

You're Saddled with Data Debt

Mid-future catastrophic scenario

Tech companies take a page from today's banks, which earn more profit the more consumers carry debt. Just as bank customers can become hopelessly buried in financial debt, consumers can find themselves drowning in "data debt," committed to providing deeper levels of personal data in exchange for indispensable services. Eventually, your every thought and action is quantified, seized, and made available for sale by the new debt collectors of the tech sector.



2ND YEAR ON THE LIST

Interoperability Initiatives



U.S. Sen. Mark Warner (D.-Va.) leads a bipartisan effort to make Big Tech's platforms interoperable.

KEY INSIGHT

Tech platforms connecting the cloud, our smart homes, and our everyday digital activities aren't interoperable. Big tech giants use different operating systems for their various devices and ecosystems, which some regulators argue is anticompetitive. New initiatives pushing for common standards are moving ahead in 2021.

EXAMPLES

Zigbee Alliance is developing a shared connectivity standard allowing hardware from different companies to work together. Amazon, Apple, and Google are members, but their devices don't work across platforms yet. Meanwhile, a bipartisan group of lawmakers led by Sens. Mark Warner (D-Va.), Richard Blumenthal (D-Conn.), and Josh Hawley (R-Mo.) proposed a new bill to encourage competition by making Big Tech's platforms interoperable. The Augmenting Compatibility and Competition by Enabling Services Switching (ACCESS) Act would require Google and Facebook to maintain API-like interfaces so that users could port their information over to different platforms if they wanted and smaller companies could more easily make use of our data. (With our permission, of course.)

DISRUPTIVE IMPACT

Incentivizing companies to make their protocols and hardware interoperable could help curtail some of the antitrust probes the big tech companies will face this year. Interoperability and data portability could eventually lead to new business opportunities and a bigger device ecosystem, if the tech giants are willing to cooperate.

EMERGING PLAYERS

- Zigbee Alliance
- Dotdot
- National Institute of Standards and Technology



Expert Insight



How the Pandemic Pushed Fast Advancements in the Public Sector

Jeff Le

U.S. State and Local Public Policy Lead for VMware

The pandemic upended the way governments, universities, and schools deliver citizen services and instruction. The silver lining: The future came faster for the public sector, which adopted flexible work arrangements, honed organizational culture, built stronger physical security, and implemented cybersecurity controls.

Consistent investment in technology and innovation has become a broadly recognized priority in the public sector. I see three areas that will continue to grow in importance: government technology modernization, sustainability, and workforce development.

Government technology modernization.

State and local governments hemorrhaged amid the pandemic. Unemployment agencies and motor vehicle departments across the country failed to meet the demand of remote services and faced serious cybersecurity concerns. The FBI reported a spike in fraudulent unemployment insurance claims involving stolen personally identifiable information. For instance, California paid at least \$400 million in unemployment benefit claims filed in the names of state prison inmates.



Multiple state governments are evaluating the use of blockchain technology to deliver services, and we'll see more digital infrastructure investments and cloud security strategies.

As a result of these failings, policymakers and politicians are interested in systems that reflect the 21st century. Multiple state governments are evaluating the use of blockchain technology to deliver services, and we'll see more digital infrastructure investments and cloud security strategies, amid more data breaches and growing calls for higher privacy standards such as those set forth by the California Privacy Rights Act of 2020.

Sustainability.

The move to the cloud and stronger digital backbones could result in reduced emissions and lower energy costs. Companies and (most) governments recognize the importance of pursuing sustainability in operations in order to combat the climate crisis (or at least realize tangible cost savings). Less reliance on one central location may minimize disaster recovery challenges,

should extreme weather events compromise a data center.

Workforce development and diversity, equity, and inclusion.

Personnel is policy. Recruitment and retention posed the biggest challenge to technology companies during the pandemic, as they consolidated their influence and worked to capture global markets. The work from home policies resulted in longer hours and record productivity but also came at the cost of extensive burnout. There are significant morale challenges, and more must be done to focus on the personal growth of employees, rather than just pure output.

In addition, partnerships with government and higher education have delivered collaboration on cloud computing curriculum that was sorely needed at community colleges and promise to improve the

meager diversity pipeline. Diversity is both a national security issue and a company culture imperative. Whether responding to a cyber event or creating an environment for working parents, companies and governments will become more resilient the more their teams reflect a broader and more inclusive range of experiences and backgrounds. The pandemic has highlighted some of these structural and institutional legacy inequities.

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1ST YEAR ON THE LIST

Science Is Back



Eric Lander was nominated to lead the OSTP.

KEY INSIGHT

The Biden administration is elevating famed scientists to key positions in the federal government, signaling a return to evidence-based research and forward-leaning policymaking.

EXAMPLES

One of the first announcements made by the Biden administration was a plan to make the White House Office of Science and Technology Policy (OSTP) a Cabinet-level agency, and it nominated geneticist and mathematician Eric Lander to lead the office. Lander, a biology professor at Massachusetts Institute of Technology and Harvard Medical School, was part of the public consortia that mapped the human genome. Elevating the position to the Cabinet marks a stark contrast to the Trump administration, which gutted the OSTP and waited nearly two years to nominate a director. In addition, Biden nominated two scientists—Maria Zuber, a planetary scientist and MIT’s vice president for research, and Frances Arnold, a Nobel Prize-winning scientist who helped pioneer the synthesis of artificial proteins—to the President’s Council of Advisors on Science and Technology.

DISRUPTIVE IMPACT

Across the federal government, 20 agencies fund science. A Cabinet-level position will be uniquely positioned to coordinate these disparate groups for better research and data sharing, to gain insights, and to launch big, collaborative projects. Biden has already charged these scientists with challenging questions: What lessons does the pandemic offer on the nation’s public health needs? What scientific advances are required to address climate change? How can the United States maintain technological and economic dominance? How can the administration nurture research and ensure that breakthroughs benefit all Americans? Answering these questions will undoubtedly unlock new funding, lead to public-private partnerships, and provide opportunities for startups across numerous industries—at least for the next four years.

EMERGING PLAYERS

- Office of Science and Technology Policy
- President’s Council of Advisors on Science and Technology



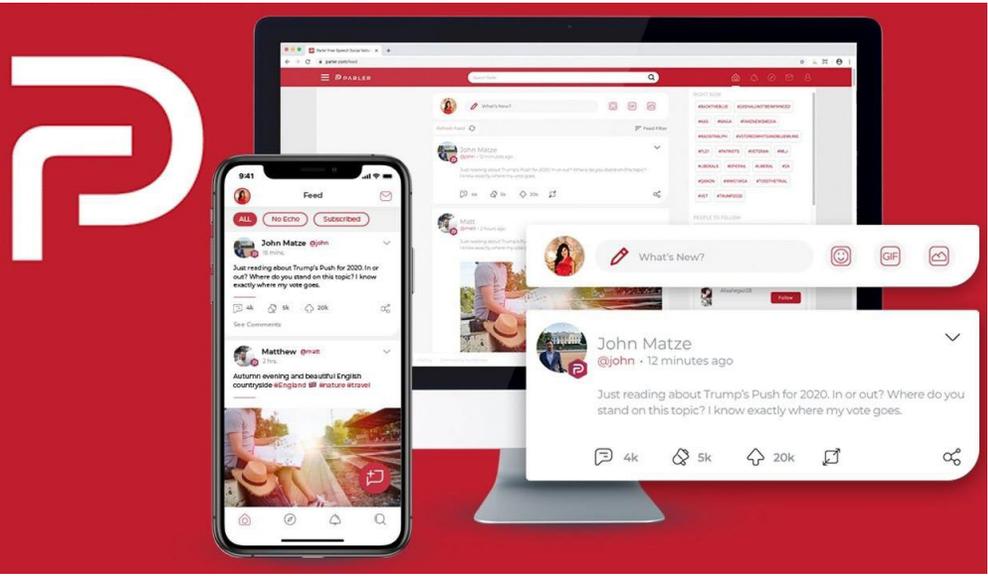
Science will always be at the forefront of my administration—and these world-renowned scientists will ensure everything we do is grounded in science, facts, and the truth.”

— President Joe Biden



1ST YEAR ON THE LIST

Corporate Denial-of-Service (CDoS)



AWS removed Parler for violating Amazon's terms of service.

KEY INSIGHT

When a company denies one or more users, businesses, or governments the ability to access its platform or services, this is an example of what the Future Today Institute calls a CDoS, a corporate denial-of-service.

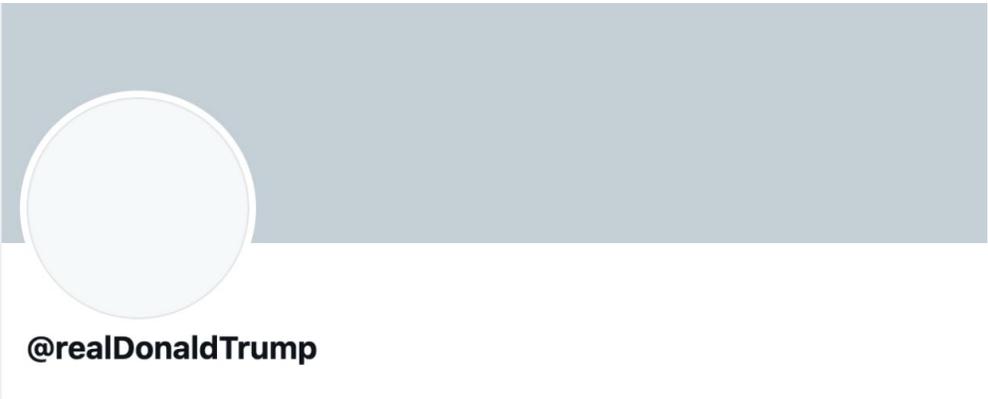
EXAMPLES

In the aftermath of the U.S. election, when former President Trump spread lies about votes being rigged or miscounted, conspiracy theorists and right-wing activists used social media to spread misinformation. This led to tech platforms taking action to suspend or deactivate accounts. On Jan. 6, 2021, Trump delivered a fire-and-brimstone speech calling for decisive, violent action. Some followers complied, attacking the U.S. Capitol in a deadly insurrection. The next day, Facebook temporarily denied Trump the right to post from his account. Snapchat instituted a similar, permanent ban. YouTube, Instagram, Twitch, and Shopify suspended Trump, while Twitter banned Trump's account indefinitely and shuttered 70,000 accounts associated with QAnon. Amazon Web Services removed extreme right-

wing platform Parler from the cloud, disabling its content and services. Reddit banned r/The_Donald and several pro-Trump pages that intentionally spread misinformation. Web-hosting company Liquid Web removed the oathkeepers.org, the site of the far-right militia group. Deplatforming worked: Weeks later, conversations about election fraud decreased on the largest platforms.



Corporate Denial-of-Service (CDoS) continued



Account suspended

Twitter suspends accounts which violate the [Twitter Rules](#)

Twitter permanently banned President Trump after he incited a riot at the Capitol.

DISRUPTIVE IMPACT

CDoSing is a complex issue in the U.S., where free speech laws are strictly enforced but where years of conspiracy theories and misinformation have divided the country on numerous issues, from politics to racial justice to the COVID-19 vaccine. Platforms played a key role—and some argue that the steps taken to remove radical groups came too late. Some lawmakers argue that tech companies overreached. The fate of Section 230, the law that offers civil liability protections to platforms like Google, Facebook, and Twitter, was called into question at the end of 2020 when Sen. Josh Hawley (R-Mo.) proposed a bill requiring platforms to stop what he perceived to be the targeting of conservative commentary. Florida Gov. Ron Desantis proposed new laws that would impose daily fines of \$100,000 if a platform restricts the speech of a candidate while running for a state office.

EMERGING PLAYERS

- Rebekah Mercer, heiress and right-wing activist
- Mark Zuckerberg, CEO of Facebook
- Jack Dorsey, CEO of Twitter
- U.S. Sen. Josh Hawley (R-Mo.)

Amazon’s decision to CDoS Parler demonstrates the power the cloud provider has over the internet.



2ND YEAR ON THE LIST

Corporate Foreign Policy



In 2014, Google Chairman Eric Schmidt made a trip to Cuba, which presaged President Obama's announcement that Google would work with Cuba to speed up internet connectivity.

KEY INSIGHT

Big tech companies are standing up departments dedicated to geopolitics.

EXAMPLES

Large companies have always lobbied to influence policy and regulation. But as the tech giants amass power and wealth, they're making key decisions that impact diplomacy and geopolitics. Microsoft President Brad Smith regularly meets with heads of state and foreign ministers about the tech cold war between America and China, emerging cyberthreats, and closing the digital divide in emerging markets. In 2017, Smith introduced a Digital Geneva Convention, an international treaty to protect citizens against state-sponsored cyberattacks. And Microsoft's Digital Diplomacy Group actively works on a tech-focused approach to foreign policy. The company sees corporate foreign policy as good business, because it builds trust and enables long-term planning. Apple, Google, and Amazon are building their own divisions centered on geopolitics and digital diplomacy.

DISRUPTIVE IMPACT

As they consolidate power in the commercial sector, Big Tech could wind up consolidating power in the public sector, too. It's one thing for a big company to lobby domestic lawmakers. Some now ponder the longer-term implications if corporations try to influence geoeconomics. What if a company's priorities differ from the national priorities of its government at home?

EMERGING PLAYERS

- Microsoft's Digital Diplomacy Group
- Facebook for Government, Politics, and Advocacy
- Jigsaw
- Google's Business Strategy Division
- Amazon's Public Policy teams
- Office of Science and Technology Policy

