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"Optimizing for Engagement: Understanding the Use of Persuasive Technology on Internet Platforms"
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Written Testimony of
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Chairman Thune, Ranking Member Schatz, and members of the Subcommittee, thank you for inviting me to speak today. My name is Rashida Richardson and I am the Director of Policy Research at the AI Now Institute at New York University. AI Now is the first university research institute dedicated to understanding the social implications of artificial intelligence ("AI"). Part of my role includes researching the increasing use of and reliance on data-driven technologies, including algorithmic systems and AI, and then designing and implementing policy and legal frameworks to address and mitigate problems identified in our research.

The use of data-driven technologies like recommendation algorithms, predictive analytics, and inferential systems, are rapidly expanding in both consumer and government sectors. These technologies impact consumers across many core domains -- from health care to education to employment to the news and media landscape -- and they affect the distribution of goods, services, and opportunities. Thus, they have a profound impact on people's lives and livelihoods. Though these technologies affect hundreds of millions of Americans, they are primarily developed and deployed by a few powerful private sector companies, and are therefore shaped by the incentives, values, and interests of these companies. Companies that arguably have limited insight into whether their products will harm consumers, and even less experience mitigating those harms or determining how to ensure that their technology products reflect the broader public interest. So while most technology companies promise that their products will lead to broad societal benefit, there is little evidence to support these claims. In fact, mounting evidence points to the contrary.[1] A recent notable example emerged when internal IBM documents showed its Watson supercomputer, which was designed to improve patient outcomes, provided unsafe and erroneous cancer treatment recommendations.[2] This is

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[1] *See, e.g.*, SAFIYA UMOJA NOBLE, ALGORITHMS OF OPPRESSION: HOW SEARCH ENGINES REINFORCE RACISM (2013); Latonya Sweeney, *Discrimination in Online Ad Delivery*, 56 COMM. OF THE ACM 5, 44-45 (2013); Muhammad Ali et al., *Discrimination through Optimization: How Facebook's Ad Delivery Can Lead to Skewed Outcomes*, ARXIV (Apr. 19, 2019), https://arxiv.org/pdf/1904.02095.pdf.
[2] Casey Ross & Ike Swetlitz, *IBM's Watson Supercomputer Recommended 'unsafe and incorrect' Cancer Treatments, Internal Documents Show*, STAT (July 25, 2018), https://www.statnews.com/2018/07/25/ibm-watson-recommended-unsafe-incorrect-treatments/.

just one of numerous examples that have come to light in the last year, showing the difference between the marketing used to sell these technologies, and the reality of how these technologies ultimately perform.[3]

While many powerful industries pose potential harms to consumers with new products, the industry producing algorithmic and AI systems poses three particular risks that current laws and incentive structures fail to adequately address: (1) harm from biased training data, algorithms, or other system flaws that tend to reproduce historical and existing social inequities; (2) harm from optimization systems that prioritizes technology companies' interests often at the expense of broader societal interests; and (3) the use of 'black box' technologies that prevent public transparency, accountability, and oversight.

First, AI systems are trained on data sets that reflect historical and existing social and economic conditions. Thus, this data is neither neutral or objective, which leads to AI systems reflecting and amplifying cultural biases, value judgements, and social inequities. For instance, a recent study found that mechanisms in Facebook's ad targeting and delivery systems led to certain demographic segments of users being shown ads for housing and employment in a manner that aligns with gender and racial stereotypes.[4] Similarly, in 2018 Amazon chose to abandon an experimental hiring tool designed to help rank job candidates based on resumes. The tool turned out to be biased against women candidates because it learned from past gender-biased hiring preferences, and based on this, downgraded resumes from candidates who attended two all-women's colleges - along with those that contained even the word women's.[5] This outcome is particularly noteworthy because as one of the most well-resourced AI companies globally, Amazon was unable to mitigate or remedy this bias issue; yet, start-ups and other companies offering similar resume screening services proliferate.[6]

The use of flawed datasets and their biased outcomes create feedback loops that reverberate throughout society and are very difficult, if not impossible, to mitigate through traditional mathematical or technological techniques and audits.[7] Indeed, most existing laws and

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[3] *See* AI Now Inst., *AI in 2018: A Year in Review* (Oct. 24, 2018), https://medium.com/@AINowInstitute/ai-in-2018-a-year-in-review-8b161ead2b4e.

[4] Muhammad Ali et al., *supra* note 1.

[5] Jeffrey Dastin, *Amazon Scraps Secret AI Recruiting Tool that Showed Bias Against Women*, REUTERS (Oct. 9, 2018), https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G; Dave Gershgorn, *Companies are on the Hook If their Hiring Algorithms are Biased*, QUARTZ (Oct. 22, 2018), https://qz.com/1427621/companies-are-on-the-hook-if-their-hiring-algorithms-are-biased/.

[6] *See, e.g.*, HIREVUE PLATFORM, (last visited June 17, 2019), https://www.hirevue.com/products/hirevue-platform; PYMETRICS, EMPLOYERS, (last visited June 17, 2019), https://www.pymetrics.com/employers/; APPLIED, APPLIED RECRUITMENT PLATFORM, (last visited June 17, 2019), https://www.beapplied.com/features; *See also* UPTURN, HELP WANTED: AN EXAMINATION OF HIRING ALGORITHMS, EQUITY, AND BIAS, 26-36 (Dec. 2019), https://www.upturn.org/static/reports/2018/hiring-algorithms/files/Upturn%20--%20Help%20Wanted%20-%20An%20Exploration%20of%20Hiring%20Algorithms,%20Equity%20and%20Bias.pdf.

[7] *See* Rashida Richardson, Jason M. Schultz & Kate Crawford, *Dirty Data, Bad Predictions: How Civil Rights Violations Impact Police Data, Predictive Policing Systems, and Justice*, 94 N.Y.U. L. REV. ONLINE 192 (2019).

regulations struggle to account for or adequately remedy these challenges, as they tend to focus on individual acts of discrimination and less on systemic or computational forms of bias. For example, in recently-settled litigation against Facebook, the company tried to evade liability for the aforementioned discriminatory outcomes produced by its ad targeting and delivery platform. Facebook claimed it was simply a "neutral" platform under Section 230 of the Communications Decency Act's content safe harbors, despite recent research that demonstrated that the discriminatory outcomes were also attributed to Facebook's own, independent actions.[8]

Second, many consumer facing products are optimization systems, which are designed to prioritize technology companies' monetary interests and focus on scaling ideal outcomes rather than understanding potential flaws and adversarial behaviors in the design process. These skewed priorities in the absence of stringent design standards pose several social risks such as, optimizing internet platforms for engagement, which can lead to profiling and mass manipulation, while also ignoring 'externalities,' like design tradeoffs that harm non-users and affected environments or markets.[9] For example, the navigation application, Waze[10], has been subject to public and government scrutiny for instances where these consequences of optimization have actualized, including directing drivers towards forest fires during emergency evacuations, and redirecting highway commuters to residential streets, resulting in more accidents since these areas were unequipped to handle an influx of cars.[11] These outcomes are common, and rarely properly addressed, because technology companies lack incentives to comprehensively assess the negative effects of optimization within and outside a given technology, remedy their failures, and prioritize societal benefits (e.g.- incorporating the needs of all relevant stakeholders and environments).

Third, most of these technologies are "black boxes," both technologically and legally. Technologically, they are black boxes because most of the internal workings are hidden away inside the companies, hosted on their internal computer servers, without any regular means of public oversight, audit, or inspection to address consumer harm concerns. Legally, technology companies obstruct efforts of algorithmic accountability through claims of proprietary or "trade secret" legal protections, even though there is often no evidence that legitimate inspection,

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[8] *Compare* Defendant's Motion to Dismiss, Onuoha v. Facebook, Inc., No. 16 Civ. 6440 (N.D. Cal. filed Apr. 3, 2017) *with* Muhammad Ali et al., *supra* note 1.

[9] Rebekah Overdorf et al., Position Paper from NeurIPS 2018 Workshop in Montréal, Canada, *Questioning the Assumptions Behind Fairness Solutions*, ARXIV (Nov 27, 2018), https://arxiv.org/pdf/1811.11293.pdf.

[10] Waze is a subsidiary of Google. Google purchased the application in 2013.

[11] Samantha Raphelson, *New Jersey Town Restricts Streets from Commuters to Stop Waze Traffic Nightmare*, NPR (May 8, 2018), https://www.npr.org/2018/05/08/609437180/new-jersey-town-restricts-streets-from-commuters-to-stop-waze-traffic-nightmare; Christopher Weber, *Waze Causing LA Traffic Headaches, City Council Members Say,* ASSOCIATED PRESS (Apr. 17, 2018), https://www.apnews.com/8a7e0b7b151c403a8d0089f9ed866863; Jefferson Graham & Brett Molina, *Waze Sent Commuters Toward California Wildfires, Drivers Say*, USA TODAY (Dec. 7, 2017), https://www.usatoday.com/story/tech/news/2017/12/07/california-fires-navigation-apps-like-waze-sent-commuters-into-flames-drivers/930904001/.

auditing, or oversight poses any competitive risks.[12] This means that neither government nor consumers are able to meaningfully assess or validate the claims made by companies. Some technology companies have suggested that the risks of emerging data driven technologies will eventually be mitigated by more technological innovation.[13] Conveniently, all of these remediations rely on us to trust the technology industry, which has few incentives or requirements to be accountable for the harms they produce or exacerbate.

Yet, history and current research demonstrates that there are significant limitations to relying solely on technical fixes and "self regulation" to address these urgent concerns.[14] Neither of these approaches allow room for public oversight and other accountability measures since technology companies remain the gatekeepers of important information that government and consumers would need to validate the utility, safety, and risks of these technologies. Ultimately, we are being asked to take technology companies' claims at face value, despite evidence from investigative journalists, researchers, and emerging litigation that demonstrate that these systems can, and do, fail in significant and dangerous ways.[15] To cite a few examples:

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[12] AI Now Inst., Litigating Algorithms Workshop, June 2018, *Litigating Algorithms: Challenging Government Use of Algorithmic Decision Systems* (Sept. 2018), https://ainowinstitute.org/litigatingalgorithms.pdf (highlighting lawsuits where vendors made improper trade secrecy claims); David S. Levine, *Can We Trust Voting Machines? Trade-Secret Law Makes it Impossible to Independently Verify that the Devices are Working Properly*, SLATE (Oct. 24, 2012), https://slate.com/technology/2012/10/trade-secret-law-makes-it-impossible-to-independently-verify-that-voting-machines-work-properly.html (describing how the application of trade secret law to e-voting machines threatens election integrity); Frank Pasquale, *Secret Algorithms Threaten the Rule of Law*, MIT TECHNOLOGY REVIEW (June 1, 2017), https://www.technologyreview.com/s/608011/secret-algorithms-threaten-the-rule-of-law/.

[13] Tom Simonite, *How Artificial Intelligence Can – and Can't – Fix Facebook*, WIRED (May 3, 2018), https://www.wired.com/story/how-artificial-intelligence-canand-cantfix-facebook/; F8 2018 Day 2 Keynote, Facebook for Developers (May 2, 2018), https://www.facebook.com/FacebookforDevelopers/videos/10155609688618553/UzpfSTc0MTk2ODkwNz g6MTAxNTU4ODExNzI4MzQwNzk/; Drew Harwell, *AI Will Solve Facebook's Most Vexing Problems, Mark Zuckerberg Says. Just Don't Ask When or How*, WASH. POST (Apr. 11, 2018), https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/ai-will-solve-facebooks-most-vexing-problems-mark-zuckerberg-says-just-dont-ask-when-or-how ("he said, artificial intelligence would prove a champion for the world's largest social network in resolving its most pressing crises on a global scale") Stephen Shankland, *Google Working to Fix AI Bias Problems*, CNET (May 7, 2019), https://www.cnet.com/news/google-working-to-fix-ai-bias-problems/.

[14] Roy F. Baumeister & Todd F. Heatherton, *Self-Regulation Failure: An Overview*, 7 PSYCHOL. INQUIRY, no. 1, 1996 at 1; Stephanie Armour, *Food Sickens Millions as Company-Paid Checks Find It Safe*, BLOOMBERG (Oct. 11, 2012), https://www.bloomberg.com/news/articles/2012-10-11/food-sickens-millions-as-industry-paid-inspectors-find-it-safe; Andrew D. Selbst et al., *Fairness and Abstraction in Sociotechnical Systems*, 2019 ACM CONFERENCE ON FAIRNESS, ACCOUNTABILITY, AND TRANSPARENCY 59, https://dl.acm.org/citation.cfm?id=3287598

[15] *See* AI Now Inst., *supra* note 11; MEREDITH WHITTAKER ET AL., THE AI NOW REPORT 2018 (2018), https://ainowinstitute.org/AI_Now_2018_Report.pdf; Julia Angwin et al., *Machine Bias*, PROPUBLICA (May 23, 2016), https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing; Jaden Urbi, *Some Transgender Drivers are Being Kicked Off Uber's App*, CNBC (Aug. 13, 2018), https://www.cnbc.com/2018/08/08/transgender-uber-driver-suspended-tech-oversight-facial-recognition.html; U.N. EDUC., SCIENTIFIC, AND CULTURAL ORG., I'D BLUSH IF I COULD: CLOSING GENDER DIVIDES IN DIGITAL SKILLS THROUGH EDUCATION, U.N. Doc GEN/2019/EQUALS/1 REV 2 (2019); Paul

- Cambridge Analytica's exfiltration of Facebook user data exposed extreme breaches of consumer data privacy.
- Facebook's Ad-Targeting lawsuits and settlements highlighted ways the platform helped facilitate and possibly conceal discrimination.[16]
- The aftermath of the Christchurch Massacre and other deplorable terrorist attacks revealed how the engagement-driven design of Facebook, Youtube and other platforms have amplified misinformation, incited more violence, and increased radicalization.[17]
- Google's Dragonfly project demonstrated the intense secrecy around socially significant and ethically questionable corporate decisions.[18]

These types of controversies are increasingly common, and show the harm that technologies optimized for narrow goals like engagement, speed, or profit, at the expense of social and ethical considerations like safety or accuracy, can cause. And unlike other important and complex domains like health, education, criminal justice, and welfare, that each have their own histories, hazards, and regulatory frameworks, the technology sector has continued to expand and evolve without adequate governance, transparency, accountability, or oversight regimes.[19]

We are at a critical moment where Congress is in a position to act on some of the most pressing issues facing our social and economic institutions, and by doing so pave the way for a technological future that is safe, accountable, and equitable. Local, state and other national governments are taking action by performing domain specific inquiries to independently assess the actual benefits and risks of certain technologies. In some cases, they are creating transparency requirements or limitations on the use of technologies they deem too risky.[20]

Berger, *MTA's Initial Foray Into Facial Recognition at High Speed Is a Bust*, WALL ST. J. (Apr. 7, 2019), https://www.wsj.com/articles/mtas-initial-foray-into-facial-recognition-at-high-speed-is-a-bust-11554642000

[16] Brakkton Booker, *Housing Department Slaps Facebook With Discrimination Charge*, NPR (Mar. 28, 2019), https://www.npr.org/2019/03/28/707614254/hud-slaps-facebook-with-housing-discrimination-charge; Kenneth Terrell, *Facebook Reaches Settlement in Age Discrimination Lawsuits*, AARP (Mar. 20, 2019), https://www.aarp.org/work/working-at-50-plus/info-2019/facebook-settles-discrimination-lawsuits.html

[17] *Compare* Issie Lapowsk*y, Why Tech Didn't Stop the New Zealand Attack from Going Viral*, WIRED (Mar. 15, 2019), https://www.wired.com/story/new-zealand-shooting-video-social-media/ *with* Natasha Lomas, *YouTube: More AI Can Fix AI-generated 'bubbles of hate'*, TECHCRUNCH (Dec. 19, 2017), https://techcrunch.com/2017/12/19/youtube-more-ai-can-fix-ai-generated-bubbles-of-hate/

[18] Hamza Shaban, *Google Employees Go Public to Protest China Search Engine Dragonfly*, WASH. POST (Nov. 27, 2018), https://www.washingtonpost.com/technology/2018/11/27/google-employees-go-public-protest-china-search-engine-dragonfly/

[19] *See* WHITTAKER ET AL., *supra* note 14.

[20] Kate Conger et al., *San Francisco Bans Facial Recognition Technology*, N.Y. TIMES (May 14, 2019), https://www.nytimes.com/2019/05/14/us/facial-recognition-ban-san-francisco.html; 2018 N.Y.C LOCAL LAW NO. 49, https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3137815&GUID=437A6A6D-62E1-47E2-9C42-461253F9C6D0; H.B. 378, 91st Leg., Reg. Sess. (Vt. 2018), https://legislature.vermont.gov/Documents/2018/Docs/ACTS/ACT137/ACT137%20As%20Enacted.pdf; H.B. 2701, 191st Leg., Reg. Sess. (Ma. 2019), https://malegislature.gov/Bills/191/HD951; H.B.1655, 66th Leg., Reg. Sess. (Wa. 2019), https://app.leg.wa.gov/billsummary?BillNumber=1655&Initiative=false&Year=2019; Treasury Board of

Congress can build on this work and take actions that can help create necessary transparency, accountability and oversight mechanisms that empower relevant government agencies and even consumers to assess the utility and risks of certain technological platforms. The remainder of this testimony will highlight actions Congress can take to address specific concerns of data driven technologies.

AI Now's Policy Recommendations for Congress

1. Require Technology Companies to Waive Trade Secrecy and Other Legal Claims That Hinder Oversight and Accountability Mechanisms

Corporate secrecy laws are a barrier to due process when technologies are used in the public sector. They can inhibit necessary government oversight and enforcement of consumer protection laws,[21] which contribute to the "black box effect," making it hard to assess bias, contest decisions, or remedy errors. Anyone procuring these technologies for use in the public sector should demand that vendors waive these claims before entering into any agreements. Additionally, limiting the use of these legal claims can help facilitate better oversight by state and federal consumer protection agencies and enforcement of false and deceptive practice laws.

2. Require Public Disclosure of Technologies That Are Involved in Any Decisions About Consumers by Name and Vendor

The need for meaningful insight and transparency is clear when you examine the way in which infrastructure owned by the major technology companies is repurposed by other businesses. Technology companies license AI application program interfaces (APIs), or "AI as a service" to third parties, who apply them to one or another purpose.[22] These business relationships, in which one organization repurposes potentially flawed and biased AI systems created by large technology companies, are rarely disclosed to the public, and are often protected under nondisclosure agreements. Even knowing that a given company is using an AI model created by Facebook, Google, or Amazon is currently hard, if not impossible, to ascertain. Thus,

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Canada Secretariat, Algorithmic Impact Assessment, (Mar. 8, 2019), available at: https://open.canada.ca/data/en/dataset/748a97fb-6714-41ef-9fb8-637a0b8e0da1; Mark Puente, *LAPD Ends Another Data-Driven Crime Program Touted to Target Violent Offenders*, L.A. TIMES (Apr. 12, 2019), https://www.latimes.com/local/lanow/la-me-laser-lapd-crime-data-program-20190412-story.html; Sam Schechner & Parmy Olson, *Facebook, Google in Crosshairs of New U.K. Policy to Control Tech Giants*, WALL ST. J. (Apr. 8, 2019), https://www.wsj.com/articles/u-k-moves-to-end-self-regulation-for-tech-firms-11554678060,

[21] Houston Fed'n of Teachers, Local 2415 v. Houston Indep. Sch. Dist., 251 F.Supp.3d 1168 (S.D. Tex. 2017).

[22] MICROSOFT AZURE, COGNITIVE SERVICES, https://azure.microsoft.com/en-us/services/cognitive-services/ (last visited June 16, 2019); GOOGLE CLOUD, AI PRODUCTS, https://cloud.google.com/products/ai/ (last visited June 16, 2019);FACEBOOK ARTIFICIAL INTELLIGENCE, TOOLS, https://ai.facebook.com/tools/ (last visited June 16, 2019); AMAZON WEB SERVICES, MACHINE LEARNING https://aws.amazon.com/machine-learning/ (last visited June 16, 2019); Matt Murphy & Steve Sloane, *The Rise of APIs*, TECHCRUNCH (May 21, 2016), https://techcrunch.com/2016/05/21/the-rise-of-apis/.

understanding the implications of bad, biased, or misused models is not currently possible. Consumers deserve to know about which data-based technologies are used to make decisions about them or affect the types of services, resources, or opportunities made available to them. Requiring disclosure of the type of technology used and which vendors it originates from will provide consumers with the kind of notice necessary to enforce their due process rights.

3. Empower Consumer Protection Agencies to Apply "Truth in Advertising Laws" to Algorithmic Technology Providers

Some technology companies and platforms serve as vendors to other companies or governments, often advertising their systems as capable of "objective" predictions, determinations, and decision-making without disclosing the risks and concerns, which include bias, discrimination, manipulation, and privacy harms. An example of this is the previously mentioned gender-biased hiring algorithm created by Amazon. Amazon shelved that project but imagine if they had instead sold it 'as a service' for other employers to use, such as companies like HireVue and Applied, who currently sell similar AI-enabled automated hiring and recruitment services. There are currently no legal mechanisms or requirements for companies who want to innovate their HR processes to determine whether these problems exist.

Though the Federal Trade Commission (FTC) does currently have jurisdiction to look for fraud and deception in advertising,[23] it has not yet looked at or tested many of these artificial intelligence, machine learning, or automated decision systems. Empowering the FTC to investigate and pursue enforcement through its existing authority is an urgent priority that Congress should support.

4. Revitalize the Congressional Office of Technology Assessment to Perform Pre-Market Review and Post-Market Monitoring of Technologies

Data driven technologies can pose significant risks to an individual's rights, liberties, opportunities and life; therefore, technologies that are likely to pose such risk should be subject to greater scrutiny before and after they are made available to consumers or government institutions. The Office of Technology Assessment existed from 1972 to 1995 to analyze these types of complex scientific and technical issues, and should be refunded to perform this function for Congress.[24] The Office could convene both technical and domain-specific experts (e.g. practitioners and individuals likely to be affected by the technology) to assess whether certain technologies meet the claims made by technology companies, or whether they pose ethical risks warranting the imposition of technical or external restrictions before the technologies are

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[23] FED. TRADE COMM'N, TRUTH IN ADVERTISING, https://www.ftc.gov/news-events/media-resources/truth-advertising (last visited June 16, 2019);
[24] U.S. GOVERNMENTAL ACCOUNTABILITY ORG., THE OFFICE OF TECHNOLOGY ASSESSMENT (Oct. 13, 1977), *available at* https://www.gao.gov/products/103962; Mike Masnick, *Broad Coalition Tells Congress to Bring Back the Office of Technology Assessment*, TECHDIRT (May 10, 2019), https://www.techdirt.com/articles/20190510/14433442180/broad-coalition-tells-congress-to-bring-back-office-technology-assessment.shtml.

publicly released. Once a product is made public, the Office should be empowered to perform periodic monitoring to ensure it continues to meet pre-market standards, and does not pose serious risks to the public.

5. Enhanced Whistleblower Protections for Technology Company Employees That Identify Unethical or Unlawful Uses of AI or Algorithms

Organizing and resistance by technology workers has emerged as a force for accountability and ethical decision making.[25] Many technology companies workforce are organized in silos, which can also contribute to opacity during product development. Thus whistleblowers can serve a crucial role in revealing problems that may not otherwise visible to relevant oversight bodies, or even to all of the workforce at a given firm. Whistleblowers in the technology industry can be a crucial component to government oversight and should have enhanced protections as they serve the public interest.

6. Require Any Transparency or Accountability Mechanism To Include A Detailed Account and Reporting of The "Full Stack Supply Chain"

For meaningful accountability, we need to better understand and track the component parts of an AI system and the full supply chain on which it relies: that means accounting for the origins and use of training data, test data, models, application program interfaces (APIs), and other infrastructural components over a product life cycle. This type of accounting for the "full stack supply chain" of AI systems is a necessary condition for a more responsible form of auditing. The full stack supply chain also includes understanding the true environmental and labor costs of AI systems, as well as understanding risks to non-users. This incorporates energy use, the use of labor in the developing world for content moderation and training data creation, and the reliance on clickworkers to develop and maintain AI systems.[26] This type of accounting may also incentivize companies to develop more inclusive product design that engages different teams and expertise earlier to better assess the implications throughout the product life cycle. Companies can submit these reports to the appropriate executive agency that regulates AI in the sector where the technology is being used.

7. Require Companies to Perform and Publish Algorithmic Impact Assessments Prior to Public Use of Products and Services

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[25] Daisuke Wakabayashi & Scott Shane, *Google Will Not Renew Pentagon Contract that Upset Employees*, N.Y. TIMES (June 1, 2018), https://www.nytimes.com/2018/06/01/technology/google-pentagon-project-maven.html; Avie Schneider, *Microsoft Workers Protest Army Contract With Tech 'Designed to Help People Kill'*, NPR (Feb. 22, 2019), https://www.npr.org/2019/02/22/697110641/microsoft-workers-protest-army-contract-with-tech-designed-to-help-people-kill; Mark Bergen & Nico Grant, *Salesforce Staff Ask CEO to Revisit Ties with Border Agency*, BLOOMBERG (June 25, 2018), https://www.bloomberg.com/news/articles/2018-06-25/salesforce-employees-ask-ceo-to-revisit-ties-with-border-agency.
[26] KATE CRAWFORD & VLADAN JOLER, AI NOW INST. & SHARE LAB, ANATOMY OF AN AI SYSTEM: THE AMAZON ECHO AS AN ANATOMICAL MAP OF HUMAN LABOR, DATA AND PLANETARY RESOURCES (Sept. 7, 2018), https://anatomyof.ai.

In 2018, AI Now published an Algorithmic Impact Assessment (AIA) framework, which offers a practical transparency and accountability framework for assessing the use and impact of algorithmic systems in government, including AI based systems.[27] AIAs draw directly from impact assessment frameworks in environmental protection, human rights, privacy, and data protection policy domains by combining public agency review and public input.[28] When implemented in government, AIAs provides both the agency and the public the opportunity to evaluate the potential impacts of the adoption of an algorithmic system before the agency has committed to its use. AIAs also require ongoing monitoring and review, recognizing that the dynamic contexts within which such systems are applied.

The framework has been adopted in Canada, and is being considered by local, state, and national governments globally.[29] Though it was originally proposed to address concerns associated with government use of automated decisions systems, the framework can also be integrated into private companies before a product or service is used by the public. This can provide companies opportunities to assess and possibly mitigate adverse or unanticipated outcomes during the development process. It can also provide the government and public with greater transparency and strengthen existing consumer accountability mechanisms. It can encourage the development of safer and more ethical technologies by requiring companies to engage external stakeholders in review, who are likely to identify technical mistakes, design oversights, or even less obvious adverse outcomes.

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[27] AI Now Inst., Algorithmic Accountability Policy Toolkit (Oct. 2018), https://ainowinstitute.org/aap-toolkit.pdf

[28] Solon Barocas & Andrew D. Selbst, *Big Data's Disparate Impact*, 104 Calif. L. Rev. 671 (2016).

[29] European Parliament Panel for the Future of Sci. and Tech., A Governance Framework for Algorithmic Accountability and Transparency: Study (Apr. 4, 2019), http://www.europarl.europa.eu/stoa/en/document/EPRS_STU(2019)624262; Algorithmic Accountability Act of 2019, H.R. 2231, 116th Cong., (1st Sess. 2019), https://www.wyden.senate.gov/imo/media/doc/Algorithmic%20Accountability%20Act%20of%202019%20Bill%20Text.pdf; Autonomisation des Acteurs Judiciaires par la Cyberjustice, Canada Treasury Board's Directed Automated Decision-Making (Nov. 25, 2018), https://www.ajcact.org/2018/11/25/canada-treasury-boards-directive-on-automated-decision-making/