



**TESTIMONY OF THE DEPARTMENT OF INFORMATION TECHNOLOGY AND
TELECOMMUNICATIONS**

**ON INT. 1696, A LOCAL LAW TO AMEND THE ADMINISTRATIVE CODE OF THE
CITY OF NEW YORK, IN RELATION TO AUTOMATED PROCESSING OF DATA
FOR THE PURPOSES OF TARGETING SERVICES, PENALTIES, OR POLICING TO
PERSONS**

October 16, 2017

Good afternoon, Chair Vacca, and members of the Committee on Technology. My name is Don Sunderland, and I am Deputy Commissioner for Enterprise and Solution Architecture at the Department of Information Technology and Telecommunications, also known as DoITT. Joining me is Craig Campbell, Special Advisor in the Mayor's Office of Data Analytics, known as MODA. I'm here to discuss Chair Vacca's legislation, Introduction 1696, a bill that would require agencies to publish the source code of algorithms they use, and allow users to test those algorithms. This is a very timely discussion, and I thank the Chair and this Committee for initiating it. City agencies rely on computer programs to varying degrees to assist in targeting and delivering services to their clients, and I am happy to talk about the broad technical processes that guide the City's use of algorithms.

First, I'd like to provide some background to the Committee on the work my division does at DoITT. The Enterprise and Solution Architecture division comprises a team of technical architects who help DoITT and its sister agencies identify technology solutions to address their business needs. A relevant example of this is the recently launched NotifyNYC app, which we assisted NYC Emergency Management (NYCEM) in developing. DoITT's "Insource Team," a group that assists agencies in managing special technology projects, was dispatched to work with NYCEM on this app starting last year. This team includes several positions that agencies may not hire on their own for such a specialized project, such as a technical lead, Android and iOS developers, a UX/UI designer, and more.

While our services are available to all City agencies, this does not afford us a comprehensive view of technology across the City. Many agencies have substantial technology shops of their own, and require no assistance from us at all. Others only need us to help them in the design or delivery of specific features required by the total application architecture. In all cases, we strive to deliver whatever services the agency needs to achieve its technology goal. This work provides us with broad exposure to a variety of systems implemented by the various agencies, but

agencies rely on their own subject matter experts to devise strategies based on the goals they wish to achieve.

No matter the level of engagement, DoITT develops technical solutions to fulfill policy goals and support business processes determined by agencies. In other words: by and large, we aren't making agency rules, decisions, or policy. We are providing the technology that helps agencies bring those elements into the world and onto our streets.

This bill seeks to increase transparency in government decision-making processes, which is a laudable goal. We understand the impetus for this legislation, and believe that this bill is an excellent way to start the conversation. The Chair has been a great partner in our transparency efforts over the last few years, and we are eager to work with the Committee to achieve some of the goals of this legislation in ways that will be useful to New Yorkers.

That being said, Introduction 1696, in its current form, presents significant operational concerns that we must address directly.

First and foremost, there are considerable security concerns. It is the opinion of our cybersecurity experts that publishing algorithms would generate considerable risk, providing a roadmap for bad actors to attack crucial City systems. Those looking to cause damage could use knowledge of these algorithms to circumvent important criteria put in place to prevent abuse of these processes. There is also meaningful risk to the private information of New Yorkers, since providing public access to decisions regarding individual benefits or services could provide tools for third parties to infer specific personal information, such as economic or disability status, of persons receiving those benefits.

Second, the scope is all-encompassing. An algorithm is a set of unambiguous instructions. All software programs use sets of unambiguous instructions to carry out their functions. In targeting all algorithms involved in rendering decisions regarding service delivery or evaluative processes, the legislation potentially targets every computer program in the city, which, as you could imagine, would be an incredibly large undertaking. Almost every program supports agency operations by producing data or interim values used to support the decision-making process of the agency—by humans or through automation. As a result, under this legislation, City agencies would be required to divulge the inner workings of all of their software. Aside from the sheer scope of this effort, the City's ability to do so would face innumerable legal and practical constraints, such as the use of software vendors' proprietary code or the inability to accurately identify the valid source code of many older systems.

Third, testing is not possible. Setting aside the scope issue for the moment, in most cases, the ability to create public access to test the accuracy of the decisions being rendered would be nearly impossible. Decisions carried out by systems are driven by highly complex states of data and other factors that that could not be emulated for the purpose of public testing. Moreover, none of the relevant programs were written to be free-standing, publicly usable software. DoITT

and IT departments across the City would likely have to put in an extraordinary amount of time and energy just to create a new body of software that safely imitates the existing functionality.

Fourth, this bill comes with unintended consequences. The clear and laudable intent of the legislation is to provide transparency around the City's decision-making process and service delivery. But as written, this legislation would deliver a deluge of information, the bulk of it likely unrelated to the services or decision in which the City's constituents are most interested, thus complicating the search for the very information it hopes to expose. Also, providing self-service "decision testing" could empower users to fabricate answers that will get them the response they want.

Most importantly, computers do not unilaterally make decisions. Even if it were possible to make this information available, the code is such a small part of decision-making. Often, algorithms take multiple sources of data and produce results that are contingent on many other contextual factors, including policy decisions made by City employees, and often shaped by local, state, and federal law. On the whole, algorithms *supplement* rather than replace the decision-making process made by City agencies.

I would like to share areas in which the City has proactively made strides in making certain kinds of algorithms transparent. The Mayor's Office of Data Analytics (MODA) recently unveiled an analytics project library, a platform that, in addition to sharing the results of MODA's analyses, also makes transparent the source code for these data analytics projects. When MODA's data scientists partner with City agencies on advanced data analytics projects, they are almost always using Open Data exclusively, so in these instances, publishing the intermediate steps of the analytics process would allow the public to apply the same process elsewhere. Representatives of MODA are here today to answer questions you may have about this project.

Finally, an example taken from this project library can further explain the Administration's position on this legislation. Following the 2015 outbreak of Legionnaires' Disease in the Bronx, MODA worked with several agencies to identify and track all cooling towers in New York City. The results, in addition to the data sources and method used to conduct this analysis are available in the project library. However, the decision-making process in enacting policy to proactively prevent sources of Legionnaires in the future could not be unilaterally made based on that analysis.

We've had great successes in working with this Committee to enact meaningful legislation that has made impactful changes in this administration's transparency effort. Thus, we'd like to hear more from the Committee on the types of City decisions there is interest in making more transparent, and we can subsequently work with our partner agencies to formulate a focused effort to elucidate the decision-making process in those specific areas.

This concludes my prepared testimony. Thank you for the opportunity to speak, and I'm happy to continue the discussion with the Committee. ###