

Ensuring That Government Use of Technology Serves the Public

Addendum

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Ensuring That Government Use of Technology Serves the Public

Testimony of Benjamin Boudreaux¹
The RAND Corporation²

Addendum to testimony before the Committee on Oversight and Accountability
Subcommittee on Cybersecurity, Information Technology, and Government Innovation
United States House of Representatives

Submitted August 2, 2023

Following the hearing on June 22, 2023, the congressional committee sought additional information and requested answers to the questions in this document. The answers were submitted for the record.

Questions from Ranking Member Gerald E. Connolly

Question 1

As technology continues to evolve, it is even more clear that we face a dual challenge of encouraging innovation and protecting the right to privacy.

*a. How can we balance individuals' privacy rights with fostering innovation and technological advances?*³

¹ The opinions and conclusions expressed in this addendum are the author's alone and should not be interpreted as representing those of the RAND Corporation or any of the sponsors of its research.

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³ All questions are presented verbatim as they were submitted to RAND.

Answer

Promoting innovative technologies and protecting individuals' privacy are each important for the public. Fortunately, these goals are not in fundamental tension; privacy protections can support beneficial technological innovation, and innovation does not have to come at the expense of Americans' privacy. Indeed, protecting privacy is essential to maintain Americans' trust in emerging technologies and the government agencies that use them.

The United States' long-standing commitment to privacy and civil liberties is important for several reasons, including to guard against wrongful government repression; to protect persons from criminal or economic theft, fraud, or abuse; and to prevent possible harms when personal practices or beliefs are made public. In each of these dimensions of privacy, the harms that result from violations will have an inequitable impact on those who are already vulnerable or marginalized.⁴

Although there is no single one-size-fits-all approach to promoting the dual goals of innovation and privacy, safeguards are necessary to ensure that innovation does not have harmful privacy implications. Emerging technologies, such as facial recognition and mobile-phone geolocation data sold by data brokers, potentially enable the widespread surveillance of Americans. Responsible government use of these technologies will require understanding the specific goals of the technology deployment, the types of harms that might result if privacy is not protected, and the policies necessary to ensure that the technologies are not misused or abused. The government should engage stakeholders to understand the public's view of benefits and risks regarding specific technology applications and develop effective standards and policies that ensure that emerging technologies also protect individual privacy.

b. What types of incentives can government use to encourage responsible innovation?

Answer

The United States has historically led the way in incentivizing responsible innovation through government-enacted safety standards—such as in the automobile industry, in which airbags, antilock brakes, and the like have led to safer products that have improved Americans' trust and been good for American business.⁵

The United States can continue to incentivize responsible innovation in emerging technologies, such as artificial intelligence, by mandating risk assessments and privacy, equity, and oversight standards through law and regulations. The government can also enact a clear set of safeguards in its acquisition and procurement process that establishes expectations for

⁴ Benjamin Boudreaux, Matthew A. DeNardo, Sarah W. Denton, Ricardo Sanchez, Katie Feistel, and Hardika Dayalani, *Data Privacy During Pandemics: A Scorecard Approach for Evaluating the Privacy Implications of COVID-19 Mobile Phone Surveillance Programs*, RAND Corporation, RR-A365-1, 2020, https://www.rand.org/pubs/research_reports/RRA365-1.html.

⁵ Jason Matheny, "Advancing Trustworthy Artificial Intelligence," testimony submitted to the U.S. House Committee on Science, Space, and Technology, RAND Corporation, CT-A2824-1, June 22, 2023, <https://www.rand.org/pubs/testimonies/CTA2824-1.html>.

technology developers. These types of safeguards can spur innovation and help expand the market for responsible technology—and thereby foster continued U.S. leadership.

c. How can policymakers ensure that companies and organizations prioritize and bake in privacy and data protection into their product design and development processes?

Answer

Policymakers can ensure that companies and organizations prioritize privacy by promoting a national culture of data privacy that applies across commercial and government uses of technology. One option for promoting this national culture is through congressional legislation that would harmonize the existing state-based patchwork approach to data privacy and provide a national-level signal that underscores the importance of privacy-preserving technology.

Currently, technology data privacy policies are notoriously lengthy and written in dense and complex legal jargon. In RAND research to address this issue, we developed a privacy scorecard that operates like a technology nutrition label, providing a concise, transparent, and standardized approach to comparing privacy protections across different technologies.⁶ This scorecard tries to empower consumers to make more-informed privacy-preserving decisions. The scorecard concept could be further promoted through governmental action at the state and federal levels.

d. How can we encourage innovation that has privacy by design or supports a privacy-conscious culture?

Answer

Per answers to prior questions, policymakers have a key role in encouraging innovation. That role includes privacy by design and supports a privacy-preserving culture by enacting safeguards in the government procurement process, considering federal data protection laws, and building a national culture of privacy by empowering consumers through more-standardized and more-transparent approaches to technology privacy policies. Privacy protections are essential for responsible technology deployments that foster trust and support from the public, and these protections can also spur innovation and be good for business.

Question 2

You have cited the Transportation Safety Administration's failed roll out of new body-scanning technology back in 2009 as a cautionary tale for agencies.⁷ The Department of Homeland Security did not foresee and mitigate the risks associated with the technology it was deployed, which resulted in added costs to taxpayers.⁸

⁶ Boudreaux et al., 2020.

⁷ RAND Corporation, *The Department of Homeland Security's Use of Emerging Technologies, Why Public Perception Matters*, (Mar. 2022) (online at www.rand.org/pubs/perspectives/PEA691-1.html).

⁸ *Id.*

a. Why is it important that federal agencies understand both the opportunities and the limitations of new technologies before investing sizable taxpayer dollars in them?

Answer

The example of the Transportation Safety Administration's failed rollout of full-body scanning technology demonstrates that there are financial and other costs from a poorly implemented technology deployment. These additional negative consequences might include reputational and credibility costs to federal agencies that impair their ability to accomplish key missions and might have a harmful impact on the federal workforce. In addition, a poorly implemented technology deployment might discourage Congress from funding other important emerging technologies that agencies need. Lastly, a poorly implemented deployment might hinder federal agencies from collaboration with essential operational partners at state, local, or international governments. These consequences can mean that federal agencies will not be able to access the technologies, personnel, or partnerships they need to accomplish governmental missions.

To prevent these severe negative consequences, it is important that federal agencies understand the benefits of new technologies but also the possible concerns raised by key stakeholders, including concerns about privacy, equity, and transparency, that will affect trustworthy deployment.

b. What kinds of questions should agencies ask of companies before investing in new technologies to ensure they understand the technology and all its risks and implications?

Answer

Before investing in emerging technologies, federal agencies should ask the following type of questions: What data does the technology collect, and how are those data stored and protected? How has the company assessed the risk of the technology, including unintended implications of the technology, through third-party Red teaming or other measures? What data was the technology trained on, and how were those data acquired (e.g., scraped from the internet)? What are the impacts of the technology across diverse demographic groups? How can the federal government ensure that the technology will be continuously audited and maintained over time?

Beyond questions for companies, federal agencies should also ensure that they understand their goals for the technology and relevant authorities for its use. They can also ask their workforce how they see the benefits and risks to ensure that frontline operators understand the technology and support its deployment. Lastly, the government should regularly elicit feedback from members of the public to understand what those affected by the technology think about the benefits and risks.

Question 3

The F-35 program is estimated to cost \$1.7 trillion to buy, operate, and sustain. The program incurred hundreds of millions in added costs and affected U.S. military readiness, because of

flaws in the contract, vendor failures, and a lack of sufficient government oversight.⁹ Among other issues, the Department of Defense did not contract for its own access to the underlying intellectual property for the complex information technology system that supports the F-35 fleet, including the system used to track spare parts and maintenance issues.¹⁰ These actions left DOD reliant on the contractor and with limited options to address tracking system deficiencies.¹¹

a. Why are regulations important for enabling the government to better evaluate new technologies, calculate risk, and provide proper oversight?

Answer

My research has not looked specifically at the F-35 program; however, it is one of many examples that underscore the importance of clear and thoughtful regulations in technology procurement. Regulations are important to ensure that the technology operates as intended and that safeguards, such as privacy, transparency, and accountability, can be maintained. These regulations will also ensure that vendors are chosen fairly, that costs of the technology are reasonable, and that the government can operate from clear expectations about how the technology will be evaluated and maintained over time.

b. How are regulations also beneficial to private sector partners with whom the government purchases novel and innovative technologies?

Answer

Per answers to previous questions, regulations can provide clarity and a set of standards for companies that can spur innovation, build consumer trust, and be good for business. There are many examples of the United States demonstrating leadership on responsible deployments of technology with regulatory safeguards in products, such as automobiles, aviation, and pharmaceuticals.

Question 4

In instances where technology holds significant potential to help save lives and to support first responders, how can the federal government ensure that concerns about privacy and civil liberties are properly addressed?

⁹ Government Accountability Office, F-35 PROGRAM DOD Needs Better Accountability for Global Spare Parts and Reporting of Losses Worth Millions, (May 2023) (GAO-23-106098) (online at www.gao.gov/assets/gao-23-106098.pdf); Department of Defense, Office of the Inspector General, Audit of F-35 Ready-For-Issue Spare Parts and Sustainment Performance Incentive Fees (June 13, 2019) (online at <https://media.defense.gov/2019/Jun/17/2002145901/-1/-1/1/DODIG-2019-094.PDF>).

¹⁰ The Pentagon Plan to Save the F-35's Logistics System Hinges on Whether Lockheed Will Relinquish Data Control, Defense News (Nov. 13, 2019) (online at www.defensenews.com/naval/2019/11/14/the-pentagons-plan-to-save-the-f-35s-automated-logistics-system-is-hitting-roadblocks-over-proprietary-data-rights/).

¹¹ *Id.*

Answer

Some emerging technologies might have significant humanitarian benefits and support first responders' ability to address emergencies. However, if these technologies are not used in ways that preserve privacy and equity and allow for accountability and oversight, there is risk that they will not ultimately serve the public's interest and might put at risk the legitimacy and credibility of emergency responders. To maintain the public's trust, it is important to find ways to deploy these potentially beneficial technologies in ways that protect privacy and civil liberties.

The federal government needs to engage relevant stakeholders to understand perceptions of the benefits and concerns of the technology application. These relevant stakeholders include the first responders themselves but also external groups, such as civil liberties organizations and groups representing the persons potentially affected by the technology in relevant contexts. The government should seek to collaborate and partner with these organizations to ensure that concerns can be addressed and ideally to find ways to deploy the technology collaboratively with the public's support.

Question 5

What can the federal government do to keep the public informed of the benefits and risks of new technologies as the country embraces new innovations that seek to keep Americans safe?

Answer

There are a multitude of ways the federal government can keep the public informed about the benefits and risks of new technologies. One approach is for the government to collaborate with industry and civil society organizations to undertake public-messaging campaigns that describe the benefits of emerging technologies while also showing how organizations have worked to address risks.

To take one example regarding the use of facial recognition to identify travelers in airports, federal agencies should provide consistent and clear messaging across all airports and other contexts of use about how agencies are using the technology and the ways they have mitigated concerns (such as by providing clear instructions in line with policies for how travelers can opt out). There are recent reports regarding the use facial recognition in airports that signage is inconsistent and that the Transportation Security Administration did not comply with its own risk-mitigation policies.¹² This example underscores that, in addition to clear messaging, the government will need to model responsible deployment in its actions.

Question 6

What platforms and tactics can agencies and public officials use to assess public opinion on the acquisition and use of new technologies as well as to educate the public on the opportunities and risks of these technologies?

¹² Shira Ovide, "You Can Say No to a TSA Face Scan. But Even a Senator Had Trouble," *Washington Post*, July 11, 2023.

Answer

There are a multitude of ways that agencies and public officials can assess public opinion and educate the public. For instance, the government can more regularly conduct nationally representative surveys, focus groups, and community engagement activities to understand the public's views of different technologies, with an emphasis on how the public views benefits and risks of specific government applications. These studies can help better understand distinct communities' views and potential behavioral and emotional reactions to technology applications, as well as to identify the attitudes held by different demographic groups and the key associated factors, including age, gender, race, income, education, and media consumption.¹³ For instance, the Department of Homeland Security's Science and Technology Directorate has recently commissioned several public perception studies,¹⁴ and these studies can be done regularly as new technologies are considered.

These public perception studies can be done both before a technology is deployed and regularly throughout a feedback process that might identify new or ongoing issues. These studies can proactively inform federal agencies about potential concerns before they arise and be used to develop strategic messaging to educate the public and build public trust.

¹³ Benjamin Boudreaux, Douglas Yeung, and Rachel Steratore, *The Department of Homeland Security's Use of Emerging Technologies: Why Public Perception Matters*, Homeland Security Operational Analysis Center operated by the RAND Corporation, PE-A691-1, March 2022, <https://www.rand.org/pubs/perspectives/PEA691-1.html>.

¹⁴ U.S. Department of Homeland Security, "Public Perceptions of Emerging Technology," *Federal Register*, Vol. 86, No. 212, November 5, 2021, <https://www.federalregister.gov/documents/2021/11/05/2021-24247/public-perceptions-of-emerging-technology>.