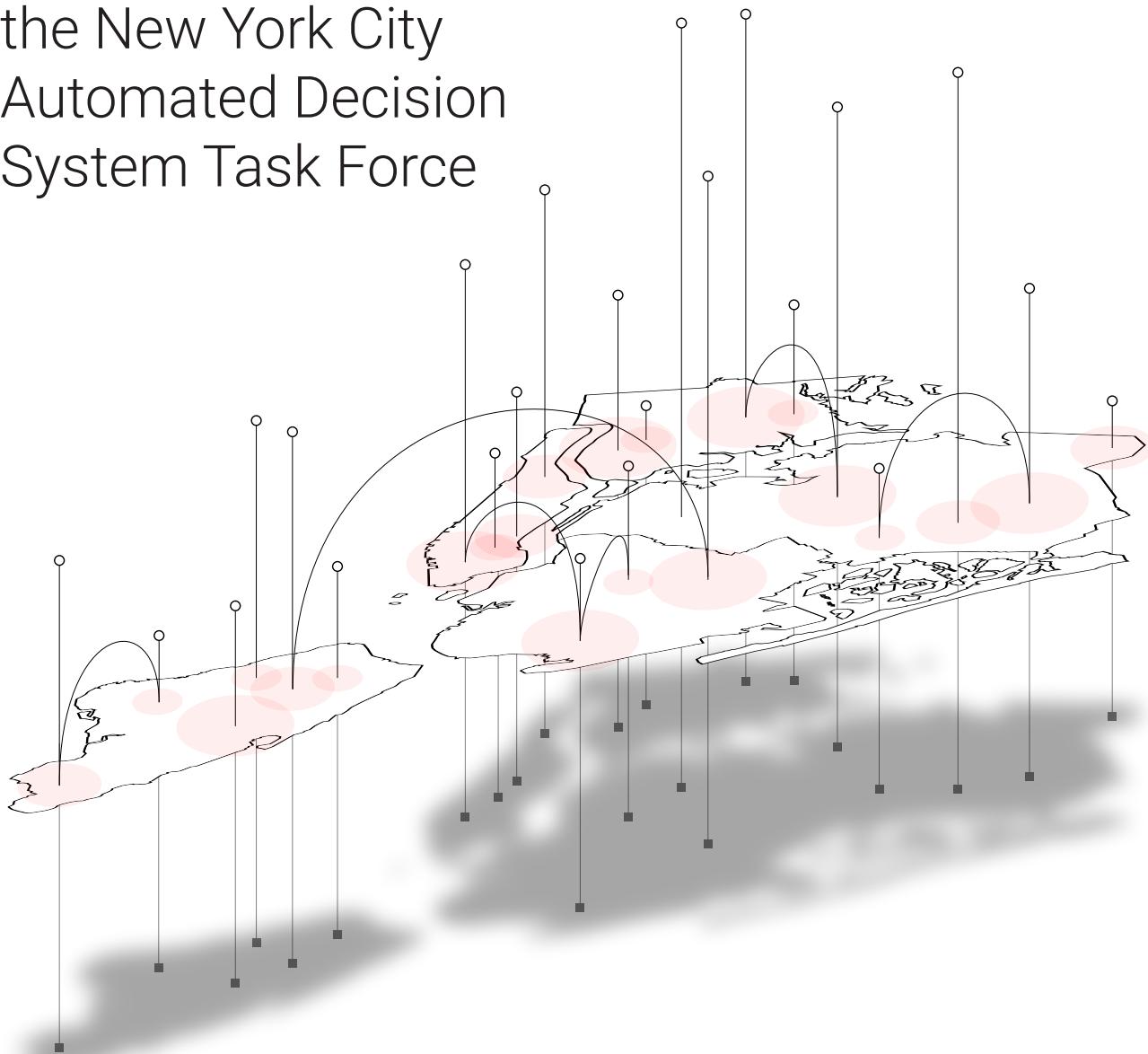


■ CONFRONTING ■ BLACK ■ ■ BOXES ■

A Shadow Report of
the New York City
Automated Decision
System Task Force



DECEMBER 2019

CONFRONTING BLACK BOXES:

A Shadow Report of the New York City Automated Decision System Task Force

DECEMBER 2019

A shadow report is a formal review prepared by an NGO coalition of a government report. This report was written in anticipation of the New York City Automated Decision System Task Force Report, but does not formally review it. The title “Confronting Black Boxes” is a double entendre referencing the opaque nature of government processes and data-driven technologies. Both proved to be challenges in the New York City process reviewed in this shadow report.

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CONTENTS

CONTRIBUTORS AND EDITOR	4
ENDORSEMENTS	5
Organizational Endorsers	5
Individual Endorsers	6
SHADOW REPORT FRAMING	7
SECTION 1: TIMELINE AND HISTORICAL OVERVIEW	9
The New York City Automated Decision System Task Force Timeline	9
History of the Legislative Process	11
History of the Task Force Process	13
The New York City Advocacy Effort	16
SECTION 2: RECOMMENDATIONS REGARDING GOVERNMENT USE OF ADS	20
Recommendations Based on The Provisions of Local Law 49 of 2018	20
Recommendations to Government Agencies Considering ADS Use (General)	27
Recommendations to Specific Agencies about ADS Use	30
Recommendations to Relevant Government Officials and Bodies	43
SECTION 3: RECOMMENDATIONS BASED ON THE NEW YORK CITY EXPERIENCE	47
Recommendations for Government Task Force or other Government Processes with Similar Mandates	47
Recommendations for Multidisciplinary Advocacy Coalition Work	50
Recommendations for the General Public	52
Considerations for Legislation Regarding Government Use of Automated Decision Systems	53
SECTION 4: SUPPLEMENTARY MATERIALS	56

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SHADOW REPORT FRAMING

Automated decision systems (ADS) refer to data-driven technologies used to automate human-centered procedures, practices, or policies for the purpose of predicting, identifying, surveilling, detecting, and targeting individuals or communities. In particular, these technologies are used by government agencies to allocate finite government resources (e.g., public benefits or health services); to foresee and presumably prevent specific risks or adverse outcomes; to remove or curtail discretion from current human decision-making; and to provide analysis at a scale and scope that cannot be performed by humans. These technologies are more colloquially known as predictive policing, pretrial risk assessments, school-assignment matching algorithms, fraud-detection systems, traffic-management systems, screening tools, or face recognition.

In late 2017, New York City became the first US jurisdiction to create a task force to come up with recommendations for government use of ADS. Possessing one of the largest municipal budgets and some of the largest municipal agencies in the world, New York City was thought to be an ideal laboratory for evaluating the actual risks, opportunities, and obstacles involved in government use of ADS, as well as the feasibility of interventions and solutions primarily explored in academic research. Despite a storm of media coverage highlighting the novelty and promise of this Automated Decision Systems Task Force, little is known about what happened in New York City, and the public record of the process to date has been insufficient.

By the time this shadow report is published, the City of New York will have publicly released the report of the Automated Decision Systems Task Force, which is expected to include recommendations ranging from a proposed process for making information about the ADSs used by city agencies publicly available to suggested procedures for addressing instances of disparate impact and harm associated with city agencies' use of ADS. Because these are issues that governments at all levels are grappling with and few have performed or concluded procedures to address, New York City is in a position to have an outsized influence on current global policy debates regarding government use of ADS.

The purpose of this shadow report is to provide a comprehensive record of what happened over this two-year period and to offer robust recommendations based on collective experience and current research insights. **The shadow report consists of four key sections:**

1. A robust and detailed narrative of the legislative history that led to the creation of the ADS Task Force, ADS Task Force process, and local advocacy efforts. This section includes a timeline of key activities, and highlights the missteps and missed opportunities other governments should avoid.
2. Policy recommendations on government use of ADS. This section includes recommendations aligned with the exact provisions of the Task Force Law (Local Law 49 of 2018); recommendations for government agencies considering use of ADS; recommendations directed at New York City agencies regarding current or prospective use of ADS; and recommendations to New York City and State government officials or bodies that have relevant authority regarding city-agency procurement and use of ADS.

3. Recommendations on best practices and other considerations based on the New York City experience. This section includes specific policy recommendations for government task forces or processes with similar mandates; recommendations for multidisciplinary advocacy coalitions engaged on ADS issues; recommendations for the general public regarding ADS issues; and considerations for legislation relating to government use of ADS (both general and subject-matter-specific).
4. Supplementary materials that centralize hard-to-find public records related to the ADS Task Force process and other resources referenced throughout this shadow report.

The goal of this shadow report is to inform policy makers, researchers, advocates, and the public about the complexities of evaluating the true risks and opportunities of government use of ADS; the limitations of existing bureaucratic procedures; and the importance of engaging a variety of perspectives and experiences. The concerns and consequences related to government use of ADS are nuanced because they tend to amplify and obfuscate current and historical inequalities and inefficiencies in governments and society. Thus, any process that purports to examine and address ADS issues will be insufficient and unsatisfactory if it is not performed in good faith and with extreme care. Much of the New York City Automated Decision Systems Task Force experience will not be directly transferable to other jurisdictions given the varying political, social, historical, and economic contexts; however, most of the recommendations were drafted with rationales to allow stakeholders from other jurisdictions to modify according to their local contexts. There is also some overlap in recommendations to ensure that the nuances of particular issues or concerns are not lost given the broad scope of the shadow report.

We hope that by providing a robust and nuanced record along with empirically informed recommendations, we can help all stakeholders reassess presumptions about government's and society's capacity to evaluate and meaningfully address ADS concerns in a rights-preserving manner. A collaborative effort bringing together multiple perspectives, areas of expertise, and experiences, this shadow report can serve as a blueprint for how to lead an inclusive process that produces informed, creative solutions to emerging and novel issues.

SECTION 1: TIMELINE AND HISTORICAL OVERVIEW

The New York City Automated Decision System Task Force Timeline¹

2017

I August 24, 2017

New York City Council member James Vacca introduces bill Int. 1696 to the New York City Council. This original version of the bill required publication of source code for any “algorithm or any other method of automated processing system of data.”

I October 16, 2017

The New York City Council Technology Committee holds a hearing for bill Int. 1696.

December 7, 2017

Bill Int. 1696 is amended, adding a provision mandating the creation of a task force to examine government use of automated decision systems and to make recommendations to the mayor and the City Council on a number of specific concerns. The requirement for source code publication is dropped.

I December 11, 2017

The New York City Council passes Int. 1696 and sends it to Mayor Bill de Blasio for signature or veto.

I December 15, 2017

Council member James Vacca sends Mayor de Blasio a letter recommending organizations and individuals for membership in the Automated Decision Systems (ADS) Task Force.

I January 17, 2018

Bill Int. 1696 becomes law (Local Law 49 of 2018), without Mayor de Blasio’s signature.

I January 22, 2018

A coalition of advocates and researchers sends Mayor de Blasio a letter with recommendations on the construction of the ADS Task Force.

I May 16, 2018

Mayor de Blasio announces ADS Task Force chairs and non-governmental members.

I August 17, 2018

A coalition of advocates and researchers sends a letter to the ADS Task Force with recommendations based on the provisions of Local Law 49 of 2018, along with a list of subject-matter experts whom the ADS Task Force should consult throughout the process.

I November 2018

The ADS Task Force website goes live, but includes only an “About” page, as well as a “Contact” page containing an email address and a web form to solicit feedback from the public. No further information regarding ADS Task Force membership is provided.

I February 2019

The ADS Task Force website is updated to include the full membership list with biographies.

I February 12, 2019

The New York City Council Committee on Technology holds an oversight hearing for the Commission on Public Information and Communication’s Collaboration in Developing City Information Policies and Promoting Governmental Transparency, where concerns about the ADS Task Force are raised.

I March 1, 2019

A coalition of advocates and researchers sends a letter to the ADS Task Force raising concerns about the ADS Task Force’s lack of progress and public engagement.

2019

¹ We encourage readers to review this timeline along with the historical overviews below, since the subsequent sections provide more context on the events listed here.

2019

- | **March 26, 2019**
The New York City comptroller sends a letter to the ADS Task Force chairs raising various concerns about city agencies' use of algorithmic systems and requesting a range of information about eight types of automated decision systems used by city agencies.
- | **March 27, 2019**
The ADS Task Force issues a public statement announcing its plans to host two public forums at New York Law School in addition to a series of community meetings over the summer.
- | **April 4, 2019**
The New York City Council Committee on Technology holds an oversight hearing requesting an update on the progress of the ADS Task Force.
- | **April 26, 2019**
New York City Council Committee on Technology Chair Peter Koo sends a letter to ADS Task Force Chair Jeff Thamkittikasem with follow-up questions to the oversight hearing of April 4.
- | **April 11, 2019**
The AI Now Institute releases a chart of known automated-decision-system use cases in New York City as well as use cases in other jurisdictions.
- | **April 30, 2019**
The ADS Task Force Public Forum on Fairness and Accountability is held at New York Law School.
- | **May 22, 2019**
ADS Task Force Chair Jeff Thamkittikasem responds to New York City Council Committee on Technology Chair, Councilmember Peter Koo.
- | **May 30, 2019**
The ADS Task Force Public Forum on Transparency is held at New York Law School.
- | **June 10, 2019**
New York State Senator Andrew Gounardes introduces S. 6428, legislation creating a statewide task force on the role of artificial intelligence in New York State government.
- | **June 27, 2019**
One ADS Task Force chair and one member of the ADS Task Force met with members of the Atlantic Plaza Towers Tenant Association after two tenants provided testimony at the ADS Task Force Public Forum on Transparency in May.
- | **July 1, 2019**
The AI Now Institute releases a compilation of comments and inquiries sent to the ADS Task Force during its Spring 2019 public engagement period.
- | **July 8, 2019 - September 10, 2019**
The ADS Task Force holds three community meetings in Queens, Staten Island, and the Bronx, but information about the meetings is not provided to the public on the ADS Task Force website, and avenues for public participation are never made clear.
- | **November 19, 2019**
Mayor de Blasio releases the ADS Task Force Report and an executive order to establish an Algorithms Management and Policy Officer.

History of the Legislative Process

In January 2018, New York City became the first US jurisdiction to enact a law creating a task force to provide recommendations regarding government use of automated decision systems. ADS technologies generally refer to systems that use algorithms or other data-driven processes or techniques to make determinations and predictions that assist or supplant decisionmaking in government agencies. This task force was allotted 18 months to create a report providing the city council and the mayor with recommendations on the following considerations:

1. criteria for identifying which ADS should be subject to its proposed standards or procedures for oversight and review
2. a procedure for individuals affected by ADS-related agency decisions to request and receive an explanation along with the basis for a given decision
3. a procedure for the city to determine whether an agency's use of an ADS disproportionately affects persons based on a protected status
4. a procedure for addressing instances of disparate impact and harm associated with an agency's use of an ADS that is found to have a disparate impact based on a person or group's protected status
5. a process for making information about the ADS used by each agency publicly available, specifically including information about how the system functions, how it is used by the agency, and technical information
6. an assessment of the feasibility of developing and implementing a procedure to archive ADS and data used by the ADS

The law mandated that ten days after receipt of the task force's report (due sometime in November or December 2019), the mayor must make it publicly available on New York City's website, NYC.gov.

This historic task force was created against a backdrop of growing public scrutiny regarding the lack of meaningful transparency of government use of controversial algorithm-based technologies, including an increasing public backlash against several city agencies' resistance to accountability or oversight efforts.² Indeed, months before the original iteration of the task-force legislation was introduced (which mandated the release of all ADS code), a diverse coalition of advocates and local elected officials was engaged in a legislative and public-relations battle with the New York City Police Department (NYPD) over a legislative proposal³ that attempted to create greater transparency and accountability regarding

2 See Valerie Strauss, "Judge Calls Evaluation of N.Y. Teacher 'Arbitrary' and 'Capricious' in Case Against New U.S. Secretary of Education," *Washington Post*, May 10, 2016, Answer Sheet, <https://www.washingtonpost.com/news/answer-sheet/wp/2016/05/10/judge-calls-evaluation-of-n-y-teacher-arbitrary-and-capricious-in-case-against-new-u-s-secretary-of-education/>; Peter Goodman, "The New York City High School Application Process: Is It Fair to Students? Can It Be Improved?" *Ed in the Apple*, September 19, 2017, <https://mets2006.wordpress.com/2017/09/19/the-new-york-city-high-school-application-process-is-it-fair-to-students-can-it-be-improved/>; <https://fivethirtyeight.com/features/why-the-bronx-really-burned/>; and Josmar Trujillo, "Op-Ed: Why NYPD's 'Predictive Policing' Should Scare You," *City Limits*, January 29, 2015, <https://citylimits.org/2015/01/29/why-nypds-predictive-policing-should-scare-you/>.

3 The P.O.S.T. Act, Int. 1482 (2017), <https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=2972217&GUID=0D8289B8-5F08-4E6F-A0D1-2120EF7A0DCA&Options=ID%7CText%7C&Search=>

the NYPD's use of invasive and often ADS-based surveillance technologies like facial recognition,⁴ X-ray vans,⁵ and automatic license-plate readers.⁶ This legislation mirrored ordinances that had already passed in over ten US municipalities, and were under review in over 20 local and state legislatures;⁷ it included provisions such as ensuring the NYPD tested the technologies for health and safety effects. Yet during legislative hearings and media appearances, NYPD officials mischaracterized both the legislation and the department's record of transparency, suggesting compliance with the legislation would "help criminals and terrorists."⁸

On August 24, 2017, James Vacca, then a city council member and chair of the City Council Committee on Technology, introduced legislation (Int. 1696-2017) that would require each city agency using algorithm or automated processing systems to target services, impose penalties, or, in policing, to publish the source code of the systems they are using, and to permit inspection and self-testing by the public. Citing concerns about his own inability to answer constituent inquiries about the outcomes produced by city-agency use of such systems, Vacca, who was in his last term as a local elected official, introduced the legislation with hopes of raising awareness about the power and risks of algorithms used by city agencies.⁹ Two weeks later, a *ProPublica* and *New York Times* investigation revealed that the New York City Office of the Chief Medical Examiner created and used a faulty algorithm to examine complex DNA samples in thousands of criminal cases.¹⁰

On October 16, 2017, the New York City Council Committee on Technology held a hearing on Int. 1696. The hearing room was overflowing, and included oral and written testimony from Don Sunderland (NYC DOITT), Craig Campbell (NYC MODA), Noel Hidalgo (BetaNYC), Rashida Richardson (NYCLU), Julia Powles (Cornell Tech NYC), Helen Nissenbaum (Cornell Tech NYC), Thomas Ristenpart (Cornell Tech NYC), Rachel Levinson-Waldman (Brennan Center for Justice), Alexander Krupp (software developer), Scott Levy (Bronx Defenders), Yung-Mi Lee (Brooklyn Defender Services), Rodrick Wallace (New York State Psychiatric Institute), Taline Sanassarian (Tech NYC), Joshua Norkin (Legal Aid Society), Julia Stoyanovich (Drexel University), Charlie Moffett (NYC Center for Urban Science and Progress), Sumana Harihareswara (Consultant and Programmer), Bryn Borelli (Google NY), and Alex Rich (New York University).¹¹ During the hearing, city officials expressed concern about the feasibility of implementing the legislation as written, along with worries that it would pose an increased security risk to the city's technical systems, potentially allowing people to "game" the systems once they understood their role in delivering city services. The majority of public comments supported the legislation, with some speakers offering recommended amendments.

4 Ava Kofman, "NYPD Refuses to Disclose Information about Its Face Recognition Program, So Privacy Researchers Are Suing," *The Intercept*, May 2, 2017, <https://theintercept.com/2017/05/02/nypd-refuses-to-disclose-information-about-its-face-recognition-program-so-privacy-researchers-are-suing/>.

5 Michael Grabell, "Judge Orders NYPD to Release Records on X-ray Vans," *Pro Publica*, January 9, 2015, <https://www.propublica.org/article/judge-orders-nypd-to-release-records-on-x-ray-vans>.

6 Mariko Hirose, "Documents Uncover NYPD's Vast License Plate Reader Database," *ACLU News & Commentary*, January 25, 2016, <https://www.aclu.org/blog/privacy-technology/location-tracking/documents-uncover-nypds-vast-license-plate-reader-database>.

7 Community Control Over Police Surveillance, <https://www.aclu.org/issues/privacy-technology/surveillance-technologies/community-control-over-police-surveillance>.

8 Daniel Prendergast, "NYPD Anti-terror Chief: Surveillance Bill Would Help Terrorists," *New York Post*, June 18, 2017, <https://nypost.com/2017/06/18/nypd-anti-terror-chief-surveillance-bill-would-help-terrorists/>; Ali Winston, "NYPD Attempts to Block Surveillance Transparency Law with Misinformation," *The Intercept*, July 7, 2017, <https://theintercept.com/2017/07/07/nypd-surveillance-post-act-lies-misinformation-transparency/>.

9 See Media Coverage Chart in Supplementary Materials.

10 Lauren Kirchner, "Thousands of Criminal Cases in New York Relied on Disputed DNA Testing Techniques," *ProPublica*, September 4, 2017, <https://www.propublica.org/article/thousands-of-criminal-cases-in-new-york-relied-on-disputed-dna-testing-techniques>

11 Note that some professional affiliations may have changed since October 2017.

Throughout October and November 2017, the legislation underwent several proposed amendments. One version of the legislative drafts required the mayor to publicly release a list of all automated decision systems used by city agencies, accompanied by a description of the purpose of the system, including any decisions assisted or made using the system. This version also mandated the release of a plan outlining how and where technical information about a given system would be released to the public or, alternately, a detailed statement outlining reasons that would prevent the city from releasing such information, including legal or other obstacles. In addition to these revisions regarding public disclosure, this version mandated the creation of an “automated-decision-system task force” that would issue a report with recommendations on a range of issues regarding government use of automated decisions systems. After legislative negotiations, on December 7, 2017, an amended version of Int. 1696-A was introduced to the Committee on Technology. The amended bill eliminated all disclosure requirements and instead only created an automated-decision-system task force (“Task Force”). Though the mandated ADS disclosure language was removed from the legislation, there were no statements or communications by city officials that an enumeration of existing ADS used by city agencies was beyond the scope of the Task Force’s mandate or responsibilities. On December 11, 2017, Int. 1696-A was approved by the City Council with a 47-0 vote, and was sent to Mayor Bill de Blasio. In New York City, the mayor has 30 days to sign a bill into law, veto it, or take no action.¹² If the mayor takes no action within 30 days, the bill becomes law.

On December 15, 2017, Council Member Vacca sent Mayor de Blasio a letter recommending organizations and individuals that should be considered for membership on the automated-decision-system task force. On January 17, 2018, Int. 1696-A became Local Law 49 of 2018 (“ADS Task Force Law”), without the mayor’s signature. The law required the mayor or his designee to convene the task force within 120 days of the ADS Task Force Law’s effective date; this gave the City a May 11, 2018 deadline.

History of the Task Force Process

On January 22, 2018, a group of advocates and researchers sent a letter to Mayor de Blasio with recommendations on subject-matter expertise that should be represented on the Task Force; city agencies and specific staff that should be appointed or directed to cooperate with the Task Force, organizations and individuals that should be appointed, and considerations regarding transparency and conflicts of interest.

On May 16, 2018, Mayor de Blasio announced the formation of the ADS Task Force with a press release that included complimentary quotes from several city officials, and a list of Task Force co-chairs and non-government Task Force members.¹³ The Task Force convened during the summer of 2018 and set out defining “automated decision system” as an initial priority.

On August 17, 2018, a coalition of advocates and experts sent the Task Force a letter with recommendations related to the provision of the ADS Task Force Law, including a definition of “automated decision system” and a list of local and national experts and advocates to consult throughout the process. The ADS Task Force continued to convene throughout the fall of 2018 and the winter of 2019, primarily deliberating the definition of an automated decision system. Non-government Task Force members expressed frustration with the city’s failure to provide specific information about automated decision systems used in New York City, and with the Task Force’s structure and management. During

12 “Legislation,” New York City Council, <https://council.nyc.gov/legislation/>.

13 See Media Coverage Chart in Supplementary Materials.

this period, the Task Force chairs and some members of the mayor's staff met with a handful of local advocates and experts, but did not communicate this consultation to the Task Force or to the public. In November 2018, a website was created for the NYC Automated Decision System Task Force; the site included only an "About" page that noted when the Task Force would convene and a "Contact" page that described the Task Force and provided an email address and web form to solicit feedback from the public. After non-government Task Force members raised questions about the lack of information on the website, the city updated it in February 2019 to include the names and biographies of all Task Force members.

On February 12, 2019, the New York City Council Committee on Technology held an oversight hearing for the Commission on Public Information and Communication's Collaboration in Developing City Information Policies and Promoting Governmental Transparency. During this hearing, several City Council members raised concerns about the Task Force's lack of community engagement. Following this, on March 1, 2019, a coalition of advocates and experts sent the Task Force a letter expressing similar concerns about the lack of meaningful public engagement, citing examples of meaningful public engagement efforts in other states on similar issues.¹⁴ The growing chorus of concern continued through March, and included a letter from the New York City Comptroller raising various issues about city agencies' use of algorithmic systems and requesting a range of information about eight types of automated decision systems currently in use.¹⁵ On March 27, the Task Force issued a press release announcing its intention to host two public forums in April and May at New York Law School, along with a series of less clearly specified community meetings to be held during the summer.¹⁶ Although this announcement appeared intended to quell worries about the Task Force's lack of meaningful public engagement, there was still great concern among the public and other city officials. As a result, the New York City Council Committee on Technology announced an oversight hearing in which Task Force chairs would be asked to provide a status update, and to solicit public concerns about the process to date.

On April 4, 2019, the Committee on Technology held this Automated Decision System Task Force oversight hearing, and ADS Task Force Chairs Jeff Thamkittikasem, Brittny Saunders, and Kelly Jin provided oral testimony and answered committee members' questions. Jeff Thamkittikasem's testimony revealed that the city did not plan to produce a list of automated decision systems currently used by city agencies for the Task Force or the public. Instead, the co-chairs expressed the intention to develop a set of criteria for what constitutes an automated decision system.¹⁷ During the question-and-answer session, the Task Force chairs admitted that they still had not reached consensus on a definition of an automated decision system and that the Task Force had not reviewed any New York City-specific automated decision systems,¹⁸ in spite of repeated requests to do so from non-government Task Force members.¹⁹ The remainder of the hearing included public testimonies and feedback from Janet Haven (Data & Society); Rashida Richardson (AI Now); Albert Fox Kahn (Surveillance Technology Oversight Project); Noel Hidalgo (BetaNYC); Jordan Kroll (Information Technology Industry Council); and Solon Barocas (Microsoft, Cornell University, and Task Force member) jointly with Julia Stoyanovich (New York University and Task Force member). Members of the public expressed concerns about the lack of progress generally, the lack of action regarding the coalition letters, the failure to provide any form

¹⁴ See [NYC ADS Task Force Advocacy Letters](#) in Supplementary Materials.

¹⁵ See [Comments Compilation](#) in NYC ADS Task Force Documents, Supplementary Materials.

¹⁶ See [NYC ADS Task Force Public Forum Press Release](#) in NYC ADS Task Force Documents, Supplementary Materials.

¹⁷ See [NYC ADS Task Force Oversight Hearing Testimonies](#) in City Council Oversight Hearings Documents, Supplementary Materials.

¹⁸ See [NYC ADS Task Force Oversight Hearing Transcript](#) in City Council Oversight Hearings Documents, Supplementary Materials.

¹⁹ Albert Fox Cahn, "The Irony Behind de Blasio's Proposed Robot Tax," *New York Daily News*, September 11, 2019, <https://www.nydailynews.com/opinion/ny-oped-the-irony-behind-de-blascos-proposed-robot-tax-20190911-6fwkugtgbfavrp7zkn7u6odeca-story.html>.

of public education, the absence of public engagement, and the futility of convening a task force if its members are not provided with specific examples of automated decision systems used by city agencies.²⁰ A non-governmental Task Force member also provided testimony revealing the city's reluctance to provide the Task Force with information about automated decision systems used by city agencies. They argued that such information was necessary to fulfill the Task Force Law mandate and recommended that the City Council help facilitate such access.²¹

After the oversight hearing revealed that the City had no intention of releasing a list of automated decision systems used by City agencies, the AI Now Institute published a chart with known examples of ADS systems used in New York City, citing media reports and other public documents, in addition to known ADS use examples from other jurisdictions.²² AI Now released the chart with the hope of providing the public with some foundational information in advance of the Task Force's public forums and community meetings. Later that month, New York City Council Committee on Technology Chair, Council Member Peter Koo, sent a letter to ADS Task Force Chair Jeff Thamkittikasem with detailed follow-up questions that ensued from the Technology Committee oversight hearing on April 4.²³ Throughout April, media coverage revealed friction within the Task Force—particularly between city officials and non-government Task Force members—and growing public scrutiny about the lack of progress.²⁴

On the evening of April 30, 2019, the Automated Decision Systems Task Force held its first public forum on Fairness and Accountability at New York Law School.²⁵ The public forums were structured so the first two hours were reserved for expert testimony with a question-and-answer session, during which only Task Force members could ask the experts questions. The last hour was open to the public to provide comments. All Task Force co-chairs were present; a mix of non-government and city-agency Task Force members were also present for portions of the evening. The forum featured expert testimony by Natalie Evans Harris (BrightHive), Sarah Kaufman (NYU Rudin Center for Transportation), Janai Nelson (NAACP LDF), Andrew Nicklin (Johns Hopkins University Center for Government Excellence), and Ginger Zielinskie (Benefits Data Trust). The public comments portion of the forum was cut 30 minutes short with no explanation, when members of the public began asking the task force questions about the need for public education about automated decision systems to accompany public engagement, along with the need to make public engagement accessible. Commenters noted that late-evening events held only in Manhattan were not accessible to many New Yorkers. They also asked whether the report would include any examples of actual New York City automated decision systems, to which non-governmental members of the Task Force responded by citing the ongoing dispute over the lack of access to information.²⁶

On the evening of May 30, 2019, the Task Force held its second public forum: the ADS Task Force Public Forum on Transparency. All Task Force co-chairs were present; a mix of non-government and city-agency Task Force members were also present for portions of the evening. At the beginning of the hearing, the Task Force co-chairs announced that they had recently published a "Checklist for Determining whether a Tool or System is an ADS/Agency ADS as defined by Local Law 49 (2018)" ("Checklist") on its website.²⁷

20 See NYC ADS Task Force Oversight Hearing Transcript in City Council Oversight Hearings Documents, Supplementary Materials.

21 See [NYC ADS Task Force Oversight Testimonies](#) in City Council Oversight Hearings Documents, Supplementary Materials.

22 See [ADS Use Chart](#) in Supplementary Materials.

23 See [Comments Compilation](#) in NYC ADS Task Force Documents, Supplementary Materials.

24 See [Media Coverage Chart](#) in Supplementary Materials.

25 "ADS Task Force Public Forum #1: Fairness and Accountability," Eventbrite, April 30, 2019 <https://www.eventbrite.com/e/ads-task-force-public-forum-1-fairness-and-accountability-tickets-60323166214>.

26 See [April 30 Public Forum Transcript](#) in NYC ADS Task Force Documents, Supplementary Materials.

27 See [NYC ADS Task Force Checklist for Determining ADS](#) in NYC ADS Task Force Documents, Supplementary Materials.

The forum featured expert testimony by Chancey Fleet (Data & Society, New York Public Library); Aaron Pallas (Columbia University); and Rumman Chowdhury (Accenture). The public-comments portion of the forum featured comments and questions from twelve community members. The public portion of the forum revealed disagreements among Task Force members, including a lack of consensus regarding the content in their recently published Checklist.

On June 27, 2019, ADS Task Force Chair Britny Saunders and ADS Task Force Member Vincent Southerland met with members of the Atlantic Plaza Towers Tenant Association after two tenants provided testimony at the May public forum about their landlord's plan to install face recognition for entry into their apartment complex. On July 18, 2019, the Task Force cosponsored a community meeting with Council Member Koo and former Council Member Vacca at the Queens Library, Flushing Branch. Despite requests by Council Member Koo, the event was not published on the Task Force website; the only public advertisement of the event was at the library itself and via Council Member Koo's Twitter account.²⁸ The event garnered small community turnout. The Task Force subsequently hosted community events on August 28, 2019 at Arden Heights Boulevard Jewish Center in Staten Island and September 10, 2019 at Hostos Community College in the Bronx, but information about these meetings was never published on the Task Force website and little is known about the public's participation. On November 19, 2019, Mayor de Blasio released the ADS Task Force Report along with an executive order to establish an Algorithms Management and Policy Officer within the Mayor's Office of Operations.²⁹ On November 26, 2019, Council Member Koo introduced legislation that requires annual reporting on ADS used by city agencies.³⁰

The New York City Advocacy Effort

Throughout the legislative and Task Force process, a coalition of civil rights advocates, researchers, community organizers, and concerned residents proved to be a crucial element in leveraging the public's concerns. This coordinated community involvement was necessary not only to demonstrate the urgency and need for legislation addressing government use of algorithm-based technologies, but also to bring public pressure to bear on the Task Force process. After a robust public showing at the legislative hearing for Int. 1696, members from a preexisting advocacy effort for surveillance transparency started to engage researchers and concerned New Yorkers about their apprehensions and to share existing research regarding the fairness, accountability, and transparency of algorithmic systems. Following the New York City Council passage of the ADS Task Force Law, this group met to assess how they could ensure their shared interests and concerns regarding government use of automated decision systems could be addressed through the prospective Task Force. In light of the City's lack of expertise on these issues, the group agreed to collaborate on a letter with recommendations to the mayor, and to continue to meet, as needed, throughout the Task Force process. The coalition also created two hashtags that helped broadcast their concerns on social media: #NYCalgorithms and #ADSTaskForce.

28 Peter Koo (@CMPeterKoo), "Come to the #Flushing @QueensLib tonight to learn how algorithms affect our daily lives in #NewYorkCity #tech #civictech #OpenData," July 18, 2019, 12:58 p.m., <https://twitter.com/CMPeterKoo/status/1151899162461528064>.

29 New York City Automated Decision Systems Task Force Report (November 2019), <https://www1.nyc.gov/assets/adstaskforce/downloads/pdf/ADS-Report-11192019.pdf>; "Executive Order 50 of November 19, 2019, Establishing An Algorithms Management and Policy Officer," (November 19, 2019), <https://www1.nyc.gov/assets/home/downloads/pdf/executive-orders/2019/eo-50.pdf>.

30 A Local Law to amend the administrative code of the city of New York, in relation to reporting on automated decision systems used by city agencies, Int. 1806 (2019), <https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=4265421&GUID=FBA29B34-9266-4B52-B438-A772D-81B1CB5&Options=&Search=>.

When the City announced the formation of the ADS Task Force, its membership included several experts, advocates, and agency representatives recommended in the coalition's letter: Craig Campbell (Mayor's Office of Data Analytics), Brittny Saunders (New York City Commission on Human Rights), Albert Fox Cahn³¹ (CAIR-NY), Julia Stoyanovich (Drexel University), Khalil Cumberbatch (The Fortune Society), and Meredith Whittaker (AI Now Institute).³² In light of the City's apparent responsiveness to the coalition's proactive outreach, the coalition decided to research and draft recommendations based on the provisions of the ADS Task Force Law. They also compiled a list of subject-matter experts and organizations whom the Task Force could work with and consult, hoping to provide it with a head start in its effort and to lay the groundwork for robust community engagement early in the process. Although the Task Force Chairs expressed gratitude for the coalition's advocacy intervention, there was no follow-up or request for further consultation for the remainder of the Task Force process.

This was a key missed opportunity for a number of reasons. First, it is rare for advocates and researchers to proactively offer frameworks and recommendations at the beginning of a task force or other government review processes. Second, the Task Force squandered time by deliberating only a few ADS issues, and did not appear to consult the recommendations or resources outlined in the letter. Third, the coalition letter listed over 127 organizational and individual experts and advocates with valuable perspectives on the issues the Task Force was empowered to consider, and few were engaged throughout the Task Force process. These experts and advocates could have been solicited for collaboration on public education and engagement opportunities, including the 2019 Public Forums and Community Meetings; identifying and evaluating local consequences or harms resulting from the City's ADS use; assessing actual awareness of ADS issues among specific stakeholder groups; and other opportunities that could have informed the Task Force's recommendations and raised public awareness on government use of ADS.

After months without a response from the Task Force, and without any indication that it intended to engage in public education or outreach, the coalition sent the Task Force another letter expressing concern about the lack of adequate public engagement, highlighting examples of other jurisdictions that had structured robust public engagement programs around similar issues. Shortly after sharing and publicly posting this letter, several coalition members participated in the April 4 City Council Committee on Technology Oversight hearing of the ADS Task Force, which was convened in response to concerns about the Task Force's lack of public engagement and its slow progress. During the public portion of the oversight hearing, coalition members highlighted the various missed opportunities in the Task Force process, as well as the importance of the Task Force using local information and concrete examples to inform its recommendations. Coalition members also engaged media, providing outlets that had previously covered the Task Force with an update and notice in advance of the oversight hearing. Media engagement can be a useful strategy for creating greater accountability, providing a public record of events and insights on government performance.

During this same period, the coalition was actively engaging new organizations and individuals that were not currently part of the coalition effort, but whose knowledge and expertise required inclusion. Members of the coalition drafted a list of local and national organizations and researchers whose insights were relevant to the issues the Task Force was considering, and who should at least be made aware of the

³¹ Afaf Nasher, Executive Director of CAIR-NY, was actually named to the Task Force, but Albert Cahn participated on behalf of CAIR-NY throughout 2018.

³² Note that some professional affiliations may have changed since the formation of the Task Force.

Task Force process and the concerns regarding government use of ADS. To help provide context to new partners and allies, the coalition shared existing resources including AI Now's Algorithmic Accountability Policy Toolkit,³³ and a chart of New York City ADS use examples organized by issues.³⁴ The coalition also made clear that there were many ways for new members to participate, based on what made the most sense for the organization or individual. By prioritizing flexible and inclusive practices, the coalition was able to attract a wide variety of perspectives and experience levels, and to ensure that engagement was feasible for a broad array of participants.

Despite announcing plans to host two public forums at the end of March, the City released no additional details about public participation in the forums. The Task Force website and the event websites noted that the public could submit written comments to the Task Force via email or give comments in person, but provided no details about whether there were any restrictions (most City public hearings impose time limits on public comments, for example), whether the public would be able to ask questions of the Task Force or the invited experts, or how much of the three-hour event would be reserved for public participation. As a result of this lack of public communication, and the lack of meaningful information, public participation was limited at the April 30, 2019 public forum, and most coalition members attended to observe how the event was run so that, informed by this experience, they could organize for more robust participation at the next forum. Notably, since no members of the public signed up to provide comments, coalition members used the public-comments period to direct questions at the Task Force—there were no stated prohibitions against asking Task Force members or invited experts questions. After a series of direct questions about the lack of public engagement, the opacity of the process to date, and concerns about specific agencies, to which non-government Task Force members answered candidly, the Task Force chairs abruptly ended the forum early.

Before the May 30, 2019 public forum, the coalition met and drafted specific questions to ask at the end of each oral testimony. Following the Task Force chairs' response to directed questions during the April forum, the coalition wanted to use the next forum to create a robust public record of concerns and to give the Task Force an opportunity to respond to questions and concerns that were not addressed either at the previous public forum or at the City Council oversight hearing. The coalition also emailed the Task Force chairs in advance of the May forum seeking additional information about the upcoming forum and community meetings. The coalition was particularly interested in the following issues:

- 1.** the goals of the community meetings
- 2.** whether public education about ADS would exist in advance of those meetings
- 3.** whether the Task Force planned to collaborate on or co-facilitate public meetings with community-based organizations
- 4.** whether there would be funding to support collaboration with community-based organizations
- 5.** whether there were plans to update the Task Force website with resources and articles to explain ADS issues to the public (the coalition also offered to recommend resources)

³³ AI Now Institute, "Algorithmic Accountability Policy Toolkit," October 2018, <https://ainowinstitute.org/aap-toolkit.pdf>.

³⁴ An updated version of the ADS examples chart is available in the Supplemental Materials.

The Task Force chairs replied with more information about the May forum and an update that planning for community sessions in Brooklyn, Queens, Manhattan, the Bronx, and Staten Island was underway and that they were already working closely with community-based organizations and stakeholders.³⁵

During the public-comments portion of the May public forum, several members of the coalition and the public provided oral comments (which were also submitted in written form via email). They ended their comments with questions for the Task Force. Initially, the Task Force chairs answered the questions, but other Task Force members soon interjected with their own responses. This revealed a lack of consensus among the Task Force, in which many non-governmental members expressed concerns about its slow progress and the City's opacity. At the end of the May public forum, the Task Force chairs announced a series of community meetings to be held throughout the summer. However, information about these meetings was never published on the Task Force website.

On June 10, 2019, New York State Senator Andrew Gounardes introduced S. 6428, legislation creating a statewide task force on the role of artificial intelligence in New York State Government. The coalition provided insights to Senator Gounardes to ensure the state legislation avoided repeating missteps from the New York City experience. The coalition also promoted the introduction of the legislation with the hope that state-level pressure would incentivize the City to make a good-faith effort. During this same period, the coalition agreed to solicit and publish a compilation of comments and letters directed at the Task Force during the spring of 2019. In July, AI Now published this compilation to provide a more robust public record of the concerns and feedback the Task Force received during its period of public engagement.

Throughout the remainder of 2019, the coalition continued to share information and draft advocacy options in the absence of any public update or communications from the City about the Task Force process. They stressed the continued need to educate and engage the public about government use of ADS, and decided to create this report and plan a community-led public-education event. Following great examples from other jurisdictions where advocates have created community-led forums and events in the absence of government action or accountability,³⁶ the coalition will host a **community-led public-education community event on Saturday, December 7, 2019, from 11 a.m. to 3 p.m. at Riverside Church (490 Riverside Drive) in Manhattan**. We invite the public, the NYC ADS Task Force, and City officials to join us!

³⁵ Record on file with the editor.

³⁶ See, e.g., F Jones, "Community-Led Public Hearing on Racially-Biased Policing in Tulsa," *Oklahoma Eagle*, March 7, 2019, <http://theoklahomaeagle.net/2019/03/07/community-led-public-hearing-on-racially-biased-policing-in-tulsa/>.

SECTION 2: RECOMMENDATIONS REGARDING GOVERNMENT USE OF ADS

Recommendations Based on The Provisions of Local Law 49 of 2018

This section includes recommendations based on the specific provisions of Local Law 49 of 2018. These recommendations were drafted for the New York City policy context, but most can be modified for other jurisdictions.

**Recommendations
on the criteria for
identifying which
agency automated
decision systems should
be subject to one or
more of the procedures
recommended by the
Task Force**

- The Task Force should adopt the following definition of “automated decision system” to determine which systems should be subject to its recommendations on procedures, rules, policies, and actions regarding government use of automated decision systems.

An “automated decision system” is any software, system, or process that aims to automate, aid, or replace human decision-making. Automated decision systems can include both tools that analyze datasets to generate scores, predictions, classifications, or some recommended action(s) that are used by agencies to make decisions that impact human welfare,³⁷ and the set of processes involved in implementing those tools.
- Agencies should maintain a public archive identifying automated decision systems that are subject to procedures, rules, policies, or actions recommended by the Task Force, as well as systems and categories of systems (e.g., short-lived Microsoft Excel formulae that are not used to inform significant policy determinations) excluded from the recommended procedures, rules, policies, or actions, and explanations of their exclusion. The City should also implement a procedure for the public to challenge an agency’s exclusion of an automated decision system.

³⁷ Impact on public welfare includes but is not limited to decisions that affect sensitive aspects of life such as educational opportunities, health outcomes, work performance, job opportunities, mobility, interests, behavior, and personal autonomy.

**Recommendations
on procedures, rules,
policies or actions
for how a person may
request and receive
an explanation of how
an agency automated
decision system
determination was
reached**

- The City Council and the Mayor should provide agencies with annual budgetary support to ensure that public documents and communications related to the agency's use of automated decision systems are broadly available and accessible. Agencies should ensure that public documents and communications account for language, socioeconomic, cultural, geographic, educational, and digital-access differences. This budgetary support should be used to hire and consult group-facilitation experts to design, lead, and implement public meetings centered on soliciting community concerns regarding existing procedures, and this engagement should occur prior to and during the design process. The budgetary support should also cover training and other costs associated with ensuring that agency staff and/or other relevant civil servants (e.g., librarians) can directly assist community members in accessing, understanding, and using such resources. Agencies can include provisions in third-party vendor contracts to ensure the vendor assists and produces the necessary resources for this process.
- The City should require procurement contracts to include provisions requiring the vendor to provide agencies documentation³⁸ on the details of all of the datasets used in the development, implementation, and testing of the systems (training data and input data); a description of the ADS model performance, including details on data informing the model; and high-level characteristics of the model. As part of this process, the following information should be requested of the vendor: plain-language descriptions of how the system makes determinations; any records of bias, fairness, or validation-testing performed on the system; design documentation and information about a given system's technical architecture; records of all vendor marketing materials and claims about the system; plans for ongoing maintenance, monitoring, and system updates; training materials for any users of the ADS; response plans for any system changes that result from technical updates; any independent or internal auditing of results from the implementation of the system; and any other relevant information that will assist agencies in developing explanations of how an automated-decision-system determination was reached and compliance with any other Task Force recommended procedures, rules, policies, or actions.

38 Several examples of documentation practices for ADS are explored in research, and summarized in the Partnership on AI's ABOUT ML project (<https://www.partnershiponai.org/about-ml/>). Some prominently used examples include the following research contributions toward documentation standards for dataset, model, and system-level characteristics, respectively: Timnit Gebru et al., "Datasheets for Datasets," March 2018, <https://arxiv.org/pdf/1803.09010.pdf>; Mitchell et al., "Model Cards for Model Reporting," February 2019, <https://arxiv.org/abs/1810.03993>; Arnold et al., "FactSheets: Increasing Trust in AI Services through Supplier's Declarations of Conformity," February 2019, <https://arxiv.org/abs/1808.07261>.

**Recommendations
on procedures, rules,
policies or actions
for how a person may
request and receive
an explanation of how
an agency automated
decision system
determination was
reached**

(Continued)

- Agencies should produce explanations of how the agency uses or intends to use ADS, and types of decisions or practices influenced by the ADS, using documentation provided by vendors. Agency explanations of an automated-decision-system determination should include general, plain-language descriptions of the following: the automated decision system's overall function; a description of how agency staff interacts with or uses the system; a description of the agency's practices or policies in which the ADS system is used; a description of the purpose of the system and how it relates to the agency's mission or a societal need; and a description of the agency's process to measure the impact or value of the system. Agency explanations should be made available to the public upon request and the agency must publish a clear process for how individuals or organizations can request explanations for each system in use. The process for requesting information should be published on the City 311 and agency websites, in a similar manner to Freedom of Information Law requests, and should also be available at agency offices or other relevant locations.
- Agencies should adopt procedures that guarantee an agency response to a request for an explanation of an automated decision system determination within a 20-day time period. Requests for explanations of automated-decision-system determinations pertaining to critical issues (e.g., public benefits eligibility or allocation) should have a limited response timeline of five business days. Explanations should include a description of the process and timeline to appeal an automated-decision-system determination.
- The City should require agencies using automated decision systems to maintain and publish metrics regarding how many determinations each ADS system was involved in making, the number of requests for explanation it received about each ADS, whether the explanation resulted in a challenge, the outcome of that challenge, and a summary of anonymous qualitative feedback from residents receiving the explanation. This information can be published in a privacy-preserving manner, but it should allow the public and public officials to assess the efficacy and impact of procedures and practices as well as the utility of automated decision systems.

**Recommendations
on procedures
and standards to
determine whether
an agency automated
decision system
disproportionately
impacts persons based
on protected status**

- The City should require agencies to develop a pre-acquisition or development procedure (depending on how ADS is acquired and implemented) to ensure that experts and individuals directly affected by ADS use are meaningfully consulted multiple times during the development of an automated decision system. Such consultation should be balanced to ensure robust and comparable participation among experts and individuals affected by ADS use.³⁹ Agencies should maintain a public record of external participation. Agencies must ensure that non-agency experts and community members are consulted early in the acquisition and development process (preferably before and during the design), since important policy determinations that can result in disproportionate outcomes occur early in system development.
- The explicit expectation is that ADS should not result in a disproportionately negative effect on members of a protected class, and measures should be affirmatively undertaken to eliminate disparities. In furtherance of this goal, the City should require all agencies using ADS to adopt a standard for assessing disproportionate impact based on protected status. This standard should be tailored to the specific use and context of a given ADS. The following is an example of a general standard agencies can consider and modify for this purpose: if an ADS selects or affects members of a protected class at a rate that varies by four-fifths or more, then that ADS should not be used unless the agency provides a public explanation of why its use of the ADS is necessary to achieve an important agency interest, and that there is no less-discriminatory alternative to achieving this interest. Agencies should look not only at the decisions made by the ADS but also, where applicable, the actions taken by the City employees, contractors, or other state actors in response to the ADS, to ensure that practitioners are not responding to the automated recommendations in discriminatory or unlawful ways.⁴⁰
- The City should require agencies to document and justify data collection associated with the development, function, and implementation of an ADS. In these written statements, agencies must both address the privacy impact on the public generally and on members of a protected class specifically. These statements should be published before use of newly procured ADS and annually for all currently used ADS.

39 See "The Cambridge Experimentation Review Board," *Bulletin of the Atomic Scientists*, 33, no. 5, 1977, <https://www.tandfonline.com/doi/abs/10.1080/00963402.1977.11458373?journalCode=rbul20>.

40 Ben Green and Yiling Chen, "Disparate Interactions: An Algorithm-in-the-Loop Analysis of Fairness in Risk Assessments," *Proceedings of the Conference on Fairness, Accountability, and Transparency*, January 29–31, 2019, <https://www.benzevgreen.com/wp-content/uploads/2019/02/19-fat.pdf>.

**Recommendations
on procedures and
standards for addressing
instances in which a
person is harmed by
an agency automated
decision system if any
such system is found
to disproportionately
impact persons based on
protected status**

- When an agency's use of an ADS produces harm and/or disproportionately impacts individuals or groups based on protected status,⁴¹ the agency must (1) cease use immediately if there are comparable unautomated practices or processes in place, or (2) when immediately ceasing use of the ADS will cause more harm, the agency must publish notice of an ADS or unautomated practice redesign process. The redesign process must include individuals and advocates from the communities or protected class whom the system is found to disproportionately impact; this can include representatives from community-based organizations and residents not affiliated with an organization. Community participation must occur within the first 90 days of the redesign process, and calls for participation should be publicly posted, ensuring that community members are able to select adequate organizations and representatives for participation. The agency must specifically design and host pre-meeting preparation sessions for non-government participants to ensure that they can comfortably and meaningfully participate in the redesign process.
- The City Council should pass a law providing a private right of action for individuals or groups of individuals where agency use of ADS is the proximate cause of an injury.
- Agencies should define and publicly post a procedure allowing the public access to all information⁴² required to assess whether an ADS produces disparities between similarly situated individuals based on protected status. Agencies should adopt procedures that guarantee an agency response to a request within a 20-day time period.

**Recommendations for
a process for making
information publicly
available that, for each
agency automated
decision system, will
allow the public to
meaningfully assess
how such a system
functions and is used by
the city, including making
technical information
about such a system
publicly available where
appropriate**

- The City should make a list of automated decision systems used by agencies publicly available online and accessible in print at branches of the New York Public Library. This list should be disaggregated by agency, and should include the following:
 - A description of the purpose of the automated decision system, including any decisions that the system is used to make or assist in making and which types of people are likely to be affected by those decisions.
 - A description of the procedure for individuals to learn whether and how an automated decision system was used to make a decision that affects them. This should include clear information on how an individual or group may challenge a decision in which an automated decision system was involved, timelines for each procedure, and expected response time from the agency.
 - The process by which the automated decision system is used to make decisions (e.g., whether the system makes decisions directly, or informs the decisions of agency staff, or is otherwise integrated into a process that results in a determination affecting human welfare).

41 Agency use of ADS that are used to mitigate or address historical and systemic bias and harm should not be considered a discriminatory practice, similar to NY Exec. L. § 296 (2015).

42 E.g., a representative sample or full set of past ADS predictions or decisions.

Recommendations for a process for making information publicly available that, for each agency automated decision system, will allow the public to meaningfully assess how such a system functions and is used by the city, including making technical information about such a system publicly available where appropriate

(Continued)

- Relevant technical information of the ADS can include, but is not limited to:
 1. source code
 2. all versions of the ADS including updates to the model, formulae, software, interface, and other records of meaningful changes made to the ADS
 3. design documentation and information about the ADS' technical architecture including data-provenance information⁴³
 4. some justification for the validity of using a model trained on data from a potentially different context than the agency's
 5. the system's intended use as implemented (e.g., the automated decision system's actual objective function)
 6. any records of bias, fairness, or any validation-testing performed on the system and on applicable human uses of the system
 7. training and other materials relating to how a user interacts with a system (including wireframes or documentation on how determinations from the system are displayed and communicated)
- Any marketing materials, internal documentation, and training instructions or materials intended to inform agency employees interacting with the ADS.
- In the future, the City shall not permit any agency to enter into any agreement with ADS vendors that would prevent the aforementioned information disclosure. If any existing contract with a third party precludes an agency from releasing such information, the agency must publicly post (i) the name of such third party, (ii) an electronic link to a copy of such contract, (iii) the date that the current term of such contract will expire, and (iv) a statement explaining why the contract prevents the agency from releasing such information. If no such obstacles exist, a plan for publicly releasing such technical information, including the anticipated date of such release, should be created.
- Policies and procedures relating to access, use of the system or input data, and any safeguards to protect system or input data from unauthorized access or use.
- Documentation of privacy impact, including, but not limited to, materials documenting any other agencies or third parties that have access to the automated decision system, its input data, or its outputs.
- Information regarding audits of such systems, including the methods that would comprise an audit, its frequency, scope, and public availability of such audits.
- A statement documenting the processes by which policy decisions related to the development of the automated decision system model (e.g., score thresholds, system objectives) were made.

43 Timnit Gebru et al., "Datasheets for Datasets," April 16, 2019, <https://arxiv.org/pdf/1803.09010.pdf>.

Recommendations for a process for making information publicly available that, for each agency automated decision system, will allow the public to meaningfully assess how such a system functions and is used by the city, including making technical information about such a system publicly available where appropriate

(Continued)

- There should be no exceptions to making the aforementioned list of automated-decision-systems information public. If an agency attempts to raise agency-specific concerns or legal compliance issues that would prevent the release of some of the aforementioned information, the agency should provide a detailed statement regarding the need for the limitations and a review of the information that can be released without revealing sensitive agency data or producing an adverse outcome to the City Council and comptroller. The City Council and comptroller should hold annual oversight hearings on these issues.
- The City should develop mechanisms to connect transparency requirements more strongly to approval of contracts. For example, the City can make some agency funding conditional upon meeting certain standards of algorithmic disclosure and interpretability through external, independent audits.
- The City should require agencies that use or intend to use automated decision systems to perform an algorithmic impact assessment⁴⁴ before acquiring or developing a new automated decision system. Each agency should perform a self-assessment of existing and proposed automated decision systems, evaluating potential impacts in terms of fairness, justice, bias, privacy, civil rights, and other concerns. Agencies should provide a public notice and comment period of the self-assessment and respond to comments or concerns raised by the public before publicly posting the final assessment.

Recommendations on procedures for archiving agency automated decision systems, data used to determine predictive relationships among data for such systems and input data for such systems

- The City should allow outside experts and researchers access to archived input data and other relevant agency data necessary to identify systemic and structural problems that may derive from agency practices and procedures, and affect the output and use of a given ADS. The findings can be used to identify optimal policy solutions.⁴⁵
- Agencies should document, archive, and publicly post a retention schedule for changelogs of modifications made to the source code or models of an automated decision system (i.e., agencies should inform the public about how, and for how long, they will be preserving the records of different versions of a given ADS system). The changelogs should include plain text describing any changes, including why they were necessary, along with agency-internal communication and/or communication between agency employees and vendors relating to any changes made to a given ADS system. All information should be presented in a way that allows researchers to understand how such changes affect the determinations produced by the automated decision system, and evaluate these over time.

44 AI Now Institute, "Algorithmic Impact Assessment: A Practical Framework for Public Agency Accountability," April 2018, <https://ainowinstitute.org/aiareport2018.pdf>.

45 For example, data demonstrating that NYPD's stop-and-frisk practice unlawfully targeted Black and Latino New Yorkers, and that an overwhelming majority of the stops did not lead to evidence of a crime, was only available to a group of legal organizations following racial-profile litigation. If such data had been preemptively available for scrutiny, then this unlawful practice and subsequent reform could have been identified without costly litigation.

Recommendations to Government Agencies Considering ADS Use (General)

This section includes recommendations with explanations for agencies that are considering procurement or development of ADS. These recommendations should also be evaluated by agencies currently using ADS, as some of the recommendations can still be pursued within existing contract agreements or where an agency developed the ADS internally. These recommendations are not jurisdiction specific, so they can be evaluated and adopted by governments outside of New York City.

Agencies procuring ADS should not enter purchase agreements or licenses that require the agency to indemnify vendors for any negative outcomes.

Some vendors, notably SAS Institute, require government agencies to indemnify the company for any legal claims that arise from its use of their systems.⁴⁶ When agencies agree to such provisions, they absolve vendors of responsibility and accountability for negative consequences that were caused by design errors or oversights in the ADS that vendors should be accountable and responsible for.

Agencies procuring ADS should require agency-vendor contracts to stipulate that vendor or agency conduct and publicly publish a validation study (including the methodology and results) that audits disparate impact, accuracy, and the value of using the ADS in place of existing practices.

If the vendor performs these studies, they should share all relevant data inputs, methodologies, code, and findings that comprise the validation study and its results with the agency. These validation studies should be performed on an ongoing basis.

Some vendors may claim that they have validated their product or service internally (for disparate impact and accuracy) but fail to share the results of this validation with agencies, or they may refuse to share code, data, and other relevant documentation due to trade secrecy. In order to ensure ADS use is just, accurate, and constitutes an improvement over existing practices, agencies should ensure that continual (e.g., annual or biannual) audits and validation studies are performed and that ADS are responsive to any changes in institutional policies or practices.

Agencies must adopt clear procedures relating to the collection, usage, storage, and sharing of personal information in the context of developing, using, and validating a given ADS in a privacy-preserving manner.

ADS use can increase opportunities for unnecessary data collection, and sharing that data increases individual privacy risks. Agencies should adopt clear procedures that include (1) obtaining informed consent from individuals whose personal information is sought for the ADS, (2) limiting the duration for which personal information and the results of the ADS are stored, (3) detailing the process by which individuals can correct the personal information used in the ADS, and (4) technological and physical safeguards to ensure the security and integrity of any personal information used in the ADS, including the use of anonymization techniques wherever possible and ensuring periodic independent security audits of databases involved in the ADS. Note that given the powerful predictive and inferential capabilities of current machine-learning techniques, some ADS systems may produce personal data as part of their outputs, even if these outputs were not dependent on the ADS having access to personal information to begin with. Personal information that is generated by an ADS should also be subject to these procedures.

Agencies should prioritize community needs for trust and accountability in ADS procurement and predeployment testing processes and make sure that transparency practices are in place sufficient to ensure these needs are met.

Government agencies seeking to acquire and use ADS should internally assess the knowledge differentials or inefficiencies that limit accountability and contribute to the agency's inability to adequately assess and anticipate problems that may arise from such systems.⁴⁷ This may mean ensuring the public is adequately informed about the current or prospective use of ADS. Execution of this responsibility can be facilitated by requiring more from vendors during the procurement process (for any ADS independently developed by third-party vendors). Specifically, agencies can require vendors to provide more training materials for agency staff to understand the system, in addition to requiring the vendor to collaborate with the agency in developing public-education materials and engaging the public. Vendors are often in the best position to ascertain whether public-education documents adequately describe the capabilities and potential risks of a given system, while agencies are in a better position to assess the needs of people affected by a given system, as well as the needs of the broader community.

Agency contract agents or other individuals with authority to negotiate ADS contracts should ensure the contract includes language requiring the vendor to guarantee the product or service is compliant with federal, state, and local antidiscrimination laws.

ADS compliance with antidiscriminations laws is not always guaranteed. Agencies should ensure third-party vendor contracts include assurances of compliance with antidiscrimination laws. Inclusion of such provisions will ensure the agency has standing to have the system fixed, and that vendors share liability if ADS use produces discriminatory outcomes.

⁴⁷ See Meredith Whittaker et al., "AI Now Report 2018," https://ainowinstitute.org/AI_Now_2018_Report.pdf.

Agencies using face or other biometric analysis should request the following information from vendors to assess whether current or prospective ADS will disproportionately affect individuals or groups based on protected class.

Prior to licensing or purchasing such a system, agencies should qualitatively evaluate the relative advantages and risks of procuring an ADS that relies on biometric data. This evaluation should consider issues like data sources, privacy, and consent, and should also take into account the vulnerability of the population most affected by the implementation of the tool, and the potential impact such a tool would have on these populations, in the best- and worst-case scenarios. Only after a documented evaluation of these ethical considerations should the agency begin a process of validating the functionality of these systems. In order to verify the functionality of these systems, the agencies must demonstrate that any biometric detection system performed up to a specified standard. Because such evaluations may not include adequate representation from the specific context of deployment of the system (NIST benchmarks, for example, are often exclusively adult subjects, and tend to be skewed in gender and race representation), the testing procedure accepted must include an evaluation on a user-representative dataset,⁴⁸ in which the major intersectional demographic categories of the affected user population are adequately represented in the test set. Agencies must report the performance of the model on each demographic subgroup in order to acknowledge any performance disparities.

Agencies should not procure or use ADS that are shielded from independent validation and public review because of trade-secret or confidentiality claims.

Vendors of ADS often make broad trade-secrecy or confidentiality claims when agencies, researchers, members of the public, or parties to a legal challenge of a given ADS request information about the ADS that should otherwise be shared. Thus, invocation of such corporate-secrecy laws can function as a barrier to due process, making it difficult to assess bias, contest decisions, or remedy errors. In response to these obstacles posed by some vendors, governments have introduced legislation or enacted laws prohibiting vendors or agencies from asserting trade-secret or other intellectual-property protections. Agencies should either include provisions requiring vendors to waive such claims, or avoid procurement and use of ADS with vendors that refuse such waivers.

⁴⁸ A user-representative dataset includes a representative sample of each intersectional demographic subgroup within the expected user population. Note that this is not a proportional sample of the expected user demographic—even if 2 percent of the population is expected to have darker skin types, there should still be an equal number of subjects in the test set with darker and lighter skin types in order to be representative of both possibilities. More details on the importance of desegregated subgroup evaluation and an example of execution can be found in the following studies: Buolamwini and Gebru (2018), "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification," <http://gendershades.org/overview.html>; and Raji and Buolamwini (2019), "Actionable Auditing: Investigating the Impact of Publicly Naming Biased Performance Results of Commercial AI Products," <https://dl.acm.org/citation.cfm?id=3314244>.

Recommendations to Specific Agencies about ADS Use

This section includes recommendations to specific New York City agencies regarding the procurement, development, use, and oversight of ADS currently or prospectively used in New York City. These recommendations are informed by knowledge of agencies' practices and policies, in addition to known ADS use cases in New York City or use cases by similar agencies in other jurisdictions.⁴⁹ Although these recommendations are tailored to the local context, the recommendations are relevant to concerns, issues, and challenges in other jurisdictions. Each recommendation is accompanied by a rationale so that stakeholders in other jurisdictions can assess the applicability and adequacy for their jurisdictional context.



Administration of Children's Service (ACS)

ACS should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

ACS should conduct retroactive reviews of districts⁵⁰ that have implemented predictive analytics (a type of ADS) in their welfare departments to identify best practices and the viability of the use of predictive analytics in child welfare, and to determine what additional research is necessary to develop these systems in a constructive, rights-preserving manner.

Predictive analytics (also called predictive risk-modeling) have been used in child-welfare agencies across the country with mixed success. For example, the Illinois Department of Children and Family Services implemented predictive analytics and found that the system improperly assessed a majority of children and failed to identify at-risk children who ultimately died of neglect or abuse.⁵¹ Meanwhile, Allegheny County first adopted its Allegheny Family Screening Tool in August 2016, but implemented a revised version in December 2018. While the success of the tool remains in debate, Allegheny County's experience with implementation and tool redesign, as well as community accountability and transparency, may be informative.⁵² As a result, ACS should examine multiple use cases before proceeding to pilot any predictive analytics tools.

ACS should publicly identify the specific ways in which the ADS is being used by the agency, including how the ADS is used to make decisions in individual cases and whom the ADS evaluates (i.e., the accused, the child, the family). ACS should also create a means for regularly gathering and surveying the experiences of people with prior/current interactions with ACS, frontline service providers, and ACS personnel with these uses. These responses should inform the current implementation and future revisions of the ADS tool.

By disclosing the specific decision points and ACS practice or procedures where ADS tools will be or are currently used, the agency promotes transparency around the tool. By soliciting and responding to the questions and concerns expressed by people directly affected by the use or outcomes of the ADS, ACS creates greater public accountability. Moreover, in light of the fact that ADS decisions can result in state intervention in family practices or family separation, the public should be informed about the potential implications of ACS use of ADS.

49 See ADS Use Chart in Supplementary Materials

50 For example, the Illinois Department of Children and Family Services; Allegheny County, Pennsylvania; and Hillsborough County, Florida.

51 Nancy Smith, "Illinois Dumps George Sheldon's 'Failed' Predictive Analytics Program," Sunshine State News, December 7, 2017, <http://sunshinestatenews.com/story/illinois-dumps-george-sheldons-eckerd-kids-failed-predictive-analytics-program>

52 "Impact Evaluation on Allegheny Family Screening Tool Released," Allegheny County, May 1, 2019, <https://www.allegenycounty.us/News/2019/DHS-2019/6442467524.aspx>.



Administration of Children's Service (ACS) (Continued)

ACS removal decisions should not be solely based on ADS predictions or recommendations, and should require court authorization.

The impacts of out-of-home placement decisions are complex and underresearched; research suggests that family separations increase the risk to a child's cognitive, emotional, educational, and social development.⁵³ While New York City has led the country in decreasing the number of children in foster care through the use of preventative services, ACS removed 1,854 children in FY 18 without court authorizations, and at least 20 percent of these cases were not given approval through the courts⁵⁴—data that could be fed into a prospective ADS. Because of the stakes of this decision and the potential for ADS to reinforce existing biases and disparities in child welfare, ACS should incorporate meaningful human oversight of any decision where ADS may play a role, and should develop mechanisms for review and redress.

ACS should proactively and publicly release data annually relevant to whether current and prospective ADS use is affecting or worsening racial and socioeconomic disparities in ACS practices and outcomes.

ACS and many child welfare agencies around the United States have policies and practices that disproportionately affect racially and socioeconomically marginalized groups. This skewed focus is partly the historical legacy of past agency practices and goals to intervene in these specific communities.⁵⁵ Additionally, the broad and amorphous definitions of “neglect” and “maltreatment” have allowed factors correlated with poverty and racial stereotypes to be conflated with, or mistaken for, harm to children or risk thereof. Included among the data that ACS should release, broken down by demographic characteristics, are the number of complaints screened in and screened out; types of services offered/required; children removed versus not removed during pendency of investigation, upon close of investigation; children placed with kin versus congregate care versus foster care; cases identified for additional or greater scrutiny versus those not.

- 53 McCormack, Lynne; Issaakidis, Gemma L. (2018), “Complex trauma in childhood; psychological growth in adulthood: Making sense of the ‘lived’ experience of out-of-home-care.” *Traumatology* 24 (2): 131–139. doi:10.1037/trm0000139. ISSN 1085-9373; Greeson, Johanna K.P.; Briggs, Ernestine C.; Kisiel, Cassandra L.; Layne, Christopher; Ake III, George S.; Ko, Susan J.; Gerrity, Ellen T.; Steinberg, Alan M.; Fairbank, John A. (2011), “Complex Trauma and Mental Health in Children and Adolescents Placed in Foster Care: Findings from the National Child Traumatic Stress Network.” *Child Welfare*. 90 (6): 91–108. PMID 22533044 (via EBSCOhost); Colleen Kraft, MD, “AAP Statement Opposing Separation of Children and Parents at the Border,” *American Academy of Pediatrics*, May 8, 2018, <https://www.aap.org/en-us/about-the-aap/aap-press-room/Pages/StatementOpposingSeparationofChildrenandParents.aspx>.
- 54 Chris Gottlieb, “Child Separations, Here at Home: We Remove Far, Far Too Many Kids from Their Families in the Name of Saving Them,” *New York Daily News*, December 2, 2018, <https://www.nydailynews.com/opinion/ny-oped-child-separations-here-at-home-20181129-story.html>.
- 55 See Kate Morris et al., “Social Work, Poverty, and Child Welfare Interventions, *Child & Family Social Work*, January 17, 2018, <https://onlinelibrary.wiley.com/doi/abs/10.1111/cfs.12423>; and Kathryn Joyce, “The Crime of Parenting While Poor,” *New Republic*, February 25, 2019, <https://newrepublic.com/article/153062/crime-parenting-poor-new-york-city-child-welfare-agency-reform>.



Administration of Children's Service (ACS) (Continued)

In individual cases, ACS should inform the child/children and parent(s) who are the subjects of the investigation the specific scores, recommendations, risk evaluation, or other determinations made by an ADS tool as part of the investigation.

Informing individuals about the way in which an ADS tool operated to impact them in particular is important to ensure that determinations in every case are made on a sufficiently individualized basis and not overgeneralizations alone. Justice and due-process considerations weigh in favor of such disclosures.

ACS should not use scores, predictions, or other outcome of any ADS tool to punish families or parents.

While ACS may offer services voluntarily to families, these efforts can, in practice, be overly punitive and/or coercive rather than supportive and be seen as such.⁵⁶

ACS should not use ADS to classify or investigate families that have no complaint against them.

56 See Rachel Blustain, "The Limits of Protection: Fighting the Fear of ACS," *City Limits*, December 18, 2014, <https://citylimits.org/2014/12/18/the-limits-of-protection-fighting-the-fear-of-child-welfare-officers/>; "Surveillance Isn't Safety – How Over-Reporting and CPS Monitoring Stress Families and Weaken Communities," *Rise*, September 17, 2019, <http://www.risemagazine.org/2019/09/surveillance-isnt-safety/>; and Larissa MacFarquhar, "When Should a Child Be Taken from His Parents," *New Yorker*, July 31, 2017, <https://www.newyorker.com/magazine/2017/08/07/when-should-a-child-be-taken-from-his-parents>.



Department of Corrections (DOC) and Board of Corrections (BOC)

DOC and BOC should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

ADS used by DOC to assess eligibility for programming or access to care should not rely on local, state, or federal criminal justice data, including gang-affiliation designations or arrest data. Instead, DOC should develop just policies and methods that evaluate eligibility based on the availability of services and individualized logistical factors (e.g., length-of-stay based), rather than the “risk” of the individual.

Access to care (e.g., nursery programs for new mothers) and programming (e.g., literacy classes and library services) are critical to addressing individual health needs and developing life and work skills, which, in turn, help reintegration into one's community and the reduction of recidivism. Currently, DOC's assessments for programming use various kinds of criminal justice data, which can include subjective determinations of gang affiliation or data that reflects systemic biases of the criminal justice system. Additionally, this data does not adequately assess an individual's needs for care or preparedness for programming, which serves to limit access to these important services. Therefore, DOC should adopt just and rights-preserving policies and methods for assessing and allocating programming and care.



Department of Education (DOE)

DOE should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

DOE should modify its school-assignment appeal process to allow students to challenge assignment outcomes that may be the product of ADS error or failures.

The current DOE appeal process only permits students to appeal school assignment based on limited and predetermined reasons (e.g., medical hardship).⁵⁷ This fails to acknowledge that assignment outcomes can be the product of algorithmic system errors⁵⁸ and can reinforce existing racial and socioeconomic segregation in New York City schools.

⁵⁷ New York City Department of Education. Retrieved from <https://www.schools.nyc.gov/enrollment/enroll-grade-by-grade/high-school>.

⁵⁸ Reema Amin, "Initially Rejected, 144 Students Learn They Were Accepted to NYC's Coveted Lab School," Chalkbeat, April 9, 2019, <https://www.chalkbeat.org/posts/ny/2019/04/09/admissions-error-lab-school-for-collaborative-studies-new-york/>.



Department of Education (DOE) (Continued)

DOE should proactively and publicly release data relevant to assessing bias and discrimination concerns related to current and prospective ADS use. Specifically, DOE should make assignment algorithms' data (e.g., student choice inputs and matching outputs) with relevant demographic data available for testing and evaluation of whether it perpetuates or worsens segregative effects and other educational equity concerns.

The school-assignment algorithm used by DOE has been the subject of controversy given the extreme racial and socioeconomic segregation⁵⁹ in New York City schools. In response to these growing concerns, the City enacted the School Diversity Accountability Act,⁶⁰ which requires the DOE to publicly release demographic data related to school enrollment by individual grade levels and programs within schools. However, enrollment data does not show whether there are disparities in who applies to specific schools and who actually gets in. In order to accurately assess whether the school-assignment algorithm contributes to discriminatory outcomes, interested parties must have access to the assignment algorithm's data (e.g., student choice inputs and matching outputs). This type of data should be made available by the DOE so researchers, advocates, and New York City families can assess whether this ADS is contributing to segregation in City schools, especially since research shows that where a student goes to school can significantly affect their life opportunities and outcomes. If there is no way for the DOE to publicly release assignment algorithm data in a privacy-preserving manner, the DOE should provide data to an independent third party for evaluation of segregative effects and other educational equity concerns. The results, methodology, and analysis of the third party should be made publicly available and the DOE should subsequently hold a public hearing (with adequate notice) for educational equity experts, advocates, and community members to provide feedback or dissent. This independent evaluation and public review process should occur on an ongoing basis, as long as DOE uses ADS for school assignment.

- 59 Kucsera, J., & Orfield, G. (2014). "New York State's Extreme School Segregation: Inequality, Inaction and a Damaged Future." Los Angeles, CA: The Civil Rights Project. Retrieved from <https://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/ny-norfler-report-placeholder/Kucsera-New-York-Extreme-Segregation-2014.pdf>.
- 60 The act requires the Department of Education to report annually on student demographics in community school districts and high schools. Retrieved from <https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=1946653&GUID=7329D54A-4E94-443D-9411-BCF5C-C0C65D8&Options=&Search=>.



Department of Education (DOE) (Continued)

DOE should place a moratorium on adoption of facial-recognition systems and other biometric identifiers in schools until further research is conducted regarding their impact, efficacy, and utility, as well as regulations enacted providing adequate safeguards, standards of use, compliance procedures, and reporting requirements.

Localities in New York, such as the city of Lockport,⁶¹ have begun to implement infrastructure for facial recognition and other biometric monitoring technology—systems that can identify individuals using unique characteristics like gait or voice. This is in the face of mounting evidence that facial recognition and biometric identifying systems are flawed⁶² and reinforce racial and gender bias.⁶³ While a bill placing a moratorium on the use of biometric ADS in schools pending further research is currently under review (the bill has passed in the Assembly⁶⁴ and is being considered in the Senate⁶⁵), the DOE should proactively place a moratorium on the use of this technology in schools until further research and regulation are put in place, given the well-established risks these technologies pose and the sensitivity of the population affected by the use of such systems (i.e., minors).

DOE should evaluate ADS technologies currently and prospectively used in schools in a surveillance capacity for its effect on students, teachers, staff, and the educational environment. These evaluations should include consulting a variety of experts and at least two community listening sessions. The evaluations should also include an assessment of the efficacy of existing privacy, data-collection, and sharing protocols, policies, and safeguards.

Reports of schools adopting ADS for surveillance to address school security and detect possible mental-health issues has prompted a backlash given the potential for disparate impact, questions of efficacy and accuracy, student and teacher privacy concerns, lack of safeguards around data collection, lack of clear specifications around data collection, sharing, and use,⁶⁶ and the potential to harm child development.⁶⁷ ADS technologies with surveillance capacity include but are not limited to systems that scan students' social media,⁶⁸ texts, and documents.⁶⁹ It is thus imperative that the impact of this class of ADS is carefully understood in order to inform the decision of whether to procure surveillant ADS in the future and how to properly deploy and monitor their use.

- 61 WGRZ Staff, "First Look at Lockport School's Facial Recognition System," *WGRZ*, September 3, 2019, <https://www.wgrz.com/article/news/education/first-look-at-lockport-facial-recognition-system/71-85ab8ea5-9a15-40ae-9ffd-6f551f017708>.
- 62 See Lisa Feldman Barrett et al., "Emotional Expressions Reconsidered: Challenges to Inferring Emotion From Human Facial Movements," *Psychological Science in the Public Interest*, 2019, Vol. 20(1), <https://journals.sagepub.com/stoken/default+domain/10.1177%2F1529100619832930-FREE/pdf>; and Sarah Powazek, "Live Facial Surveillance Trial Misidentifies 4 out of 5 People," *Privacy SOS*, July 29, 2019, <https://privacysos.org/blog/live-facial-surveillance-trial-misidentifies-4-out-of-5-people/>.
- 63 Joy Buolamwini and Timnit Gebru, "Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification," *Proceedings of Machine Learning Research* 81:1–15, 2018, <http://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf>.
- 64 New York Assembly Bill 6787, <https://legiscan.com/NY/bill/A06787/2019>.
- 65 New York Senate Bill 5140, <https://legiscan.com/NY/bill/S05140/2019>.
- 66 New York State Procurement Guidelines, May 2014, <https://ogs.ny.gov/system/files/documents/2018/08/psnys-procurement-guidelines.pdf>.
- 67 "Social Media Monitoring in K-12 Schools: Civil and Human Rights Concerns," Center for Democracy & Technology, Brennan Center for Justice, <https://cdt.org/files/2019/10/CDT-Brennan-School-Social-Media-Monitoring.pdf>.
- 68 Faiza Patel, Rachel Levinson-Waldman, Jun Lei Lee, and Sophia DenUyl, "School Surveillance Zone," Brennan Center for Justice, April 20, 2019, <https://www.brennancenter.org/analysis/school-surveillance-zone>; Tom Simonite, "Schools are Mining Students' Social Media Posts for Signs of Trouble," *Wired*, August 20, 2018, <https://www.wired.com/story/algorithms-monitorstudent-social-media-posts/>.
- 69 Simone Stolzoff, "Schools Are Using AI to Track What Students Write on Their Computers," *Quartz*, August 19, 2018, <https://qz.com/1318758/schools-are-using-ai-to-track-what-students-write-on-their-computers/>.



Department of Health and Mental Hygiene (DOHMH)

DOHMH should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

DOHMH should clarify publicly whether social-media data is used for any ADS system involved in public-health surveillance, monitoring of epidemics, or mental-health screening.

Forecasting of population health trends using social-media data has been fueled by many studies, and has spurred their use by public health departments, including the Chicago Department of Public Health, using Twitter data to identify outbreaks of foodborne disease.^{70,71} However, this is incredibly problematic, not only because these tools can be inherently prone to bias due to cultural and geographic factors,^{72,73} but also due to the fact that surveillance without consent of individuals using data from social-media platforms will breed distrust within the communities being monitored.⁷⁴ Moreover, serious concerns regarding the evidence that such systems are effective remain unaddressed,⁷⁵ and therefore DOHMH should ensure that clear justification and community engagement (in part through public disclosures) exist for any ADS using such data.

DOHMH should perform a disparate impact evaluation and publicly disclose if any previous or current ADS produce racial or socioeconomic disparities resulting from public-health surveillance or reporting, and should proactively perform such analysis in algorithmic impact assessments prior to implementing prospective ADS.

As seen with algorithmic tools used in other domains such as criminal justice, increased surveillance has clear disparate-impact effects,⁷⁶ and these concerns are accentuated in any instance in which inferences from surveillance tools result in the distribution of necessary resources, given the racial inequality regarding access to healthcare.⁷⁷ DOHMH must include disparate-impact analysis as part of any impact assessments done in order to ensure that racial inequities are not propagated by new ADS.

- 70 Ebele Mogo, "Social Media As A Public Health Surveillance Tool: Evidence And Prospects," *Sickweather*, https://enterprise.sickweather.com/downloads/SW-SocialMedia_WhitePaper.pdf.
- 71 Justine Brown, "Using Social Media Data to Identify Outbreaks and Control Disease," *Government Technology*, January 8, 2015, <https://www.govtech.com/em/health/Social-Media-Data-Identify-Outbreaks.html>.
- 72 Shirin Ghaffary, "The Algorithms That Detect Hate Speech Online Are Biased against Black People," *Vox*, August 15, 2019, <https://www.vox.com/recode/2019/8/15/20806384/social-media-hate-speech-bias-black-african-american-facebook-twitter>.
- 73 Graham Dodge, "Using Social Media as a Public Health Surveillance Tool," *Becker's Hospital Review*, March 2, 2017, <https://www.beckershospitalreview.com/population-health/using-social-media-as-a-public-health-surveillance-tool.html>.
- 74 "Q&A: Ethics in Public Health Surveillance," World Health Organization, June 2017, <https://www.who.int/features/qa/surveillance-ethics/en/>.
- 75 Sanjana Varghese, "The Junk Science of Emotion-Recognition Technology," *The Outline*, October 21, 2019, <https://theoutline.com/post/8118/junk-emotion-recognition-technology>.
- 76 Barton Gellman and Sam Adler-Bell, "The Disparate Impact of Surveillance," The Century Foundation, December 21, 2017, <https://tcf.org/content/report/disparate-impact-surveillance/>.
- 77 Jamila Michener, "The Politics and Policy of Racism in American Health Care," *Vox*, May 24, 2018, <https://www.vox.com/policy-politics/2018/5/24/17389742/american-health-care-racism>.



Fire Department (FDNY)

FDNY should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

FDNY should not use model-calculated response time as a factor in ADS used for fire-service deployment and staffing policy decisions. These decisions should be determined using factors and empirical information with probative value, like damage statistics.

After the public backlash to FDNY's failed implementation of RAND fire models in the 1970s, which triggered widespread fires in the South Bronx and across New York City, the FDNY began using various kinds of model-computed travel time as its primary policy-planning statistics.⁷⁸ While actual response time, as opposed to model-calculated response time, can be useful in assessing policies for an ambulance taking a sick or injured person to a hospital, it is not useful or probative for fire-service deployment and staffing policy decisions. Instead, FDNY should use variables like damage statistics or injury patterns to inform fire-service deployment and staffing decisions.



Housing Authority (NYCHA)

NYCHA should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

NYCHA should not sign contracts with third-party housing-data brokers without first obtaining all information regarding the party's data-procurement methods, its ADS systems, and its data-distribution methods. NYCHA should then hold a listening session with all impacted tenants and legal advocates to assess whether the contract should be pursued. When and if there is consensus to enter the contract, all of the above information should be made public in an accessible way on NYCHA's website.

Public-housing authorities are beginning to turn to third-party data-broker ADS systems such as Yardi to manage voucher programs, tenant screening, property management, and maintenance requests. Yet such systems allow for profiling and other privacy intrusions of tenants and contractors. In light of these risks, the tenants and legal advocates should be consulted and have the opportunity to oppose procurement of such tools.

⁷⁸ John Jay Research, Deborah and Rodrick Wallace, "Interview with Dr. Glenn Corbett, Fall 2018" June 21, 2019, YouTube video, 56:53, <https://youtu.be/zi8k5FIx0C0>.



Mayor's Office of Management and Budget (OMB)

OMB should evaluate and adopt the relevant recommendations from the preceding sections, in addition to the following agency-specific recommendations.

The OMB should update its mandate to agencies so that written justifications and consistent analysis for all new programs and spending for an ADS also include a market-based justification for pursuing an ADS intervention. This justification must specify why the ADS intervention is preferred to resource-investment interventions as well as what other alternatives were evaluated, and how they were evaluated.

Since many City agencies are constrained for time and resources, they often too quickly turn to technological or less optimal solutions without performing broader market research or cost-benefit analysis. This means agencies procure potentially risky ADS solutions without knowing whether there were better-validated alternatives or more optimal non-technological solutions. For instance, there is a growing body of child-welfare research that demonstrates that material-benefits interventions (e.g., child support or transportation assistance) or other policy interventions (e.g., medical insurance or tax reductions) can significantly lower child maltreatment rates.⁷⁹ So requiring ACS to perform more rigorous market research or cost-benefit analysis before pursuing an ADS can help ensure the best interventions are pursued and can help improve outcomes. Additionally, there is a great need for consistency and transparency in the evaluations performed by agencies in addition to the policy options evaluated. This can be achieved through consultation and/or collaborations with other government bodies like OMB or the Mayor's Office of Operations.

The OMB should perform and publish a complete biannual review evaluating the efficiency and cost-effectiveness of City services and proposals that involve ADS. In the interim years, a truncated, preliminary report featuring key performance and analytic indicators must be made publicly available.

In addition to recommendations that City agencies perform retroactive review, an OMB evaluation of overall ADS use can help the City and the public better understand the overall cost and value of ADS use. There are countless examples of ADS that were procured for cost savings or efficiencies, ultimately costing more for cities and states (in addition to incurring societal and individual costs and harm) when they fail.

⁷⁹ See, e.g., Maria Cancian, Mi-Youn Yang, and Kristen Shook Slack, "The Effect of Additional Child Support Income on the Risk of Child Maltreatment," *Social Service Review* 87, no. 3 (2013): 417–37 (finding modest changes in maternal income through more efficient child support transfers was associated with roughly a 10 percent drop in maltreatment); and Neil McCray, "Child Health Care Coverage and Reductions in Child Physical Abuse," *Helijon* vol. 4,11 (2018) (finding child physical-abuse rates dropped markedly when more children had health-care coverage).



Mayor's Office of Criminal Justice (MOCJ)

MOCJ should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

Prior to implementing the redeveloped New York City Criminal Justice Agency pretrial risk-assessment system, the MOCJ should publicly publish an assessment of whether the ADS is compliant with recent statewide criminal justice reform. The MOCJ should also proactively publish similar assessments of all ADS when there is relevant federal, state, and local criminal justice reform legislation.

In 2017, the MOCJ and CJA began a redesign process of the risk-assessment system used by New York City courts to make recommendations regarding release and bail.⁸⁰ Yet during this redesign period, the New York State legislature passed sweeping criminal justice reform legislation, including the elimination of cash bail and pretrial detention for most cases and several other reforms that substantially affect pretrial practices. The new law also includes limitations on the disparate impact of ADS systems used to determine pretrial detention.⁸¹ MOCJ must assess whether the redesigned system complies with these reforms. If the new system is noncompliant (i.e., if it could potentially result in disparate racial impact), MOCJ should provide a detailed plan of how it plans to comply with the recent reforms. The MOCJ should proactively publish assessments of ADS with any future action on criminal justice reform that affects New York City practices and policies.

The MOCJ should publish a feasibility study on the use of ADS to address misconduct by criminal justice actors (e.g., police, corrections officers, prosecutors) in New York City.

Misconduct by different actors throughout the criminal justice system is a known and persistent problem with few meaningful interventions.⁸² Emerging research applies ADS technologies to identify criminal justice actors with a high risk of having an adverse event or interaction with the public.⁸³ The goal of these systems is to prevent the potential adverse event by targeting interventions earlier. It is important for New York City to explore ADS uses that can address known systemic problems like police misconduct.

The MOCJ should assess all ADS used by City agencies for criminal and juvenile justice decisions (e.g., pretrial detention of young people and sentencing) and meet basic standards of validity.

In order for ADS used in the criminal justice system to meet basic standards of validity, the ADS datasets must measure well-defined variables. A number of ADS in the criminal justice system suffer from underspecified outcomes and the use of inappropriate and racially biased proxy data, such as arrest history, in order to inform important decisions regarding sentencing and probation eligibility. Standards must be developed to evaluate whether outcome variables are sufficiently well specified (i.e., prohibit or avoid aggregate risk scores), and the MOCJ should evaluate whether any ADS uses well-specified, intervenable measures of need.

80 "Redesign of CJA's Risk Assessment System Discussed by Panel," New York City Criminal Justice Agency, September 22, 2017, <https://www.nycja.org/resources/details.php?id=1388>.

81 "New York's Bail Reform Law: Summary of Major Components," Center for Court Innovation, https://www.courtinnovation.org/sites/default/files/media/document/2019/Bail_Reform_NY_Summary.pdf.

82 See, e.g., Azi Paybarah, "2,300 Lawsuits Against Police. One Database to Search Them All." *New York Times*, March 7, 2019, <https://www.nytimes.com/2019/03/07/nyregion/newyorktoday/nyc-news-nypd-capstat.html>; Jan Ransom and Ashley Southall, "Prosecutors Sometimes Behave Badly. Now They May Be Held to Account." *New York Times*, April 5, 2019, <https://www.nytimes.com/2019/04/05/nyregion/ny-prosecutors-cuomo.html>; and CAPstat, <https://www.capstat.nyc/>.

83 Samuel Carton et al., "Identifying Police Officers at Risk of Adverse Events," <http://www.dssgfellowship.org//wp-content/uploads/2016/04/identifying-police-officers-3.pdf>.



Mayor's Office of Criminal Justice (MOCJ) (Continued)

The MOCJ should perform a racial-equity impact assessment on all ADS used by City agencies for criminal and juvenile justice decisions.

A number of ADS in the criminal justice system rely on inappropriate and racially biased data, such as arrest history or community disorder, in order to inform important decisions including pretrial detention and sentencing. The negative racial impact of using such inappropriate and biased data is made worse when the ADS outcome variables are not sufficiently well specified (i.e., use of aggregate risk scores). Indeed, some jurisdictions continue to use ADS that have been proven to be invalid or substantially flawed.⁸⁴ Yet ADS are increasingly adopted throughout the criminal justice system, which suggests that use of such systems can help address systemic biases, including racial disparities. In addition to performing an algorithmic impact assessment before the procurement or use of an ADS, the MOCJ should perform a racial-equity impact assessment of all ADS used by City agencies for criminal and juvenile justice decisions. The MOCJ must produce such assessments on an ongoing basis, identify the progress or efficacy of mitigation interventions, and include opportunities for meaningful public engagement and feedback.



Mayor's Office of Public Engagement (PEU)

PEU should evaluate and adopt the relevant recommendations from the preceding sections, in addition to the following agency-specific recommendations.

The PEU should collaborate with relevant agencies and public institutions (e.g., public libraries and schools) to host recurring sociotechnical literacy trainings and programming for the public. These training should explain technical terms associated with ADS, current and prospective ADS in NYC, and racial-equity training so the public can engage with ethical and equity concerns regarding government use of ADS.

Robust, multifaceted public education is necessary for true democratic engagement on nuanced issues of public interest. With support from government and private companies, Finland offers a free-access, online artificial intelligence course nationally that combines theory and practical exercises to teach a broad range of citizens basic concepts, capabilities, and techniques without complicated math or programming requirements.⁸⁵ Yet solely technical curricula will not adequately inform individuals about the full range of risks and opportunities presented by government use of ADS. Instead, the public needs educational programming that provides foundational understanding of both technical and social concepts and issues regarding ADS technologies, including topics or trainings that help the public understand the historical and political origins of social inequalities.

84 AI Now Institute, "Litigating Algorithms: Challenging Government Use of Algorithmic Decision Systems," September 2018, <https://ainowinstitute.org/litigatingalgorithms.pdf> (pp. 13–14).

85 Elements of AI, <https://www.elementsofai.com/>.



Mayor's Office of Public Engagement (PEU) (Continued)

The PEU should collaborate with external experts and designers to create a public website that explains ADS use cases and provides relevant information to the public. This collaboration should include review by diverse focus groups of community members and frontline agency employees to ensure the content is accurate, useful, and legible. All external collaborators and community members should be compensated for their time.

Public education can take many forms. Collaboration with subject-matter experts and community partners should be sought to aid in the design and engagement. During the New York City Automated Decision System Task Force Process, a group of Harvard graduate students created a website, automating.nyc, to help educate New York City residents about automated-decision-system issues. This website and project were created to address the lack of public education on this issue, not in collaboration with the New York City government. This was a missed opportunity—collaboration should be proactively pursued by agencies and PEU.



Metropolitan Transportation Agency (MTA)

The MTA should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

The MTA should limit all current and prospective ADS use to aiding and advancing transportation functions and needs, not law-enforcement priorities.

The MTA often collaborates or partners with the NYPD and other law-enforcement agencies; however, such partnerships raise serious civil rights, privacy, and justice concerns when ADS are used. This is because the context an ADS is designed for is more complex than the context where an ADS is trained. This is notable for ADS, like face-recognition systems, that are often built in a controlled environment but are used in more complex and dynamic environments.⁸⁶ Transportation involves particularly difficult and dynamic environments, which may hinder the accuracy, validity, and value of an ADS in real-world conditions. Thus, MTA must consider the use of ADS in transportation environments with care. The MTA should limit ADS use circumstances that advance transportation functions and needs, and avoid partnerships or collaborations that will heighten the risk of harm or adverse outcomes.

⁸⁶ Paul Berger, "MTA's Initial Foray Into Facial Recognition at High Speed Is a Bust," *Wall Street Journal*, April 7, 2019, <https://www.wsj.com/articles/mtas-initial-foray-into-facial-recognition-at-high-speed-is-a-bust-11554642000>.



Police Department (NYPD)

The NYPD should evaluate and adopt the recommendations from the preceding sections, in addition to the following agency-specific recommendations.

The NYPD should maintain a public list of the ADS technologies it uses and provide a simple description of how each system works.

NYPD use of ADS raises significant threats to individual liberties, such as the right to be free from unreasonable searches and seizures, the right to confront witnesses, the right to free expression and association, and the right of equal protection under the law. These potential harms make it critical that NYPD's ADS use be subject to disclosure and accountability requirements. As a first step, the NYPD must take a public inventory of the ADS systems it uses by publicly identifying, categorizing, and sharing a list of all ADS systems that the Department has implemented, plans to implement, or is developing. Once created, this list of ADS should be continuously updated in real time. This necessary transparency is essential for fostering public trust, and will allow the public and elected officials to more meaningfully partner with NYPD in shaping twenty-first-century policing.

The NYPD should publish a Racial-Equity Impact Assessment for all current and prospective ADS use.

In addition to performing an algorithmic impact assessment of ADS, the NYPD should also perform and publish a racial-equity impact assessment, which is a systematic examination of how different racial and ethnic groups will be affected by a proposed action or policy, in an effort to identify interventions that will minimize adverse consequences. Given the well-documented racial disparities in policing and evidence that the use of police data in ADS can perpetuate existing biases and disparities, it is important for the NYPD to specifically assess the racial and ethnic impact of a given ADS and proactively identify mitigation strategies (e.g., eliminating and banning the use of police data derived from discriminatory and biased enforcement policies and practices). Similar to algorithmic impact-assessment processes, the NYPD must provide an opportunity for meaningful public feedback before the ADS is procured or implemented, and retroactively for all currently used ADS. If the ADS was not internally developed, the NYPD should work with its vendors to ensure access and storage of data relevant to assessing racial and ethnic impact (e.g., storage of ADS outputs).

The NYPD should not sign vendor contracts that restrict auditing of ADS or that prevent the public disclosure of basic information regarding how its systems work.

The NYPD use of ADS raises unique threats to the civil rights and civil liberties of New Yorkers. Vendor agreements with the NYPD should not place overbroad restrictions on achieving necessary transparency and accountability. For example, confidentiality provisions should not restrict defense attorneys from understanding how an ADS was used in a criminal investigation, and comparable restrictions should not prevent compliance with oversight legislation or public-records requests. NYPD policy should be to refuse to sign confidentiality agreements that limit public accountability.

Recommendations to Relevant Government Officials and Bodies

This section includes recommendations to specific New York City and State elected officials or government bodies that have authority to enact laws and regulations, or have oversight or investigatory authority relevant to agency use of ADS. These recommendations are tailored to local and state actors, but stakeholders in other jurisdictions can evaluate whether the recommendations can be modified for their jurisdictional context.



City Council

The City Council is the lawmaking body of New York City. It writes and passes local laws that affect City government bodies and residents of New York City. The Council can also pass resolutions on state and federal issues that are relevant to New York City residents.

The City Council should pass legislation that creates a permanent independent governmental body whose mission is to (1) help implement subsequent laws, policies, or procedures that are created based on Task Force recommendations; (2) handle enforcement against agencies that fail to comply with the aforementioned laws, policies, or procedures; and (3) assess when laws, policies or procedures need to be amended to reflect advances in technology.

The City Council should pass legislation requiring that all City agency procurement of ADS must be done through an open, competitive bidding process and should not be exempt from public-hearing requirements. If an agency wants to opt out of competitive bidding, they have to provide and publicly publish a written justification for why a sole-source contract is the only viable option and why the ADS is necessary to fulfill an agency priority or public interest or need. This legislation should empower the City Council or the Comptroller to authorize and deny agency justification to opt out of competitive bidding.



Comptroller

The Comptroller is responsible for auditing the performance, finances, and contracts of City agencies, and for issuing reports on the state of the City economy.

The Comptroller should collaborate with the City Council Committee on Oversight and Investigations to publish a report on the fiscal impact of City agency use of ADS.

Agencies often procure ADS with the presumption that the technologies will produce cost savings, but few agencies perform ongoing or retrospective cost-benefit analyses to assess these claims. Costs of ADS can vary, but even when the actual sales price of the ADS is modest, agencies can fail to account for the sometimes hidden costs of implementation, such as maintenance or data storage. Additionally, when ADS fail or produce unanticipated adverse outcomes, the costs to government and society are untenable. In order to understand the true value and costs of ADS use to New Yorkers, there needs to be a comprehensive review of the actual costs of procuring, implementing, and maintaining the ADS, along with the legal costs for failed ADS use. The Comptroller should collaborate with the City Council's Committee on Oversight and Investigation, which has subpoena power, and which can facilitate access to records the Comptroller does not have access to.



New York State Legislature

The New York State Legislature is the two-house body that makes the laws of New York State, including the statewide laws regarding government procurement.

The New York State Legislature should amend the General Municipal Law § 163⁸⁷ to include considerations such as equity, trustworthiness, openness, and integrity of technical performance when awarding contracts to a bidder.

Currently, the State procurement law requires government agencies to pursue the vendor with the lowest responsible bid, where “responsible” refers to financial and organizational capacity, legal authority to do business in New York State, integrity, and past performance of the bidder on prior government contracts.⁸⁸ States like California include considerations such as trustworthiness, quality, and fitness in their definition of “responsible bidder,”⁸⁹ but given the particular concerns with ADS, we recommend New York State think more holistically regarding agency needs from vendors. Such amendments are aligned with changes made to the General Municipal Law § 103 (the “Best Value Law”), which requires agencies to procure contracts of the best value to the City by optimizing quality, cost, and efficiency.

⁸⁷ See “Bills & Laws,” The New York State Senate, <https://www.nysenate.gov/legislation/laws/GMU/103>; and “Seeking Competition in Procurement,” Office of the New York State Comptroller, <https://www.osc.state.ny.us/localgov/pubs/lmgm/seekingcompetition.pdf>.

⁸⁸ New York State Procurement Guidelines, May 2014, <https://ogs.ny.gov/system/files/documents/2018/08/psnys-procurement-guidelines.pdf>

⁸⁹ Lorman Education, “Public Contracts and Procurement Regulations in California: Introduction,” July 24, 2018, <https://www.lorman.com/resources/public-contracts-and-procurement-regulations-in-california-introduction-16992>.



New York City Procurement Policy Board (PPB)

The Procurement Policy Board is authorized to promote and put into effect rules governing the procurement of goods, services, and construction by the City of New York.

The PPB should issue amendments to Procurement Policy Board Rules § 2-02 to require presolicitation review for sole-source procurements within small purchase limits for ADS.

A presolicitation review requires an agency to define the existing market analysis, estimates of the expected cost, and the most appropriate method of procurement. Current Procurement Policy Board Rules require City agencies to perform a presolicitation review for certain construction and construction-related services, and all other procurements exceeding the small purchase limits (\$100,000); yet several ADS do not meet these criteria. Amending the rules so more ADS procurements are subject to presolicitation review can help ensure greater due diligence and accountability in the procurement process.

The PPB should issue amendments to the Procurement Policy Board Rules § 2-08 definition of “responsible contractor” to include heightened standards for ADS vendors for sensitive social domains (e.g., child welfare, education, criminal justice, housing, and public benefits).

The current “responsible contractor” definition includes vendors with satisfactory records of performance and business performance; however, given the risks to life, civil rights, and civil liberties ADS pose in sensitive social domains, the standards for a vendor’s record should be heightened. For example, most prominent recidivism-risk-assessment tools used in the pretrial context have an accuracy rate (i.e., AUC scores) in the 60 percent range, which would likely meet the current definition of a “responsible contractor.”⁹⁰ When ADS are used to assist or make life-altering decisions, like whether an individual goes to jail before trial, which also carry significant implications for an individual’s civil rights and liberties, expectations for vendor performance appraisals should be greater than satisfactory.

The PPB should issue amendments to Procurement Policy Board Rules § 3-11 and corresponding guidance to ensure that any fully automated ADS used by a City agency is initially procured as a demonstration project.

Demonstration projects are short-term, carefully planned, pilot exercises designed to test and evaluate the feasibility and application of an innovation product, approach, or technology not currently used by the City. Considering the documented risks and negative outcomes of ADS use with active or partial human oversight, override authority, or other forms of human intervention, it is imperative that City agencies fully test and assess the risks and potential consequences of ADS that omit capabilities for human intervention. Demonstration projects allow City agencies to assess the validity of vendors’ claims and the value of a particular ADS in real-world conditions, while maintaining the ability to limit, if not avoid, negative consequences. We encourage the PPB to even consider expanding this requirement to the procurement of all ADS (including renewal of existing contracts) so that the Agency and the public better understand the value of emerging technologies in relevant public sectors.

90 Sarah L. Desmarais et al., “Performance of Recidivism Risk Assessment Instruments in U.S. Correctional Settings,” *Psychological Services* 13(3), June 2016, https://www.researchgate.net/profile/Jay_Singh10/publication/303828802_Performance_of_Recidivism_Risk_Assessment_Instruments_in_US_Correctional_Settings/links/5a24781d0f7e9b71dd073f22/Performance-of-Recidivism-Risk-Assessment-Instruments-in-US-Correctional-Settings.pdf.



Public Advocate

The Public Advocate is a citywide elected official who serves as an ombudsman, or watchdog, for New Yorkers by being a direct link between the public and the City government.

The Public Advocate should investigate and publish a public report on City agency use of ADS that aid or facilitate quality-of-life enforcement.

Quality-of-life offenses or issues include fare evasion and disorderly conduct, and are typically enforced by the NYPD, with assistance from or in collaboration with other agencies like the MTA or NYCHA, with the goal of maintaining order. Quality-of-life enforcement is a key practice of the much-criticized “Broken Windows Policing” policy and has been the subject of public criticism in New York City, especially in light of such enforcement resulting in the death of Eric Garner. Taking into account research illustrating the risk of ADS use perpetuating biases of government practices and policies,⁹¹ and the documented concerns over quality-of-life enforcement,⁹² it is important for the Public Advocate to assess the potential risks and concerns for New Yorkers. We encourage the Public Advocate to collaborate with the public and other City officials and bodies, like the New York City Department of Investigation.

91 See Rashida Richardson et al., “Dirty Data, Bad Predictions: How Civil Rights Violations Impact Police Data, Predictive Policing Systems, and Justice,” *New York University Law Review*, May 2019, <https://www.nyulawreview.org/online-features/dirty-data-bad-predictions-how-civil-rights-violations-impact-police-data-predictive-policing-systems-and-justice/>; and Kristian Lum and William Isaac, “To Predict and Serve?” *Significance*, October 7, 2016, <https://rss.onlinelibrary.wiley.com/doi/full/10.1111/j.1740-9713.2016.00960.x>

92 See Michelle Chen, “Want to See How Biased Broken Windows Policing Is? Spend a Day in Court,” *The Nation*, May 17, 2018, <https://www.thenation.com/article/want-to-see-how-biased-broken-windows-policing-is-spend-a-day-in-court/>; and Mark G. Peters and Philip K. Eure, “An Analysis of Quality-of-Life Summons, Quality-of-Life Misdemeanor Arrests, and Felony Crime in New York City, 2010-2015,” New York City Department of Investigation, June 22, 2016, <http://www1.nyc.gov/assets/oignypd/downloads/pdf/Quality-of-Life-Report-2010-2015.pdf> (p. 3).

SECTION 3: RECOMMENDATIONS BASED ON THE NEW YORK CITY EXPERIENCE

Recommendations for Government Task Force or other Government Processes with Similar Mandates

This section includes recommendations for Task Forces or other government processes that seek to review, assess, address or advise on government agency use of ADS or broader uses of data-driven technologies. These recommendations seek to offer best practices for any type of temporary government body or process based on insights of the New York City Task Force process.

Any government body or process that is empowered to review, assess, make recommendations, or pursue enforcement actions against government agencies using automated decision systems must include non-government domain experts and community representatives who are familiar with the concerns and experience of individuals or communities than can be negatively impacted by the prospective or current use of an automated decision system.

Issues posed by government use of automated decision systems are both social and technical, and therefore require many different kinds of expertise, experience, and perspectives at the table. In order to identify effective, equitable, and holistic mitigation solutions, a government task force or similar process must include stakeholders and experts outside of government. It is imperative that representatives from community organizations and direct service providers are part of the process—not merely consulted throughout. Individuals affected by or in proximity to relevant social issues (e.g., educational inequity, overpolicing) have important experiential expertise that must be incorporated into deliberations and offer counternarratives to bureaucratic experience. Governments should also be mindful not only to engage the stakeholders it customarily works with, but also to seek out new or alternative individuals and organizations.

Any government body or process that is empowered to review, assess, and make recommendations regarding government agencies using automated decision systems must have budgetary support to compensate or support participation of non-civil-servant members, and hire independent experts or consultants needed to support the mandated process.

Barring legal or regulatory prohibitions or limitations, governments should also earmark funding to compensate or support non-government stakeholders that cannot participate as part of their current employment. The capacity to participate can be significantly limited by the real-world costs of uncompensated public services, so governments should try to minimize such obstacles by providing resources like childcare for evening commitments or monetary compensation to help facilitate the participation of individuals and organizations from underrepresented communities.⁹³ Governments should also earmark funding to hire independent experts, consultants, or facilitators to help with project management, public engagement, review or investigation of ADS, technical or legal assessments of ADS, or other needs that are integral to the success of the process.

93 See the Patient-Centered Outcomes Research Institute's Engagement Awards model, <https://www.pcori.org/funding-opportunities/announcement/engagement-awards>.

Any government body or process that is empowered to review, assess, and make recommendations regarding government agencies using automated decision systems must review national, state, and local procurement laws to assess the adequacy of current laws, policies, and guidelines to address concerns with ADS use.

Many laws are written with a solely human system in mind. As government agencies move toward increased automation or reliance on data-driven processes, it is necessary to review whether current government policies, practices, and procedures adequately contemplate or address the relatively novel risks, concerns, and context posed by ADS. In particular, procurement laws, policies, and guidelines should be evaluated to ensure that current practices provide adequate due diligence, oversight, and accountability for the ADS context. This should be seen as part of the process to ensure the compliance of recommended activity to the legal context in which they are implemented, so that such constraints do not become prohibitive.

Any government body or process that reviews and provides recommendations regarding government agencies using automated decision systems must be provided funding to support multiple forms of public education and engagement.

In order for the public to be an informative ally, there must be opportunities to meaningfully inform the public about the existence and goals of the quasi-government body. Public education can take many forms, including informational websites, social-media infographics, public forums, and public-service announcements. Government task forces or government processes can collaborate with community partners like nonprofits, libraries, or local organizers and researchers to aid in the design and engagement. However, the government should offer financial support to nonprofits and other non-government bodies that are not funded to do this work. For instance, a group of Harvard graduate students created a website, automating.nyc, to help educate New York residents about automated-decision-system issues. This website and project were created to address the lack of public education on this issue, not in collaboration with the New York City government. Yet we highlight this as a missed opportunity that other quasi-government bodies can proactively pursue.

Any government body or process that is empowered to review, assess, and make recommendations regarding government agencies using automated decision systems must have investigatory authority to access or request the production of relevant information about government use of automated decision systems.

New York City Automated Decision Systems Task Force members repeatedly requested information about ADS currently used because the local context was necessary to fulfill the statutory mandate, but many agencies resisted cooperating or only provided selective information about one system.⁹⁴ To avoid similar problems, similar government bodies or processes must be given authority to request and access information about all existing ADS, without special exemptions or carveouts that can undermine necessary analysis and subsequent recommendations. While it may be difficult for a task force or government process to undertake a thorough analysis of each ADS system, a task force or government process should be empowered to select representative ADS that reflect the variety of ways these systems can impact human welfare.

⁹⁴ See Albert Fox Cahn, "The Irony Behind de Blasio's Proposed Robot Tax," *New York Daily News*, September 11, 2019, <https://www.nydailynews.com/opinion/ny-oped-the-irony-behind-de-blascos-proposed-robot-tax-20190911-6fwkugtgbfavrp7zkn7u6odeca-story.html>; and ; and Colin Lecher, "New York City's Algorithm Task Force Is Fracturing," *The Verge*, April 15, 2019, <https://www.theverge.com/2019/4/15/18309437/new-york-city-accountability-task-force-law-algorithm-transparency-automation>.

Any government body or process that is empowered to review, assess, and make recommendations regarding government agencies using automated decision systems must assess the adequacy of relevant public-records laws and civil and criminal discovery statutes in providing access to important information about government use of automated decision systems. If the laws create obstacles or enable unnecessary obstruction, the body should recommend amendments for greater transparency.

Any government body or process that evaluates the role of automated decision systems in government must address the adequacy of existing transparency laws and recommend how relevant legislative or regulatory bodies can modernize existing transparency laws to address the unique accountability challenges presented by automated decision systems. This should include a review of public-records laws (i.e., Freedom of Information Acts) to determine if existing statutes grant the public meaningful access to the information needed to evaluate existing and proposed automated decision systems. Similarly, the government body or process should address the ability of civil plaintiffs and criminal defendants to receive meaningful discovery related to automated decision systems. This is particularly important in criminal proceedings, where the government's use of Automated Decision Systems raises potent legal concerns.

Recommendations for Multidisciplinary Advocacy Coalition Work

This section includes recommendations and considerations for advocacy coalitions or less coordinated advocacy efforts regarding government use of ADS. These recommendations represent best practices and important considerations for all stakeholders who are interested in effective policy advocacy on ADS issues.

Advocacy coalitions must ensure that their goals center the concerns and interests of those most affected by ADS.

While government use of ADS poses broad societal concerns, the risks and consequences of such systems disproportionately affect individuals and communities with less access to power. Thus, it is important for any advocacy efforts that seek to evaluate or address ADS concerns to center their goals on the concerns and interests of those affected by the procurement and use of ADS.

When making decisions or influencing decision-making regarding policy positions, legislative compromises, and policy advocacy tactics, coalition members must be mindful of individual and organizational tendencies to reinforce the status quo through compromise.

Often this transpires when certain kinds of expertise or experience are privileged over lived experience, or when self-interest and promotion drive advocacy. Rather, coalition members must be mindful of the privilege of compromise, and find constructive ways to challenge this tendency.

Advocacy coalitions with members who come from a variety of disciplines, issue areas, practices, and skill sets must ensure that their collective strategies and work center the knowledge and interests of those most affected by ADS. This type of coalition work entails relationship-building between those affected by ADS and those who study and advocate around automated decision-making and its underlying social-justice issues. These relationships must not be paternalistic or tokenizing. This allows knowledge production and advocacy with (rather than for or about) those most affected, and refuses to compromise as an easy way out. In our New York City effort, we tried to make sure decisions were made by consensus (when practical), and when we felt like our group lacked expertise or authority on particular issues, we made an effort to invite more participants to collaborate or consulted allies, who may have not had the capacity to engage in the full advocacy effort.

Advocacy coalitions should develop and share resources to help potential allies and collaborators understand why ADS use is important to their individual or organizational concerns.

ADS affect a broad array of issues and concerns, from housing to education to policing and well beyond. However, given the obscurity and technical jargon that often accompany the introduction and use of such systems, people working on related issues may not be aware of the capabilities or implications of government use of ADS. Since there is currently a lack of broader public awareness about the risks and opportunities presented by government use of ADS, one must not presume that potential allies are aware of the relevance of the issue to their work. It is thus imperative that advocacy coalitions support one another in sharing information about known or speculated ADS use. This may also result in improved engagement and coordination, as well as collaborative opportunities (e.g., coordinated public-records requests), bringing together advocacy groups with diverse interests to interact and pool resources to address common concerns with ADS deployment across various contexts.

Advocacy coalitions should include and consult local community organizers when designing and implementing public-education events or programs.

Community organizers have immense knowledge about the best strategies and practices for educating and moving local community members to action. Considering the range of issues government use of ADS affects, messaging and strategies may need to vary for different community members. Community organizers are well positioned to identify the most inclusive and inviting engagement strategies, and to ascertain the best practices for sharing knowledge with diverse groups.

Philanthropic organizations and other funders should earmark funds or consider time-sensitive grant requests for community-led events and hearings created to address lapses in government accountability or responsibility.

Community engagement can take many forms, including the hosting of events, use of technological crowdsourcing tools, listening sessions, public-education forums, focus groups, targeted consultations, and other approaches. What each of these methods has in common is careful coordination and planning, in addition to a set of resources to support the identification and engagement of target community members. As a result, additional resources should be earmarked anticipating this type of activity and made available to those looking to facilitate or organize such hearings or events.

Recommendations for the General Public

This section includes recommendations for the general public, with a particular eye toward communities where local, state, or national governments use ADS currently or prospectively.

Community members should be mindful that personal choices and practices of using private security systems (e.g., Google's Nest and Amazon's Ring) or safety-oriented social-media applications (e.g., Nextdoor, Amazon's Neighbors) increase and encourage surveillance of marginalized neighbors and communities.

Although the choice to buy, subscribe, and use private security systems and social-media applications is personal, use of such systems can have negative effects and consequences for one's neighbors and broader community. These technologies often have capabilities for data-sharing with local law enforcement,⁹⁵ encourage discrimination or profiling of certain neighbors, visitors and communities,⁹⁶ and can provide justification for local law-enforcement use of surveillance technologies.⁹⁷ The use and overreliance on these types of technologies is often influenced by misconceptions and stereotypes about the prevalence of crime, who commits crimes, and one's overall sense of security—despite evidence that crime in New York City and many other cities globally has declined. We encourage community members to reflect on how their personal choices and views might negatively affect or reinforce societal biases about their neighbors or broader community.

Community members should learn more about how automated decision systems perpetuate biases and make errors.

Many members of the public are under the false impression that automated decision systems are objective, effective, and only rarely defective. As these systems play an increasingly broad and important role in our society, it is important for the public to understand both the power and the limits of these systems. Crucially, members of the public should understand the subjective human design choices that direct the outcomes of automated decisions systems. These choices may result in biases against historically marginalized communities in systems that purport to be objective. Similarly, members of the public should understand the limitations of such systems and the frequency with which automated decision systems can provide incomplete or wholly inaccurate answers. Often, a system's error rate is more pronounced when analyzing communities of color, raising the risk for disproportionate harm.

95 See Kate Cox, "Ring Reportedly Shared Video Sharing Data, Detailed Maps with Police in 2018," Ars Technica, August 30, 2019, <https://arstechnica.com/tech-policy/2019/08/ring-reportedly-shared-video-sharing-data-detailed-maps-with-police-in-2018/>; and Caroline Haskins, "Amazon's Home Security Company Is Turning Everyone Into Cops," Vice, February 7, 2019, https://www.vice.com/en_us/article/qvyvzd/amazons-home-security-company-is-turning-everyone-into-cops.

96 Rani Molla, "The Rise of Fear-Based Social Media Like Nextdoor, Citizen, and Now Amazon's Neighbors," Vox, May 7, 2019, <https://www.vox.com/recode/2019/5/7/18528014/fear-social-media-nextdoor-citizen-amazon-ring-neighbors>.

97 Alfred Ng, "How Amazon convinces police to join the Ring network", Cnet(italicized), August 26, 2019, <https://www.cnet.com/news/how-amazon-convincing-police-to-join-ring/>.

Considerations for Legislation Regarding Government Use of Automated Decision Systems

This section includes recommendations and other policy considerations regarding government use of ADS. The recommendations include important policy considerations for legislative proposals, in addition to specific criminal justice policy considerations. These recommendations are informed by the New York City Task Force experience and current ADS-related research; thus, the recommendations can be explored and modified for other jurisdictions.

General

Legislation regarding government use of automated decisions systems should not include overbroad carveouts or exemptions.

The New York City Automated Decision System Task Force legislation includes a very broad exemption that permits the nondisclosure of information or noncompliance with Task Force recommendations that can interfere with law-enforcement investigations or operations or compromises public health or safety. This language is very broad and provides too much deference to agencies in determining whether to disclose information or comply with recommendations, which can undermine the Task Force mandate. While there is a need to balance transparency and accountability with public safety, the government bodies or processes must remain empowered to analyze ADS that have an outsized ability to impact the public welfare.

Legislation permitting use or funding pilots of automated decision systems should require periodic reviews and/or retrospective studies to assess the accuracy of the system, potential bias or disparate outcomes, and the value of the system in fulfilling the agency's mission and societal needs or interests.

Many automated decisions systems currently used by government agencies are operationalized by trained models. A trained model has a fixed worldview that may not always be aligned with an agency's mission or the local communities' interests. In order to update the model's understanding of the world, the model is retrained and redeployed. This can happen as frequently as multiple times a day or as rarely as once a decade. Given the specific cadence of the systems' updates, an isolated evaluation of an ADS will not suffice. It is important to continue assessments of ADS harm and risks on an ongoing basis, in order to reevaluate its impact in the context of any adjustments made. Legislation should schedule periodic assessments to evaluate whether a system is accurately serving its intended purpose, and whether the system is having a disparate impact on particular communities. These assessments should ensure that individuals and communities affected by the use of a given ADS have a meaningful opportunity to reject its use. Additionally, most government agencies that currently use or have historically used ADS often fail to perform retrospective reviews or studies to assess the overall performance and value of the ADS. For example, after performing a retrospective review of the Los Angeles Police Department's (LAPD) ADS systems used to predict crime, the LAPD Inspector General questioned whether the system helped reduce crime and raised concerns that the lack of training contributed to unconstitutional practices.⁹⁸ Thus, legislation requiring retrospective reviews of currently used ADS are also useful.

⁹⁸ Mark Puente and Cindy Chang, "LAPD Changing Controversial Program That Uses Data to Predict Where Crimes Will Occur," *Los Angeles Times*, October 15, 2019, <https://www.latimes.com/california/story/2019-10-15/lapd-predictive-policing-changes>.

General

Legislation should authorize and fund studies assessing the adequacy of current federal privacy laws and regulations, particularly the Children's Online Privacy Protection Rule (COPPA) and the Family Educational Rights and Privacy Act (FERPA), in protecting privacy risks to children posed by ADS use in education, child welfare, juvenile justice, and public-benefits programs and practices.

ADS are used in a variety of social domains that pose particular privacy risks to children; however, most relevant privacy laws were promulgated when technological capabilities were more rudimentary and data-collection and use were less pervasive. Considering the amount of data collected, used, and shared when government agencies use ADS, and the heightened risks of harm to younger members of society, it is important for governments to analyze the adequacy of existing protections.

Criminal Justice

ADS used in criminal justice present distinct legal and ethical concerns. Criminal defendants have a clear Sixth Amendment right to contest assertions made by the automated decision systems being used against them.

This includes a wide range of statistical techniques for profiling individuals and evaluating risk, including biometric identification, crime hot-spotting, DNA analysis, and actuarial risk assessment. When vendors of automated decision systems cite trade secrets and other privacy protections as a basis to deny defendants access to information on automated decision systems, it deprives defendants of a fair trial. Even where such evidence is not introduced at trial, but is used as an "investigative lead," it still threatens core constitutional rights. Therefore, criminal justice uses of ADS must be subjected to the highest level of scrutiny and transparency, in order to preserve core due-process rights.

Law enforcement use of automated decision systems can challenge reasonable expectations of privacy.

For example, biometric identification systems such as facial recognition may be able to identify individuals without police initiating a stop or arrest. Appropriate safeguards and disclosure requirements are necessary to ensure that privacy rights are respected and balanced against public safety concerns.

Criminal Justice (Continued)

Law enforcement and courtroom implementation of automated decision systems threaten to automate existing racial disparities in policing under the guise of unbiased algorithms.

For example, predictive policing systems and risk assessments rely on historical records of arrests, charges, convictions, and sentences to generate predictions regarding future criminal activity. These tools assume that these criminal history data are a reliable and neutral measure of underlying criminal activity, but such records cannot be relied upon for this purpose. Decades of research have shown that, for the same conduct, Black and Latinx people are more likely to be arrested, prosecuted, convicted, and sentenced to harsher punishments than their White counterparts. Non-White people are also treated more harshly than similarly situated White people at each stage of the legal system, which results in serious distortions in the data used to develop ADS in this context. The use of ADS by law enforcement must store and generate a list of inputs and outputs so that they can be evaluated for bias and disparate impact. This evaluation should not be limited to intentional discrimination, but should consider the mechanisms by which certain data inputs drive disproportionate harms against historically marginalized communities.

SECTION 4: SUPPLEMENTARY MATERIALS

This section includes hyperlinks to folders with key public records related to the ADS Task Force process and other resources referenced throughout this shadow report.

City Council Oversight Hearings Documents

[NYC ADS Task Force Oversight Hearing Testimonies \(4.4.19\)](#)
[NYC ADS Task Force Oversight Hearing Transcript \(4.4.19\)](#)
[NYC City Council Tech Committee Oversight Hearing Transcript \(2.12.19\)](#)
[NYC City Council Technology Committee Oversight Hearing Report](#)

Int 1696 (2017) Legislative Documents

[Int 1696 Hearing Transcript \(10.16.17\)](#)
[Local Law 49 of 2018](#)

NYC ADS Task Force Advocacy Letters

[NYC ADS Task Force Advocates Letter \(1.22.18\)](#)
[NYC ADS Task Force Advocates Letter \(3.1.19\)](#)
[NYC ADS Task Force Advocates Letter \(8.17.18\)](#)

NYC ADS Task Force Documents

[NYC ADS Task Force April 30 Public Forum Transcript](#)
[NYC ADS Task Force Checklist for Determining ADS](#)
[NYC ADS Task Force May 30 Public Forum Transcript](#)
[NYC ADS Task Force Media Coverage Chart](#)
[NYC ADS Task Force Public Forum Press Release \(3.27.19\)](#)
[NYC Press Release Announcing the Task Force \(5.16.18\)](#)
[S6428 \(2019\)- Statewide ADS Task Force Bill](#)
[Spring 2019 Forum Comments Compilation \(9.18.19\)](#)

NYC Automated Decision System Resources

[ADS Use Chart \(December 2019\)](#)
[Brennan Center NYPD Surveillance Technology \(2019\)](#)