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##### **THE COUNCIL**

##### **BRIEFING PAPER AND COMMITTEE REPORT OF THE**

##### **INFRASTRUCTURE DIVISION**

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**COMMITTEE ON TECHNOLOGY**

*Hon. Robert Holden, Chairperson*

**September 24, 2021**

**Oversight:**  Government and Technology in New York City

**Int. No. 1133:** Council Members Rosenthal, Holden and Yeger

**Title:** A Local Law to amend the New York city charter, in relation to the creation of a database to track violations from issuance to resolution

**Charter:** Adds a new Section 1076

**Int. No. 2158:** Council Members Levin, Holden and Kallos (by request of the Manhattan Borough President)

**Title:** A Local Law to amend the New York city charter, in relation to designating a geospatial information officer

**Charter:** Amends Section 1071

**Int.** **No.** **2305:**   Council Member Holden

**Title:** A Local Law to amend the administrative code of the city of New York, in relation to conducting a feasibility study on a digital identification program;

**Int.** **No.** **2358:** Council Members Holden and Yeger

**Title:** A Local Law to amend the administrative code of the city of New York, in relation to the creation of a centralized mobile application for accessing city services.

**Administrative Code:** Amends title 23 by adding a new chapter 13

1. **Introduction**

On September 24, 2021 the Committee on Technology, chaired by Council Member Robert Holden, will hold a hearing on *Government and Technology in New York City*. The Committee will also hear Int. No. 1133, sponsored by Council Members Rosenthal, Holden and Yeger to amend the New York city charter, in relation to the creation of a database to track violations from issuance to resolution; Int. 2158, by Council Members Levin, Holden, and Kallos, by request of the Manhattan Borough President, to amend the New York city charter, in relation to designating a geospatial information officer; Int. 2305 by Council Member Holden, to amend the administrative code of the city of New York, in relation to conducting a feasibility study on a digital identification program; and Int. 2358 by Council Members Holden and Yeger, to amend the administrative code of the city of New York, in relation to the creation of a centralized mobile application for accessing city services.

The Committee expects to receive testimony from the Department of Information Technology and Telecommunication (“DOITT”), advocacy groups, academia, and other interested members of the public.

1. **Background**

As New York City continues to incorporate technology to deliver and enhance government services, it is vital to also ensure the security and wellbeing of both the government and its residents. Understanding what technology is being implemented, and how that technology is being used, is necessary for New York City’s government to continue evolving in the 21st century and beyond. Transparency and accountability for technology in government allows for the public to increase their trust in government while also providing them with tools to track government performance. Technology in government has the potential to both increase government transparency and accountability while also enhancing city services.

Over the years, New York City has integrated several technologies into its government for the sake of better service delivery and more efficient operations. For instance, the City built out several portals to enable remote government service delivery like the City Clerk’s Online Marriage License Platform.[[1]](#footnote-1) There are clear benefits to having technological services and innovative technologies incorporated with government services and operations. Technology in government also improves government accountability and transparency: New York City’s Open Data program provides all kinds of datasets that allow people to track government performance, and allows city agencies to improve their operations.[[2]](#footnote-2) Additionally, NYC Open Data enables users to take advantage of the vast amount of publicly available data to create projects that in turn benefit the city.[[3]](#footnote-3) As governments like New York City’s seek to incorporate more technology and technological capabilities in the future, it is of utmost importance for the transparency, accountability, and oversight of these tech services to also increase. This is especially true when considering the risks that can be associated with technology in government.

1. **The Tracking of City Issued Notices of Violations**

Several New York City agencies, including but not limited to the Departments of Buildings, Sanitation, Environmental Protection, Consumer and Worker Protection, Health and Mental Hygiene and the Taxi and Limousine Commission exercise their enforcement powers by issuing notices of violation. There is currently no single publicly available and easily searchable online database or dashboard through which the public can track the status and timeline of notices of violation from issuance to resolution from all of these agencies.

The New York City Open Data Portal[[4]](#footnote-4) does, however, include information about violations issued by some city agencies, when those violations are going through an adjudication process with the Office of Administrative Trials and Hearings.

1. **Geospatial Information**

Geographical Information Systems (“GIS”) are becoming useful tools for both the private and public sector, especially in the areas of land use, environment, social services, public services, education, health, and public safety.[[5]](#footnote-5) GIS is a system that assembles, stores, manipulates, and analyzes geographically referenced information. The system incorporates statistical data, or tabular information, and cross-references it with physical boundaries, or spatial information.[[6]](#footnote-6) Thus, the information can be specifically identified with a particular location and vice-versa. GIS could be used in emergency response planning, business development, real property tax valuation, disease studies, and school aid distribution.[[7]](#footnote-7) For example, the system might be able to identify exact areas of natural emergency risk, and enable emergency personnel to calculate the quickest and easiest access routes in the event of a natural disaster.

However, despite the popularity of GIS as clearly evidenced by its growing use, there are some major legal issues beginning to emerge as well as others that might arise, including liability, access, and privacy.[[8]](#footnote-8) New York City does not currently have a designated office to coordinate the use of GIS by all city agencies.

1. **Digital Identification**

The concept of digital identification, in government, is the use of a singular, unifying standard of identification for all residents, wherein city agencies could rely on a single standard rather than varying forms of identification.

While digital identification can be appropriate in some contexts, there are significant privacy and security concerns that could be raised by the widespread use of digital credentials.[[9]](#footnote-9) First, as these systems require individuals to reveal sensitive information, digital identification programs can be create a risk by hosting in one location too much identifying information. Information held by a digital identification program could be at risk of disclosure from a data breach, which might compromise the personal data of millions of people in a single incident. By collecting personal data in one location, a digital identification program can become a prime target for cyberattack.

Second, the reliance on digital credentials necessarily disadvantages those populations that either cannot gain access to the internet or cannot navigate the technology required to use digital credentials.[[10]](#footnote-10) A lack of equity, therefore, is a risk with digital identification, as the technology assumes an individual has access to an internet-capable device, and will continue to have such access to continue using digital identification.

Finally, there is the potential for the misuse of digital credentials beyond the purpose for which they were collected. Government surveillance is a turbulent subject on its own, but with New York City’s status as a sanctuary city, collecting and storing the personal information necessary to create a digital identification program might put the city’s immigrant and undocumented population at risk.

1. **Mobile Applications for Accessing City Services**

There are many City agencies that utilize a mobile application to facilitate the public’s access to their services.[[11]](#footnote-11) For example, the ‘Access HRA’ application allows a person to apply for and manager their SNAP and Cash Assistance benefits,[[12]](#footnote-12) while the ‘My DEP’ application allows a person to pay their water bill and track water usage,[[13]](#footnote-13) and the ‘NYC 311’ application allows a person to submit service requests to agencies.[[14]](#footnote-14) However, there is no single City-created mobile application that would allow a person to do all of these functions at once.

Having a single portal that serves as an access point for multiple city services might provide users with more convenience. Yet, having all of the city services from different agencies accessible through a single portal can be risky. Should the portal go offline, users would no longer have a mobile means to access their city’s services. Additional risks include hosting the personal information of millions of city residents for a single web portal, magnifying the potential harms of a cyberattack or data breach. Cybersecurity risks continue to be a significant threat to all data systems, and the any system hosting massive amount of information would become a target for risks like a breach, disruption, or ransomware attack.

Further, there has been a broad expansion in the collection of personal data as a result of the pandemic, including location data, biometric data, health and health-related information, and other kinds of data that would not normally have been created or collected in the past. Any actions taken with these data all pose significant risks of unwanted disclosure, misuse, or worse.[[15]](#footnote-15) Should a user’s login information be compromised when that login information is their means of access to several city services, whoever has that login information would then be able to access all the information of that user in relation to their use of city services.

 Just this past summer, the New York City Law Department suffered a cyberattack which blocked employees from logging on to the Law Department’s computer system, and the M.T.A. discovered a breach from hackers entering their computer systems.[[16]](#footnote-16) New York City experienced a breach of the personal information of over a thousand of its students and teachers in January 2021, further highlighting the importance of proper data privacy and security.[[17]](#footnote-17) New York City can also find itself affected by cyberattacks and data breaches that target private contractors of the city. ParkMobile, whose app allows New Yorkers and other cities’ residents to digitally pay for parking meters, experienced a breach this year where 21 million of its users saw their personal data being sold online.[[18]](#footnote-18) With government and technology currently intertwined, understanding the risks accompanying technological reliance for government services is crucial as our government and society are poised to expand the use of technology in the future.

1. **Legislative Analysis**
2. **Legislative Analysis of Int. 1133**

This bill would require the Department of Information Technology and Telecommunications (“DoITT”) to create a public online searchable database through which all agencies that issue notices of violation returnable to the Office of Administrative Trials and Hearings (“OATH”) Hearings Division shall report on and update as frequently as practicable the statuses of such notices of violation. Additionally, the Department of Housing Preservation and Development would be specifically required to report on violations from issuance of the notice to resolution. The bill would also require DoITT to provide quarterly updates to the Speaker of the City Council on the completion of the database and require agencies to report to DoITT and the Speaker on the information they are unable to make available in the database. Part of the bill would take effect in one year and part of it would take effect immediately.

1. **Legislative Analysis of Int. 2158**

The proposed legislation would create a Chief Geospatial Information Officer (“CGIO”) within the Department of Information Technology and Telecommunications (“DoITT”) and require DoITT to maintain and implement a special data interoperability strategy, including the development and maintenance of a strategic plan for the City’s use of geographical information systems. The legislation would also mandate regular meetings of agency GIS managers and other geospatial experts. This bill would take effect immediately.

1. **Legislative Analysis of Int. 2305**

This bill would require the Mayor to designate a city agency to conduct a study to assess and determine the feasibility of a pilot program to establish a digital identification program. This bill would take effect immediately.

1. **Legislative Analysis of Int. 2358**

This bill would require the Department of Information Technology and Telecommunications (“DoITT”) to create a single mobile application allowing the public to access services provided by different City agencies. The application would be required to be accessible for persons with disabilities. Additionally, DoITT would be required to encrypt all exchanges or transfers between a web server and the mobile application. The application software would be open source and its code publicly accessible. This bill would take effect 120 days after it becomes law.

1. **Conclusion**

The Committee looks forward to receiving testimony from the Administration, advocacy groups, academia, and other interested members of the public on the operation of city agencies and whether they can operate more effectively and cost-efficiently by utilizing digital services.

Int. No. 1133

By Council Members Rosenthal and Richards

..Title

A Local Law to amend the New York city charter, in relation to the creation of a database to track violations from issuance to resolution

..Body

Be it enacted by the Council as follows:

Section 1. Chapter 48 of the New York city charter is amended by adding a new section 1076 to read as follows:

§ 1076. Database of violations. a. Definitions. For purposes of this section, the following terms have the following meanings:

Department. The term “department” means the department of information technology and telecommunications.

OATH. The term “OATH” means the office of administrative trials and hearings.

b. The department shall establish and maintain a public online searchable database through which all agencies that issue notices of violation that are returnable to the OATH hearings division shall report on and update as frequently as practicable the statuses of such notices of violation. Such database shall be available on or through the city’s website, present data in machine-readable format, have the ability to produce reports by query, be accessible via application programming interface and include all non-confidential information relating to such violations that such agencies possess, including but not limited to the following information:

(1) The ticket number or other unique means of identification of the notice of violation;

(2) The date, time and location by borough, city and block and lot number of the violation;

(3) The name of the agency that issued the notice of violation;

(4) The total amount of any applicable civil penalties;

(5) The date, time and scheduled location by borough of any hearing, and the agency conducting any such hearing;

(6) The current status and final result of any such hearing, and the date of any final decision;

(7) The amount of any civil penalties imposed;

(8) The total amount the respondent paid in civil penalties;

(9) The amount of any civil penalty payment the respondent still owes;

(10) The total amount of any additional penalties imposed by the office for failure to respond to a notice of violation; and

 (11) The provisions of the charter, administrative code, or rules of the city of New York applicable to the violation.

c. Through the same database, the department of housing preservation and development shall report on and update as frequently as practicable the statuses of notices of violation issued by such department. Such database shall include all non-confidential information relating to such violations that such department possesses, including but not limited to the following information:

(1) The ticket number or other unique means of identification of the notice of violation;

(2) The date, time and location by borough, city and block and lot number of the violation as recorded on the notice of violation;

(3) The name of the agency that issued the notice of violation;

(4) The class of violation;

(5) The original correction and certification deadlines and the date of submission of any certification of correction;

(6) The dates of any inspections following the submission of any certification of correction and whether such department subsequently determined that the violation is cleared;

(7) The date of submission of any dismissal request and the applicable fee amount, any subsequent inspection date and whether such department subsequently determined that the violation is cleared;

(8) The total amount of any applicable civil penalties;

(9) The current stage of any litigation to enforce such civil penalties and the ultimate result of any such litigation;

(10) The status of any other remedial measure undertaken by such department; and

(11) The provisions of the charter, administrative code, or rules of the city of New York applicable to the violation.

§ 2. The department of information technology and telecommunications shall provide quarterly progress updates to the speaker on the substantial completion of the database described in section one of this local law with respect to the categories of information set forth in such section. If an agency cannot make particular categories of information available for inclusion in the database pursuant to such section, the agency shall report as soon as it makes such a determination to the department of information technology and telecommunications and the speaker on which categories of information the agency is unable to make available, the reasons why the agency cannot do so and the date by which the agency expects that it can make such categories of information available to such department for inclusion in the database.

§ 3. Section one of this local law takes effect 1 year after it becomes law, except that the department of information technology and telecommunications and the agencies required to carry out reporting under this local law may take such measures as are necessary for the implementation of this local law, including the promulgation of rules, prior to such date. Section two of this local law takes effect immediately.

JJ

LS #3629, #6755

06/14/2018 2:41PM

Int. No. 2158

By Council Members Levin, Holden and Kallos (by request of the Manhattan Borough President)

..Title

A Local Law to amend the New York city charter, in relation to designating a geospatial information officer

..Body

Be it enacted by the Council as follows:

Section 1. Section 1071 of the New York city charter is amended to read as follows:

§ 1071. Deputies. The commissioner [may] shall appoint [four] five­ deputies, one of whom may be designated the first deputy commissioner, and one of whom shall be designated the chief geospatial information officer.

§ 2. Subdivisions g and h of section 1072 of the New York city charter are amended to read as follows:

g. to participate in developing, maintaining and implementing a long-range computer systems strategy, [and] data communications strategy, spatial data interoperability strategy for the city of New York and strategic plan for the use of geospatial information systems by city agencies;

h. to assist in providing interagency coordination on matters related to data communications activities and interfacing of computers, including convening, under the direction of the chief geospatial information officer, annual interagency meetings of agency personnel responsible for supervising the collection, management or use of geospatial data and, when appropriate, other geospatial experts, to enable citywide coordination and collaboration in areas including application development, data sharing and data interoperability;

§ 3. This local law takes effect immediately.

JSA/NKA

LS #10865, 10866, 10867

9/18/2019

4:38pm

Int. No. 2305

By Council Member Holden

..Title

A Local Law to amend the administrative code of the city of New York, in relation to conducting a feasibility study on a digital identification program

..Body

Be it enacted by the Council as follows:

            Section 1. a. Definitions. For the purposes of this section, the following terms have the following meanings:

Financial institution. The term “financial institution” means a company with expertise in technology and financial services.

Digital identification program. The term “digital identification program” means a program providing digital identification that is verified and authenticated across digital platforms, that is unique and is established with individual consent and that protects user privacy and control over personal data.

b. Feasibility study and report. By October 1, 2021, the mayor shall designate an agency to conduct a study to assess and determine the feasibility of a pilot program to establish a digital identification program. The designated agency, in consultation with at least one financial institution, shall issue a report on such study, which the designated agency shall submit to the mayor and speaker of the council and post on the agency’s website on or before July 31, 2022. Such study and report shall include, but need not be limited to:

1. The pilot program’s design, including, but not limited to, the scope, the technology, the staffing and the rationale for such design;

2. Information on participation in the pilot program, including, but not limited to, the criteria to participate and the number of participants;

3. The plan to ensure the privacy of the participants, including, but not limited to, ensuring that their personal information is secure and confidential;

4. The plan to administer and conduct outreach on the pilot program;

5. The plan to use the digital identification program to determine eligibility for public benefits and access to city services;

6. The estimated cost of the pilot program; and

7. The metrics used to evaluate the pilot program.

§ 2. This local law takes effect immediately and expires and is deemed repealed upon the issuance of the report required by section one of this local law.

ACK

LS #17383

5/4/2021

Int. No. 2358

By Council Members Holden and Yeger

..Title

A Local Law to amend the administrative code of the city of New York, in relation to the creation of a centralized mobile application for accessing city services

..Body

Be it enacted by the Council as follows:

Section 1. Title 23 of the administrative code of the city of New York is amended by adding a new chapter 13 to read as follows:

CHAPTER 13

ACCESS TO CITY SERVICES WITH MOBILE TECHNOLOGY

 23-1301 Definitions. For the purposes of this chapter, the following terms have the following meanings:

Commissioner. The term “commissioner” means the commissioner of information technology and telecommunications.

Department. The term “department” means the department of information technology and telecommunications.

23-1302 Mobile application; creation. a. The department shall create a mobile application capable of allowing members of the public to access services provided by a city agency.

b. The department, in collaboration with other agencies, shall provide public access through such application to all city services except services whose nature makes them insusceptible of access using mobile application technology.

23-1303 Accessibility. The department shall adopt an accessibility protocol for the mobile application required by this chapter to ensure the application is accessible for persons with disabilities.

23-1304 Encryption. The mobile application maintained by the department on behalf of the city or all city agencies shall encrypt all exchanges and transfers between a web server, maintained by or on behalf of the city or a city agency, and the mobile application and shall require web browsers to request such encrypted exchange or transfer at all times, provided that such encryption shall not be required if such exchanges or transfers are conducted in a manner that provides at least an equivalent level of confidentiality, data integrity and authentication.

23-1305 Open source software. Any custom software, web development service or mobile application created by the department in furtherance of this chapter shall be open source and publicly accessible, except as otherwise provided in the rules or policies of the department.

23-1306 Rules. The commissioner may promulgate rules in furtherance of the purposes of this chapter.

§ 2. This local law takes effect 120 days after it becomes law.

JG

LS #17443

06/03/21 11:54 AM

1. *DoITT Commissioner Jessica Tisch’s Testimony Before the City Council Committees on Land Use and Technology on the Fiscal Year 2022 Preliminary Budget,* NYC Dept. of Information Technology and Telecommunications, March 10, 2021, available at <https://www1.nyc.gov/site/doitt/news/t00001/doitt-commissioner-jessica-tisch-s-testimony-before-city-council-committees-land-use-and>. [↑](#footnote-ref-1)
2. *Overview,* NYC OpenData, available at <https://opendata.cityofnewyork.us/overview/>. [↑](#footnote-ref-2)
3. *See How Creators are Answering Everyday Questions with Open Data*, NYC OpenData, available at <https://opendata.cityofnewyork.us/projects/>. [↑](#footnote-ref-3)
4. NYC Open Data, OATH Hearings Division Case Status, OATH Hearings Division Case Status, https://data.cityofnewyork.us/City-Government/OATH-Hearings-Division-Case-Status/jz4z-kudi. [↑](#footnote-ref-4)
5. *See* N.Y. Zoning Law & Prac. § 36A:01. [↑](#footnote-ref-5)
6. *What Is GIS*, 3 N.Y. Zoning Law & Prac. § 36A:02. [↑](#footnote-ref-6)
7. *Id.* [↑](#footnote-ref-7)
8. *Id.* [↑](#footnote-ref-8)
9. *See* Alan Butler & Enid Zhou, *Disease and Data in Society: How the Pandemic Expanded Data Collection and Surveillance Systems*, 70 Am UL Rev 1577, 1607 [2021]. [↑](#footnote-ref-9)
10. *See id.* [↑](#footnote-ref-10)
11. NYC's Official Mobile Applications, https://www1.nyc.gov/connect/mobile-applications.page [↑](#footnote-ref-11)
12. NYC Access HRA (Android), https://play.google.com/store/apps/details?id=gov.nyc.hra.SelfService&hl=en\_US [↑](#footnote-ref-12)
13. My DEP – NYC (Android), https://play.google.com/store/apps/details?id=com.DEP.mydep\_android [↑](#footnote-ref-13)
14. NYC 311 (Android), https://play.google.com/store/apps/details?id=gov.nyc.doitt.ThreeOneOne [↑](#footnote-ref-14)
15. Alan Butler & Enid Zhou, *Disease and Data in Society: How the Pandemic Expanded Data Collection and Surveillance Systems*, 70 Am UL Rev 1577, 1580-81 [2021] (citing Cybersecurity firms report that threat actors continue to capitalize on the global pandemic to target both the public and private sector, especially to those adjusting to remote operations. See, e.g., CHRISTIAAN BEEK ET AL., MCAFEE LABS THREATS REPORT 3, 5, 15-16, 19, 21, 22-25 (2020), <https://www.mcafee.com/enterprise/en-us/assets/reports/rp-quarterly-threats-nov-2020.pdf>;  SOPHOS, SOPHOS 2021 THREAT REPORT: NAVIGATING CYBERSECURITY IN AN UNCERTAIN WORLD 20, 22, 25-26 (2020), https://www.sophos.com/en-us/medialibrary/pdfs/technical-papers/sophos-2021-threat-report.pdf; FIREEYE, INC. & MANDIANT SOLUTIONS, A GLOBAL RESET: CYBER SECURITY PREDICTIONS 2021 5-10 (2020), https://content.fireeye.com/predictions/rpt-security-predictions-202). [↑](#footnote-ref-15)
16. Benjamin Weiser and Ashley Southall, *F.B.I. Investigates Cyberattack That Targeted N.Y.C. Law Department*, The New York Times, June 7, 2021, available at <https://www.nytimes.com/2021/06/07/nyregion/cyberattack-law-department-nyc.html>; Christina Goldbaum and William K. Rashbaum, *The M.T.A. Is Breached by Hackers as Cyberattacks Surge*, The New York Times, June 2, 2021, available at <https://www.nytimes.com/2021/06/02/nyregion/mta-cyber-attack.html>. [↑](#footnote-ref-16)
17. Pooja Salhotra, *Brooklyn Tech students uncovered a NYC schools data breach. Here’s how they took action.*, Chalkbeat New York, August 12, 2021, available at <https://ny.chalkbeat.org/2021/8/12/22622143/brooklyn-tech-nyc-schools-data-breach>. [↑](#footnote-ref-17)
18. Michael Gartland, *Cashless parking app introduced in NYC las year victim of data breach*, New York Daily News, April 30, 2021, available at <https://www.nydailynews.com/news/politics/new-york-elections-government/ny-nyc-parking-app-parkmobile-data-breach-20210430-3nbu4fpqezh4xm7zbftzpq3ety-story.html>. [↑](#footnote-ref-18)