second era, new technologies—artificial intelligence, robotics, sensors, machine learning, automation, and even biological implants—are infusing into everything, and every business process. Software innovators can spin up all new business models in code, launch them on the Internet, and plug into global supply chains.

Keywords

agile methodology, central bank digital currency, data governance, Facebook, immigration, initial coin offering, participatory budgeting, SolarWinds, Solid Project, vaccination, WebID

Who should read?

Chief information officers, chief technology officers, chief digital officers in the public sector; directors of research & development; college and university presidents, venture capitalists; heads of federal and state agencies; advocates of digital rights

"Look at the bigger impact these transformative ideas can have for a better government, a better economy, a healthier world, and a better environment."

- Tony Scott

Former Federal CIO of the United States, The Obama-Biden Administration

Foundational to these innovations is the technology underlying cryptocurrencies called *blockchain*—a distributed platform that can reshape business and recast the order of human affairs for the better. This second era will disrupt financial services and transform entire industries, animate the physical world, and reshape the nature of government.

It also brings a dark side. New media have caused a fragmentation of public discourse. Industrial age jobs could vanish, from truck drivers and cashiers to telephone operators and data entry keyers. Big Tech companies capture and exploit the data of individuals. These are but a few examples.

As machines become smart, they pose new threats. Trillions of networked devices may open new holes in our security and autonomy. The federal government has made some success addressing the opportunities and challenges of this new digital age over the past few years, but to those in the know, progress seems glacial.

Now's the time for government leaders to acknowledge our new digital realities and develop a comprehensive framework for achieving prosperity, justice, sustainability, social cohesion, and good government. To do this, federal leaders must become knowledgeable about these technologies and to make a turn to realize the upside and mitigate the downside.

The current wave of digital innovation presents an historic opportunity for the United States federal government to rethink and redesign how it operates, how and what it provides, and how it interacts and engages with citizens and its partners in state, local, and foreign governments, the private sector, the media (i.e., Fourth Estate), and civil society. It's time for a turn in how it addresses technological innovation in the economy and the country as a whole.

Five digital priorities

This report recommends a series of actions that would position the United States for long-term digital leadership, help fight the COVID-19 pandemic, rebuild the American economy, and engage society in dialogues rather than diatribes for the new digital age.

We see five broad areas of change, each of which addresses major priorities for the new administration: (1) cybersecurity and protecting identity, privacy, and individual autonomy, (2) embracing the digital dollar and other cryptocurrencies, (3) retooling government services, (4) engaging citizens and holding officials accountable, and (5) rebooting America's innovation economy.



The Oculus and the USA flag, New York, US by Renan Kamikoga, 2019, used under Unsplash license. Cropped.

1. Ensuring security, privacy, autonomy, and citizen-owned identities

Cybersecurity of US digital infrastructure is paramount. Russian hackers' recent cyberattack on the United States was remarkable and unprecedented in its scope, sophistication, and impact. The intrusion must serve as a call for a global, coordinated effort to secure the technology-based supply chains and information systems upon which democratic societies depend.

Data is the new asset class of the digital age. Citizens primarily create it, large digital conglomerates exploit it, and no one governs or regulates it. America should be the first country where citizens own their data, using it to plan their lives, monetizing it, protecting their privacy and data security, and making it available as appropriate for societal reasons, such as health data in a pandemic.

Every citizen needs a self-sovereign digital identity. To do this, the federal government should take a page from Sir Tim Berners-Lee, the inventor of the Web, and seek viable digital solutions such as Berners-Lee's Solid technology so that consumers can collect, store, and use their own data on the Web. The government should encourage the numerous efforts underway that use blockchain in protecting identity and utilizing user data confidentially. For example, as individuals recover from COVID-19 and develop verifiable immunity,

they could receive a health certification to attach to their digital identity, to prove that they are safe to work in public again. In effect, the digital identity would serve as an immunity passport that expired when immunity expired.

Efforts to close the digital divide must accelerate. We cannot solve systemic inequality in the economy if we replicate it in cyberspace. When COVID-19 hit, too many people lacked and still lack the devices, Internet services, and know-how to keep up. To close this divide, the Biden-Harris administration must prioritize low-cost access and high-speed broadband, connecting marginalized communities in urban and rural dead zones. Every school should have digital literacy and cyber safety courses.

Lawmakers must recognize people's right to their own data. Companies must stop hoarding user data and return these assets to their owners or migrate the data to distributed storage systems and transfer control to owners. If online sites want to use these data, then they must do so transparently—no decrypting, copying, storing, or associating the data with the user's identity—in exchange for a clear user benefit.

2. Embracing the digital dollar and other cryptocurrencies

Lawmakers need a sense of urgency around creating a US digital dollar. As China races to launch its own central bank digital currency, its foreign trading partners are already moving to renminbi as a reserve currency. The prevalent attitude among many government and regulatory officials of other cryptocurrencies is misinformed and misdirected. Digital currencies have many uses that are good for the economy and the country. It is untrue that they are typically used for criminal activity. There are also roles for corporate cryptocurrencies like Facebook's Diem and community-based currencies like bitcoin.

A convergence of digital technologies is driving the biggest ever transformation of assets from the physical to the digital—blockchain, artificial intelligence, and the Internet of Things—what we're calling a "trivergence." However, the regulatory environment is a mixed bag of laws that requires rethinking. We suggest a moratorium on new rules until there is a full consultation with stakeholders. The overall approach should be principles-based rather than rules-based.

Innovators need clear guidance on digital tokens, including custody. Many participants in the blockchain industry have developed tokens for using their systems or funding their development or operation.

Some tokens such as bitcoin and ether are widely understood not to be securities under federal securities laws. Creating clear definitions and spaces for these tokens would not only benefit US innovation but keep innovators within the United States. Drafting legislation that spells out these criteria, amending securities laws as we suggest herein, and creating safe harbors or other exemptive relief would greatly reduce the legal uncertainty around this nascent set of digital technologies.

America also needs guidance on the tax treatment of digital things of value. How should individuals and organizations treat virtual currencies and digital securities tokens? The Internal Revenue Service should consider the use of virtual currencies as a form of payment and as an investment asset class.

Blockchain use could deter money laundering and improve sanctions compliance. Distributed ledger technologies provide unprecedented ability to track and trace transactions, by token and by wallet or account. Unlike cross-border wire transfers, blockchains perfectly preserve the provenance of financial transactions. They have already helped in detecting and prosecuting criminals and can strengthen real-time auditability of financial transactions and facilitate look-backs, transaction monitoring, tracking, audits, and reporting.

The United States must streamline oversight of the industry. The Financial Crimes Enforcement Network, US Commodity Futures Trading Commission, US Securities Exchange Commission, state regulators, and other regulatory bodies all have jurisdiction to oversee various aspects of virtual currency markets. They must consider how to apply their common requirements to financial institutions engaging in virtual currency-related activities, including complying with sanctions.

The US government must recognize the global economic significance of blockchain. It has a singular opportunity to pioneer what could become international regulations and standards in this technology. And so lawmakers must establish a framework for boosting and promoting blockchain's development so that digital technologies can lead in this second era as they led in the first era.

3. Retooling services and service delivery to meet world-class digital standards

The new administration should develop a kind of domestic Digital Marshall Plan. This plan would coordinate and engage all federal, state, and municipal chief information officers as well as the changemakers among career IT civil servants.

Leadership must think big across boundaries. Prior administrations had visions for “reinventing government.” While the federal government has made progress in its use of digital technologies to redesign and digitally deliver services to individuals and organizations, leaders must work across agency silos in terms of culture and service innovation.

Collaboration across agencies will be critical. We liken this level of coordination to the US military’s Joint Chiefs of Staff with state-level heads of the National Guards. They should think big but start small with adequate funding for innovative projects that result in open standards and shared services that are vendor agnostic, interoperable, and scalable nationally. By leveraging digital innovation, the new administration can drive service excellence and begin to reinvent the United States as a digital government for a new era.

Managing the vaccination rollout with speed and utmost care is a case in point. With blockchain technologies, it is no longer an impossible mission in mass coordination. US digital leadership, a service mindset with compliance coded into every point of the supply chain process, and a clear map of the service journey could have the American economy on the road to recovery.

Success will require service transformation and agile methodologies as well as digital architecture and tools, and a longer-term plan for changing organizational culture.

4. Engaging citizens, hold elected officials accountable, and rebuild trust

New technologies can help stakeholders to rebuild trust in democracy. The first two centuries of the American republic featured representative institutions, but there was a weak public mandate, operational opacity, and an inert citizenry. Powerful interest groups held sway over politicians. More recently, the 45th president and his ilk challenged the legitimacy of democracy itself. We identify many tools to support the next century, characterized by citizen engagement and activism, public deliberation, institutional transparency, and accountability, in turn reestablishing trust and rebuilding social capital.

There are roles for the president and vice president personally. Former President Trump used digital media extensively but reinforced a one-way model of government—you vote, I rule. The Biden-Harris administration has opportunities to include a far more diverse network of citizens in decision-making. They can spotlight people developing grassroots plans for change in their communities—not just to vote or donate but to participate in local

politics and hold local representatives accountable throughout their terms in office.

President Biden could become the first truly digital president. His predecessor used media to sow doubt in the political process and the professionals who manage it. The new president can use these same tools to restore confidence in experts and change the relationship between citizens and their government. Otherwise, Trumpism will continue to wreak havoc on democratic processes.

Old ways of governing Americans no longer work. Instead, President Biden must call on citizens to mobilize for change where the most heinous violence occurred—through voter registration campaigns, citizen development projects, and centers for digital re-skilling in coal country and the rust belt, from metals, automotive, and textiles to blockchain, artificial intelligence, and the Internet of Things—and the technology exists for his administration to make this happen.

Americans participate when doing so makes a difference. Dynamic forecasting using open source data, policy hackathons, scenario planning to test policy options, and participatory budgeting to fund them have yielded positive results.

5. Rebooting American’s innovation economy to include a diversity of entrepreneurs

The new administration must strengthen the building blocks of innovation and small business creation.

First, it must improve the performance of publicly funded incubators and accelerators. That means promoting specialization, establishing clear sector and stage mandates, funding them appropriately, and setting sector- and stage-appropriate timelines for results, all prior to additional funding. It also means devoting more funds to incubators with veteran start-up talent and supporting the opportunity to raise capital through digital channels such as initial coin offerings.

Second, it must address the opportunity gaps in start-up infrastructure. That means boosting investment in underserved communities, closing sector-based gaps in access to capital, and creating networks dedicated to serving entrepreneurs of color. Government can fund bold initiatives that engage the private sector as well.

Third, it must streamline and harmonize processes for new businesses across federal agencies and state and local jurisdictions. Officials should not require entrepreneurs to slide and dice their data in multiple ways, then submit it multiple times in multiple data formats because multiple backend government silos cannot communicate with other. This is 2021, not 1970.

Fourth, it must rekindle America's founding entrepreneurial flames. That starts with education. Government at all levels can not only promote entrepreneurial pathways in high schools and technical colleges but also bridge the business curriculum gaps between what universities teach and what their communities require, so that graduates have the skills and knowledge that companies need most.

Fifth, it must reform immigration policies. The federal government can streamline immigration processes for skilled talent, retain the best foreign students upon graduation, and create a start-up visa program so that entrepreneurs want to stay and start their businesses on American soil.

High-level commitment to digital transformation

Across these priorities, the US government's digital journey will entail transforming business and organizational models, processes, and competencies to create a superior value proposition for citizens, businesses, and other stakeholders of government. Digital transformation, after all, is not just about modernizing technology and tools. It is about adopting appropriate digital technologies to change how we work and deliver public value in the digital economy.

It also requires fresh new thinking about the role of the new digital age in the economy, body politique, and society. Only then can we ensure the fulfillment of the new promise of technology and the minimization of the dark side—the dystopian futures imagined by George Orwell, Margaret Atwood, William Gibson, and many others.

Leadership commitment to manage change is vital—leaders must foster an organizational culture that truly puts users first, collaborates across departmental silos, and modernizes policies and governance structures to support innovation and experimentation. This is hard work—the hardest work of all in transformation. It is not for the thin-skinned, the half-hearted, the short-sighted, or the partisan driven. Leaders in policy, human resources, legal, technology, and communications must come to the table and walk the halls in rolling out the digital agenda.

It is truly a time when either US federal government plays an active and positive role in its own transformation, or change will happen to it. The transformation process is both exhilarating and painful, but the price of inaction is a lost opportunity for the United States to redefine its role in the lives of its people and as a force for good in the world.

Resources

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About the Blockchain Research Institute

The Blockchain Research Institute is an independent, global think tank founded by Don and Alex Tapscott and funded by an international membership of corporations and government agencies. Its multimillion-dollar research program consists of over 100 projects on the strategic impact of distributed applications and blockchain platforms on business and society. Each research paper is written by a subject matter expert and designed to prepare private- and public-sector leaders in their roles as catalysts of change, ushering in this second era of digital technologies.

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