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What's next for the United States?

Part 5: Innovation and Digitalization Policy

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How is the Biden Administration changing the direction of the United States? The KAS Office USA takes a first look, in a series of five country reports. This report highlights the 46th President's specific positions, policy proposals, executive orders and key appointments in the executive branch with respect to innovation, science and digital policy.

Key Policy Goals

While President Biden's immediate attention and policy agenda is largely focused on all aspects surrounding the unprecedented Covid-19 pandemic and ensuing economic crisis, his statements and policy program leading up to the U.S. general elections in November 2020, as well as some early executive actions and appointments, nevertheless indicate a substantial focus on innovation and information technology policies. This includes sizeable research and development investment programs (including in artificial intelligence), possible regulation of Silicon Valley and the internet, privacy and intellectual property rights, as well as recalibration of U.S. policy based on science.

Innovate America: In his program for his 2020 presidential run¹ Biden laid out a \$300 billion investment plan in Research and Development (R&D) ranging from electric vehicle technology to lightweight materials, semiconductors to 5G and artificial intelligence, in order to "unleash high-quality job creation in high-value manufacturing and technology."

Specifically, Biden wants to allocate funding increases in direct federal R&D spending to the National Institutes of Health (NIH), the National Science Foundation (NSF), the Department of Energy, the Advanced Research Projects Agency for Health (ARPA-H), the Defense Advanced Research Projects Agency (DARPA), and other peer-reviewed science research grants to colleges and universities. The program would also direct investments to key technologies supporting U.S. competitiveness – including 5G, artificial intelligence and biotechnology.

President Biden also seeks financing to encourage small businesses to commercialize cutting-edge technology, through a scaled-up version of the Small Business Innovation Research (SBIR) program in concert with research institutions. Another aspect of the plan includes workforce skill development through public investment, and training and education for manufacturing and innovation jobs both in urban and rural settings.

Silicon Valley and Anti-Trust: Joe Biden's relationship with the tech industry has evolved since serving as Vice President under Barack Obama. Since then, also due to the coronavirus pandemic, "Big Tech" companies have expanded their reach, influence and bottom line (through the unparalleled collection and monetization of data.) Yet, platforms such as Facebook, Twitter and YouTube have also been utilized by misinformation campaigns seeking to influence U.S. elections and liberal democracy as a whole. Throughout his candidacy, Biden promised that he would take on this growing economic concentration

and monopoly power. The recent breach of the U.S. Capitol by violent protesters might result in greater urgency for the Biden administration to address this issue. Democratic control of the White House and Congress could lead to new competition laws regulating tech companies' business practices. More litigation could force breakups or significant structural changes at some of the world's largest corporations.

Social Media Regulation - Section 230:

Even before the November 2020 election and the January 6 Capitol intrusion, Congress and experts debated whether internet platforms ought to remain shielded from liability for content posted on their services, as prescribed by Section 230² of the Communications Decency Act, a 1996 law regulating the early internet. In a late 2019 New York Times interview, President Biden said about this liability protection that "It should be revoked


because it (Facebook) is not merely an internet company. It is propagating falsehoods they know to be false, and we should be setting standards not unlike the Europeans are doing relative to privacy."³ Members of Congress on both sides of the aisle have started to seek changes to the law - which predates many popular apps and services - as a remedy for numerous problems associated with platforms and their content moderation.

Digital Divide: The coronavirus pandemic induced a significant migration to the digital sphere, with technology becoming increasingly central to daily life. However, it also exposed inequalities that Joe Biden addressed during his campaign by aiming to close the disparities in the nation's internet infrastructure. Biden discussed expanding broadband capability to every household in the U.S., investing heavily in rural connectivity, backing municipal-run networks, encouraging more competition among Internet Service Providers (ISPs), reforming subsidy programs and providing funding for cities to help their residents get connected.

The Biden platform also addressed issues concerning the millions of **gig workers**, who are connected to jobs through tech platforms. Typically, these workers do not receive the benefits that come with being considered full employees. Biden has expressed that he wants to make gig workers employees. In 2019 in California, the state legislature passed a law defining many app workers as employees. However, this law was overturned in a statewide ballot called Proposition 22.⁴

As U.S. Senator, Biden was part of a bipartisan Senate consensus on the increasing importance of **intellectual property (IP) protection**. Like the Obama and Trump administrations, the Biden administration is likely to treat IP questions as an important component of national security overall. On his campaign platform, Biden states that he will:

"confront foreign efforts to steal American intellectual property. China's government and other state-led actors have engaged in an assault on American creativity. From cyberattacks to forced technology transfer to talent acquisition, American ingenuity and taxpayer investments are too often fueling the advances in other nations."



**"SCIENCE WILL ALWAYS BE AT THE
FOREFRONT OF MY ADMINISTRATION —
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SCIENTISTS WILL ENSURE EVERYTHING
WE DO IS GROUNDED IN SCIENCE,
FACTS, AND THE TRUTH."
Joe Biden, January 2021**

Thus, Biden also announced to develop new sanctions to prevent theft of U.S. technology, which could be accomplished, in part, through the Detering Espionage by Foreign Entities through National Defense (DEFEND) Act⁵, introduced by – then Senator and now Vice President - Kamala Harris.

Biden's platform promised to increase the number of visas offered for permanent, **high-skilled immigration** based on macroeconomic conditions. He said that he would also exempt from any cap recent foreign graduates of doctoral programs in STEM fields (Science, Technology, Engineering and Mathematics) stating that “losing these highly trained workers to foreign economies is a disservice to the U.S. economic competitiveness.”

First Steps and Announcements

Starting in the first week after his Inauguration, President Biden began issuing several technology and innovation related Executive Orders and Memoranda, demonstrating that this field is a crucial policy concern of the new Biden administration.

On January 27, 2021, he announced the creation of the “President’s Council of Advisors on Science and Technology” (more below) and issued a Memorandum on “Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking.”⁶ The Memorandum expresses that “scientific and technological information, data, and evidence are central to the development and iterative improvement of sound policies, and to the delivery of equitable programs, across every area of government,” and seeks to “ensure the highest level of integrity in all aspects of executive branch involvement with scientific and technological processes.”

In another Memorandum, “Revitalizing America’s Foreign Policy and National Security Workforce, Institutions, and Partnerships”⁷ from February 4, 2021, the President declares that:

“too many of America’s foreign policy and national security institutions have lost, or are at risk of losing, their technological edge. To succeed in a competitive world, we must close mission-critical knowledge and skills gaps, compete in and win the race for talent, equip our workforce with cutting-edge technology and agile, flexible, and adaptive organizational structures, and establish incentives and rewards for innovation across the Government.”

Another early expression of Biden’s position on tech policy emerged on February 11, 2021, when the Biden Administration asked in a filing with the Ninth Circuit Court of Appeals in San Francisco for a pause in Trump’s effort to ban the Chinese WeChat mobile application, over concerns of user data being collected by the Chinese government. The filing added that the Biden administration:

“remains committed to a robust defense of national security as well as ensuring the viability of our economy and preserving individual rights and data privacy.”

However, as of yet, President Biden's team has not offered specifics about how it plans to approach China's tech giants after four years of somewhat hawkish relations under Trump. White House Press Secretary Jen Psaki indicated that the new administration is “currently conducting an interagency review as it seeks to develop a holistic China policy.”

Organizational Changes and Important Players

In total, President Biden will have to fill about 4,000 politically appointed positions in the executive branch and independent agencies, including more than 1,000 that require Senate confirmation. As of February 15, somewhat curbed by Congress' preoccupation with former President Trump's second impeachment trial and debates over pandemic relief measures, Joe Biden had picked 53 nominees to fill key roles in his administration. Additionally, there are 245 appointees so far, who are serving in termed positions or who were held over from previous administrations.

New Faces Represent a New Start for Science and Technology Policy

In early January, Biden announced Rhode Island Governor, **Gina Raimondo** as his nominee for Secretary of Commerce. During her confirmation hearing she stated that she would work with Commerce's National Telecommunications and Information Administration (NTIA) to set up an Office of Connectivity and Growth "to amplify the work of NTIA's BroadbandUSA activities." She also indicated that she would "expand upon" the ongoing National Institutes of Standards and Technology efforts to create a trustworthy framework for AI and ensure a U.S.-EU transatlantic data flow deal that "fully addresses" the European court's concerns. As of mid-February Raimondo still awaits Senate confirmation.

Another of Biden's early nominations is the **Director of the Office of Science and Technology Policy (OSTP)**, also known as the President's "Science Advisor." The OSTP advises the President and others within the Executive Office on the scientific, engineering, and technological aspects of the economy, national security, homeland security, health, foreign relations, and the environment. The OSTP leads efforts across the federal government to develop and implement science and technology policies and budgets, and works with private and philanthropic sectors, state, local, tribal, and territorial governments, the research and academic communities, and other nations toward this end. Biden's nominee for OSTP is **Eric Lander**, who is the founding director of the Broad Institute of MIT and Harvard University, and was the lead author of the first paper announcing the details of the human genome. Lander's appointment is yet to be confirmed by the U.S. Senate.

For the **Federal Trade Commission (FTC)**, which yields substantial powers over the regulation of Facebook, Google and other tech giants in Silicon Valley, Biden selected **Rebecca Kelly Slaughter** as Acting Chairwoman. Slaughter takes the reins at the FTC after serving as a Democratic FTC commissioner since 2018. Slaughter is also a former top aide to now-Senate Majority Leader Charles E. Schumer (D-N.Y.).

Biden also designated **Jessica Rosenworcel** to serve as the Acting Chairwoman of the **Federal Communications Commission (FCC)**. Rosenworcel is a known supporter of net neutrality and has called on the FCC for years to build out broadband to the country's most unserved communities. Rosenworcel has also served as a Democratic Commissioner at the FCC for the past 8 years. The process of naming the fifth member of the FCC, either a new Democratic Chair or Commissioner, is likely take months, leaving the FCC in a split between the two Republican and the two Democratic members in the meantime.

Biden Administration Changes Structures and Hierarchies

The above mentioned Executive Order establishing the **President's Council of Advisors on Science and Technology (PCAST)**⁸, from January 27, 2021 is also elevating the science advisor position to the Cabinet level for the first time in White House history. This unprecedented move clearly underlines the Biden administration's commitment to science when it comes to the formulation of policy across the Executive Branch.

In addition, Biden has appointed **Frances Arnold** a California Institute of Technology chemical engineer, who won the 2018 Nobel Prize in chemistry, as PCAST co-chair. The other co-chair will be **Maria Zuber**, who has been a member of the MIT faculty since 1995 and MIT's vice president for research since 2013. She has served since 2012 on the 24-member National Science Board (NSB), the governing body of the National Science Foundation, serving as NSB chair from 2016 to 2019.

In summary, the Biden administration's stance on technology, innovation, and related policy fields appears firmly based on science - elevating science to the Cabinet level - and will likely be based on increased federal funding for R&D, possibly more appetite for regulation of Silicon Valley and the internet as a whole, while expanding cooperation with international allies.

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