

— CENTERS FOR —
Civic Impact

To: Jeff Thamkittikasem, Director, Mayor's Office of Operations
Brittney Saunders, Deputy Commissioner, NYC Commission on Human Rights
Kelly Jin, Director, Mayor's Office of Data Analytics
(on behalf of the NYC Automated Decision Systems Task Force)

From: Andrew Nicklin, Futurist-At-Large, Centers for Civic Impact at Johns Hopkins University

Date: April 30, 2019

Re: Panelist Comments at ADS Task Force Public Meeting #1

Good evening! Thank you for the opportunity to speak with you today about this important topic. I'm Andrew Nicklin from the Centers for Civic Impact at Johns Hopkins University – a new organization which umbrellas the Center for Government Excellence where I have worked for the past four years. We work with governments across the country to use their data more effectively for decision-making, at both the leadership and operational levels. My job is to scan the technology horizon and help governments use emergent technology and data practices to better serve their communities. Prior to this, I spent two years in Governor Cuomo's administration, leading open government programs, and prior to that I worked here for NYC government for 18 years on a variety of technology and data projects.

Many of the colleagues we work with look to New York City for transformative data-informed methods that improve the lives of residents, businesses, visitors, and government employees. They are also watching as you face the challenges; quite a few have expressed great interest in the work of this task force and are eager to see your recommendations. After all, they too face the issues of fairness, accountability, and transparency in algorithms when they use similar methods to tackle their most important challenges.

In my opinion, the use of automations in government will continue to grow in both adoption and complexity, driven by three forces

- a. the amount of data we have is growing exponentially, but our capacity as humans to fully comprehend it for decision-making is not;
- b. governments are continually pressured to achieve more with the same or fewer resources;
- c. contractors will employ them to stay competitive for government funding.

A large amount of the resistance to this growth comes in the form of deeply concerning impacts that new technologies are having on our lives. We constantly complain that government is "behind the times" when it comes to adopting new technologies, but perhaps in this case we should be grateful for that lag; life might be a little better for us, but more people might also be needlessly suffering. This inevitability of automation pushes us to think carefully about how it is used to improve everyone's health, safety, and agency to the maximum possible extent.

In this context, I'd like to share some specific recommendations for your consideration. As today's session focuses on Fairness and Accountability (items A, C, and F in Section 3 of Local Law 49 of 2018), I'll save my recommendations for the remaining parts and send them along in writing at a future date.

A. Criteria for identifying which agency automated decision systems should be subject to one or more of the procedures recommended by such task force pursuant to this paragraph;

In my opinion, this should be a set of thresholds, not a decision defined by the technologies in use. Ultimately, we are talking about building greater trust between the City government and its constituents. It shouldn't matter if decisions are made using an excel spreadsheet, a complex case management system, or a network of cameras scanning license plates. Some ways to define these thresholds include:

- a. Domains/verticals: Public Safety, Criminal Justice, Health, Social Services, Operations, Tax and Finance, etc.,
- b. Whether or not there is substantive human review or intervention before action is taken.
- c. Whether it is one-shot effort or something which is operationalized. (ex. Launch of pre-K programs vs teacher evaluations).
- d. Potential number of people impacted.
- e. Who is affected (vulnerable, business owners, property owners, city employees).
- f. What the potential negative impacts are (poorer education, change to credit reports, incarceration).
- g. How long the impact could last (a week, 7 years, permanent).
- h. How significant the impact is (quantifiable costs, changes to personal safety, physical/mental health).

This group can also recommend tiers for prioritizing, e.g. ask the city to focus on public safety analytics that affect all 8.5m New Yorkers first; then those systems handle business permitting second, and so on.

C. Development and implementation of a procedure that may be used by the city to determine whether an agency automated decision system disproportionately impacts persons based upon age, race, creed, color, religion, national origin, gender, disability, marital status, partnership status, caregiver status, sexual orientation, alienage or citizenship status;

This is to address systemic discrimination, which while related to individual cases of harm, may need different mechanisms. I think this requires two different, complimentary approaches:

- a. Self-correction.
 - a. The city (specifically, MODA and DCAS) should establish contracts with several trusted, third-party algorithmic evaluation organizations, be they academic, non- or for-profit. These contracts can be leveraged by agencies to conduct periodic

- assessments. On the note about contracts, many city products and services are obtained from third parties, and the task force can recommend boilerplate language to be included which requires those parties to not only cooperate in algorithmic evaluations, but share the accountability when issues arise. (More on this later.)
- b. A mechanism is needed to connect the reporting and resolution mechanisms in item D (handling of individual harms) to potential systemic issues. For example, when 50 cases of individual harm are reported, perhaps this should trigger a systemic review by a third party.
 - b. Outside correction.
 - a. The task force should recommend the role of an ombudsman (with the necessary independence/authority from the Mayor) to help City agencies resolve public concerns, whether they arise from advocacy groups, the media, the courts, or elsewhere.

Although it would function differently, a model for this independence exists in New York State's Freedom of Information Laws. The Committee on Open Government is given independence from the Governor, and while they do help state government agencies meet the expectations of the law, they also help those who seek information from the government, especially in situations which require context such as case precedent.

F. The feasibility of the development and implementation of a procedure for archiving agency automated decision systems, data used to determine predictive relationships among data for such systems and input data for such systems, provided that this need not include agency automated decision systems that ceased being used by the city before the effective date of this local law.

As the law acknowledges, ADS aren't just computer code. They are also data, and even when the computer code doesn't change, the data used to inform decisions certainly does.

Documentation of simpler automated decision-making systems already happens in a scattershot way – for example when there is a law suit the city needs to defend against, or a metric being reported for the Mayor's Management Report. Along these lines, making computer source code open, or, if protected by intellectual property laws, at least held in escrow is a possibility for systems where relatively simple decisions are codified – “if this then that” type of things.

Storing the state of complex systems, especially those that are designed to evolve how they arrive at decisions over time remains, as you know, an important question in the data science world. I am not certain it is completely feasible. This isn't just a data science problem, it is a digital archiving problem. To illustrate this, consider that there are many time capsules buried with CDs full of digital images that will be very difficult to view in fifty years because the

hardware to read them is already nearly obsolete. The task force may want to consult with digital archiving professionals.

Finally, I would like to highlight a few things that local law 49 of 2018 does not mention, but leaves room for inclusion:

- The law seems to make the assumption that everything which can be automated will be. But this task force can certainly recommend gatekeeping and ongoing evaluation methods such as [JHU GovEx's Ethics & Algorithms Toolkit](#) (which I co-authored), [AI Now's Algorithmic Impact Assessment](#) (co-authored by a member of the task force), or the [Canadian National Government's Algorithmic Impact Assessment](#).
- Middle managers and senior executives in city agencies have a huge role to play in this work, and they need to be better educated to understand and manage it. The Mayor's Office of Data Analytics and the Department of Citywide Administrative Services can offer training resources, not just for data analysts and IT staff, but for middle managers and senior executives who actually make program-level decisions and apply tools to transform their work. This idea is strongly supported by our own experience working with governments across the globe, and [articulated extremely well by Eddie Copeland at the UK's Nesta Foundation](#) (formerly the National Endowment for Science, Technology and the Arts).
- Finally, the city isn't always the end of the line when it comes to product and services. Vendors – not just technology companies, but also any service providers who use automation – should share the risks that are traditionally wholly owned by the public sector. This can be done through a variety of contracting tools such as providing financial rewards and penalties, requiring indemnification, and requiring them to have insurance policies which provide suitable coverage to reconcile harms.

Thank you for having me here to talk about this important topic. I look forward to answering your questions, and can be reached at anicklin@jhu.edu should you wish to continue this discussion beyond today's meeting,