

To: Mayor Bill de Blasio

cc: Peter Koo, Chair, City Council Committee on Technology Polly Trottenberg, Commissioner, Department of Transportation Daniel Brownell, Commissioner, Business Integrity Commission Gregg Bishop, Commissioner, Department of Small Business Services

Every time a New Yorker calls 311, applies for a construction permit, or sees their streets cleaned, they are interacting with their government at work and seeing the creation of public data. Access to this data allows New Yorkers to understand what public institutions do and how public dollars are spent. This kind of transparency is a priority for the City of New York, which in 2012 enacted Local Law 11, also known as the "Open Data Law," requiring all City agencies to publish every public dataset they maintain on the Open Data Portal. Six years after open data became law, the City's Open Data Portal is home to more than 2,100 datasets spanning dozens of City agencies, making it the nation's single largest municipal data service.

Pursuant to Local Law 8 of 2016, the Mayor's Office of Data Analytics (MODA) was tasked to conduct a series of examinations of City agencies to verify their compliance with the Open Data Law. The law, known as the Open Data Examination and Verification (E&V), names three agencies each year to be examined. The process is designed to improve agency compliance with the Open Data Law by creating a systematic way to locate datasets that may have been excluded in agencies' self-reported Open Data compliance plans, an annual process for every agency that results in a public report published every September 15th.

We hereby submit MODA's findings for 2018 on the Department of Transportation (DOT), Department of Small Business Services (SBS), and Business Integrity Commission (BIC). This report also includes recommendations on improving the City's overall compliance with the Open Data Law in line with the Administration's *Open Data for All* vision.

Please find enclosed:

- Examination and Verification 2018 Findings Report
- Agency Summary Workbooks

Our ongoing partnership with the Open Data Coordinators and other Open Data stewards at participating agencies is helping MODA support a more transparent City government. We wish to thank them for their cooperation in this process and for continuing the good work to identify, prepare, and publish valuable datasets to the Open Data Portal.

Respectfully Submitted,

Kelly Jin Chief Analytics Officer and Chief Open Platform Officer Director, Mayor's Office of Data Analytics

2018 Open Data Examination and Verification Report

Mayor's Office of Data Analytics (MODA) Authors: Craig Campbell, Deena Patel

Date: December 1, 2018

The Open Data Examination and Verification (E&V) authorizes MODA to critically examine three specific City agencies' data inventories while reflecting on ways to improve the City of New York's Open Data program at large. After three years of E&V, it is clear that open data is becoming a routine part of many agencies' data operations. As they move beyond immediate compliance with the Open Data Law, agencies are seeking more sustainable models for staffing open data capabilities while improving the quality and reliability of their data releases.

Key Findings

- All agencies not only compiled, but were open and cooperative. The Department of Transportation (DOT), Department of Small Business Services (SBS), and Business Integrity Commission (BIC) fully complied with the requirements established in MODA's E&V plan. Each agency was responsive, timely, and thorough in completing the process.
- The process gave agencies more clarity on whether they were in compliance with the Open Data Law. E&V is an organizational learning process for agencies involved.
 Regular check-ins with MODA and a structured approach to evaluating lines of business across the agency in search of data gave agencies confidence that they are currently in full compliance.
- The E&V process is effective but requires significant effort. Each agency identified new datasets to publish, but all dedicated significant staff resources to data discovery.

Key Recommendations

- The Open Data team should develop guidance and provide oversight on publishing multi-agency data products.
- The Open Data team should explore agency requirements and potential technology solutions to reduce the time it takes agencies to collect information for mandatory reporting and manage their inventories on the Open Data Portal.
- Business and data analysts should be part of Open Data processes at agencies.

 Data analysts can help ensure that data published in a useful and usable way.

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MODA's Examination and Verification Process

In December 2015, the New York City Council passed Intro No. 916-A, which required an agency designated by the Mayor to conduct a series of examinations of select City agencies' data assets to verify their compliance with the Open Data Law. In January 2016, Mayor Bill de Blasio signed Int. No. 916-A into Local Law 8 of 2016 (Appendix A) and appointed the Mayor's Office of Data Analytics (MODA) to oversee the process. MODA then prepared an Examination and Verification (E&V) plan that was approved by the Commissioner of the Department of Investigation.

In December 2016, MODA submitted the results of the first E&V for the Department of Sanitation (DSNY), Department of Correction (DOC), and Department of Housing Preservation and Development (HPD). In 2017, MODA submitted examinations of the Department of Buildings, Fire Department (FDNY), and the Department of Environmental Protection (DEP). These results can be found in the "Reports" section of the Open Data website.

The E&V process is designed to improve citywide compliance with the Open Data Law by creating a more systematic way to locate datasets that may have been excluded in agencies' self-reported open data compliance plans. Agency Open Data Coordinators (ODCs), who serve as liaisons to MODA and DoITT and coordinate data publishing in their agencies, were responsible for fulfilling the E&V requirements on behalf of their agencies.

Each year, MODA has gathered feedback from ODCs at the surveyed agencies, City Council, and the public open data community to improve the E&V process with each cycle. This year's cycle featured the following components.

Dataset Questionnaire

In the 2016 E&V report, MODA found that there are many ways to interpret the term "dataset." The same set of data records can be represented in single or multiple data tables, at multiple levels of granularity, and may be stored in different data formats in a database or in a custom data system.

To accommodate definitional differences, MODA requires agencies to examine the *existing* instances at their agencies where data assets are created and exchanged. This requires ODCs to complete a thorough internal audit process that ensures that they connect with other relevant information stewards at their agencies, including public communications officials, Freedom of Information Law (FOIL) officers, and database administrators.

The dataset questionnaire was presented as a workbook of spreadsheets with the following sections:

- Agency Overview: Description of the agency, its data sources, and its technical systems
- Current Baseline: Inventory and data quality questionnaire for datasets already on the Open Data Portal
- MMR: Inventory of Mayor's Management Report (MMR) indicators and underlying datasets
- Reports: Inventory of mandated reports and underlying datasets. Similar to the MMR section, this section aims to identify whether the most granular information used to calculate metrics in public reports is available on the Open Data Portal
- Shared: Inventory of datasets shared between agencies for operational purposes
- FOIL: Inventory of datasets used to respond to FOIL requests
- **Data on Agency Websites:** The Open Data Law requires all data to reside in a single web portal. This section verifies that any dataset available on an agency website is also on the Open Data Portal.
- Future Releases: Datasets already on the agency Open Data Plan and newly identified datasets.
- Civic Engagement: For the first time this year, the Open Data team required agencies to commit to three civic engagement activities between September 15, 2018 and September 15, 2019. Agencies that opted-out were required to list their reason with a public statement.

Organizational Chart

The organizational chart familiarizes MODA and agency ODCs with each bureau, division, and reporting relationship within the agency. The dataset questionnaire requires ODCs to work across the organizational chart, giving them an opportunity to better understand their agency's information ecosystem while examining the business functions and personnel that have already contributed data to the Open Data Portal.

Executive Certification Letter (Appendix B)

MODA requires agency leadership to sign a certification letter modeled after the letter all Agency commissioners signed when they submitted their first Open Data compliance plans in 2013. In this statement, an agency's Commissioner or their designee, and the agency's General Counsel or their designee, certifies the completeness and accuracy of the information provided in the dataset questionnaire.

NEW: Early Kick-Off and Monthly Check-In

For the first time this year, MODA provided agencies a detailed overview of the E&V process at in-person meetings at their agencies at a kickoff meeting in January 2018. This earlier start proved useful to ODCs undergoing the process. MODA also required monthly check-ins, where the Open Data team answered questions. The regular points of contact helped agencies make incremental progress on their E&V deliverables each month.

NEW: Public Review Period (Appendix C)

Between October 3 and October 17, 2018, the public was invited to submit feedback on agencies' draft dataset questionnaires. In past years, the E&V process has included a public comment period through the existing dataset request process on the Open Data website's "Contact Us" page. MODA, for the first time this year, released draft workbooks for public review in advance of the publication of this report. The public was invited to:

- Request a dataset believed to be maintained by the agency but not already in the Open Data Plan
- Identify what is believed to be an omission from any section of the agency's dataset inventory
- Disagree with the agency's reported rationale for why any dataset is or is not public
- Ask a question about something reported in the survey, including questions on existing datasets on the Open Data Portal or datasets scheduled for future release

Debrief Interview (Appendix D)

Following the examination process, MODA met with ODCs to discuss the challenges and opportunities they face in the ODC role, which are reflected in the "Recommendations for Better Citywide Compliance" section of this report.

Summary of Results

Detailed information about each agency, including their mission, personnel count, budget, and the new datasets identified for publication in the E&V process, are included in the Agency Profiles below. Newly identified datasets were added to the <u>2018 Open Data Plan</u>, the schedule for future dataset releases. More detailed information on each agency's existing datasets can be found in their <u>dataset questionnaires</u>, which are summarized in Table 1.

In addition to identifying new datasets, the E&V process helped agencies review their existing datasets on the Open Data Portal holistically and take steps to improve the quality of their dataset inventories. As a result:

- **SBS** refreshed out-of-date data.
- BIC removed eight datasets from the Portal that did not qualify as public datasets. All
 datasets removed from the Open Data Portal can be tracked on the <u>Dataset Removals</u>
 dataset maintained by the Open Data team.
- **DOT** identified opportunities to expedite data transfer and improve automation for upcoming data releases, utilizing the new **Data Collections** dataset publication format to publish data tables directly from the relational databases in which they are stored.

Table 1. Results Snapshot - Aggregate Dataset Counts by E&V Questionnaire Section

	BIC	SBS	DOT
Total Open Datasets on ODP	5	14	60
Current Inventory - Automation Status			
Automated	5	9	7
Not Automated	0	5	53
Current Inventory - Update Frequency			
Annually	0	1	6
Biannually	0	0	1
Quarterly	0	0	2
Monthly	0	2	3
Weekly	0	6	11
Daily	5	1	2
Several times per day	0	0	2
As needed	0	3	27
Historical Data	0	1	6
Datasets associated with MMR indicators			
On Open Data Portal (ODP)	2	2	19
Scheduled for future release	1	2	8
Not public dataset / not agency dataset	3	6	17
Datasets associated with Reports			
On Open Data Portal (ODP)	0	2	14
Scheduled for future release	0	1	2
Not public dataset / not agency dataset	0	1	21
Datasets associated with Shared			
On Open Data Portal (ODP)	0	1	7
Scheduled for future release	3	0	0
Not public dataset	5	6	20
Datasets associated with FOIL			
On Open Data Portal (ODP)	4	0	20
Scheduled for future release	3	0	
Not public dataset	5	8	9
Datasets associated with Websites			
On Open Data Portal (ODP)	5	8	48
Scheduled for future release	4	1	1
Not public dataset / not agency dataset	0	0	5

Business Integrity Commission (BIC)

Subject Area: Public Safety and Access to Justice

Deputy Mayor: Operations
Agency Personnel Count:² 90
Agency Budget:³ \$9 million

Mission: The Business Integrity Commission (BIC) regulates and monitors the trade waste hauling industry and the wholesalers and businesses operating in the City's public wholesale markets, and ensures the integrity of businesses in these industries. Through vigorous background investigations of license and registration applications, the establishment of standards for services and conduct of business, and long-term criminal investigations, BIC carries out its mandate to make certain that these regulated industries and businesses remain free of organized crime and other forms of corruption. BIC protects New York City consumers by ensuring that businesses in certain industries and markets act in an honest manner. By fostering an open marketplace, BIC ensures that businesses in those industries and markets are protected from unfair competition. BIC also has the authority to regulate the shipboard gambling industry, although that industry currently does not operate in New York City.

Table 2. BIC Newly Identified Datasets

Dataset Name	Dataset Description	Release Date
Denied TW and Wholesale Market Companies	List of Trade Waste and Wholesale Market Companies that were denied to receive a license by BIC	December 17, 2018
Complaints / Inquiries	The dataset contains information on all complaints/inquiries BIC received	December 17, 2018
Licensees and Registrants Fleet Information	The dataset contains information about the trucks of BIC licensees and registrants	December 17, 2018
BIC issued violations	BIC issued violations for companies in the trade waste industry	December 17, 2018

¹ Agency "subject area" comes from thematic groupings of City agencies in the 2018 Mayor's Management Report. September 2018.

https://www1.nyc.gov/assets/operations/downloads/pdf/mmr2018/2018 mmr.pdf

² Agency personnel counts as reported in a November 8, 2018 update to the Office of Management and Budget's "Full Time and Full Time Equivalent Staffing Levels" dataset.

https://data.cityofnewyork.us/City-Government/Full-Time-And-Full-Time-Equivalent-Staffing-Levels/2t2c -qih9/data

³ Agency budget as reported in Fiscal Year 2019 Executive Budget and Projections, rounded to the nearest million. https://www1.nyc.gov/assets/omb/downloads/pdf/mm4-18.pdf

⁴ Agency mission as reported in agency chapters in the 2018 Mayor's Management Report. September 2018. https://www1.nyc.gov/assets/operations/downloads/pdf/mmr2018/2018 mmr.pdf

Trade Waste Hauler Licensees* (new fields)	The following companies have been issued trade waste removal licenses by the Business Integrity Commission and, therefore, are authorized to collect and remove all types of trade waste covered by Local Law 42 of 1996. *The BIC will add three additional fields to the Trade Waste Hauler Licensees dataset, which is already on the Open Data Portal: • "Commercial Recycling Authorization": List of BIC-licensed private carters with the information if they were authorized by BIC to perform single-stream, co-collection or source-separated recycling collection • "Commercial Organic Waste": List of BIC-licensed private carters that collect and dispose of organic waste from commercial establishments • "Waste hauling applications approved - New and Renewal": New and renewal trade waste applications that were approved by BIC	December 17, 2018
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Department of Small Business Services (SBS)

Subject Area: Building Human Potential **Deputy Mayor:** Strategic Policy Initiatives

Agency Personnel Count: 403
Agency Budget: \$258 million

Mission: The Department of Small Business Services (SBS) makes it easier for businesses in New York City to start, operate and grow by providing direct assistance to business owners, fostering neighborhood development in commercial districts and linking employers to a skilled and qualified workforce. SBS runs the City's NYC Business Solutions Centers, Industrial Business Solutions Providers and Workforce1 Career Centers; provides grants and services to support the growth of local community and economic development organizations throughout the City, oversees the largest network of Business Improvements Districts (BIDs) in the country; and administers the Minority and Women-owned Business Enterprise (M/WBE) Program.

Table 3. SBS Newly Identified Datasets

Dataset Name	Dataset Description	Release Date
Businesses Receiving Lower Manhattan Energy Program Benefits	Listing of commercial tenants active within the buildings approved for the LMEP with the value of the reduction of their energy cost	July 31, 2019
Businesses Receiving Training Fund Awards	Listing of businesses who received an award from the Training Funds program	July 31, 2019

Department of Transportation (DOT)

Subject Area: Infrastructure and Sustainability

Deputy Mayor: Operations **Agency Size (Personnel):** 5,741 **Agency Budget:** \$1 billion

Mission: The Department of Transportation (DOT) is responsible for the condition and operation of 6,000 miles of streets and highways, 12,000 miles of sidewalks, over 70 pedestrian plazas, 794 bridges and tunnels, and 10 boats for the Staten Island Ferry program. DOT operates over 12,000 signalized intersections and over 315,000 street lights and maintains over 200 million linear feet of markings on City streets and highways. Safety for everyone using the City's streets, bridges and ferries is the agency's top concern. To increase mobility, DOT manages the City's Bus Rapid Transit program, Select Bus Service, in partnership with the MTA; oversees the City's bike share system; and maintains over 1,180 miles of bicycle lanes, of which over 108 miles are protected. DOT's infrastructure programs include bridge capital investment and life-cycle maintenance, roadway resurfacing and pothole repair, ferry boat and terminal upgrades and maintenance and street and sidewalk reconstruction. DOT also manages the Joint Traffic Management Center, pedestrian ramp and sidewalk repair, and oversees the on-street parking meters system.

Table 4. DOT Newly Identified Datasets

Dataset Name	Dataset Description	Release Date
9/11 Bus Parking Permit	Parking Permits issued to Motor Coach Tour Bus operators to park in designated metered bus parking spaces below Houston Street from River to River to visit the 9/11 Memorial Museum.	December 31, 2018
Agency Authorized Parking Permit (AAPP) or On Street Authorized Permit (OSAP)	Parking Permits issued to government employees, teachers and private school facilities to travel between multiple facilities with authorized on-street parking spaces.	December 31, 2019
Agency Business Parking Permit (ABPP)	Parking Permits issued to government employees who need to park while conducting official business, valid for three hour parking in No Parking, Truck Loading and metered zones, submitted through each agency's DOT liaison and distributed by DOT through the employee's agency liaison.	December 31, 2018
Annual Bridge Volume Counts (Includes Manhattan River Crossings)	Traffic volume counts collected on all NYC major bridges. For three reports made public (NYC DOT Bridge Report, Manhattan Crossing Report, Screenline Report)	December 31, 2019

Annual On-Street Parking Permit (AOSPP)	Travel Permits issued to not-for-profits organizations, which allow vehicles conducting business to park for particular purposes in designated parking zones or locations for short, prearranged periods of time.	December 31, 2018
APS Dig Invoices - Approved	Approved DOT Accessible Pedestrian Signal Invoices with work orders by location for the three phases of work (dig, wire and restore) and includes material proof of purchase.	December 31, 2019
APS Restore Invoices - Approved	Approved DOT Accessible Pedestrian Signal Invoices with work orders by location for the three phases of work (dig, wire and restore) and includes material proof of purchase. The dataset is stored in Excel spreadsheets and updated with each Invoice that is submitted.	December 31, 2019
APS Wire Invoices – Approved	Approved DOT Accessible Pedestrian Signal Invoices with work orders by location for the three phases of work (dig, wire and restore) and includes material proof of purchase. The dataset is stored in Excel spreadsheets and updated with each Invoice that is submitted.	December 31, 2019
Arterventions Tracking	Tracking of Arterventions within the city.	December 31, 2019
Barrier Beautification Tracking	DOT Art collaborates with volunteer organizations to beautify concrete barriers with bold, colorful murals that are designed by professional artists but painted almost entirely by volunteers. Barriers located along protected bike lanes or active sidewalks serve as canvases for art. DOT Art provides selected artists with a design honorarium of \$2,500 and a materials fee of \$500 for stencil production. DOT Art provides paint and associated materials at no cost to the artist, and coordinates volunteer recruitment and secures volunteers to implement the mural on a single day in fall and spring. Murals remain installed for 11 months.	December 31, 2019
Bicycle Shops	Bicycle shops that have agreed to be shown on the official DOT Bike Map	December 31, 2019
Bike Counters	Proximity counters used to count how many bicyclists use bicycling infrastructure at key locations	December 31, 2019
Bike Share Inspections	The tablet/smartphone-based Bike Share Inspections application facilitates the visual inspection of Citi Bike stations, kiosks, docks and bikes. DOT field inspectors conduct inspections and issue tickets in real-time to the BikeShare system operator according to the SLAs.	December 31, 2018

Bikes in Buildings (BIB)	In compliance with the Bicycle Access Law, BIB allows tenants to request for Bike access from the landlords in commercial buildings, and for DOT to monitor the requests for access and their status.	December 31, 2018
Bollards Tracking and Installations	Database that tracks bollards installed in-house	December 31, 2019
Borough Engineering Tracking (BETS) System	Tracks requests to Borough Traffic Engineering offices	December 31, 2018
Bridge Hold Locations for Street Construction Permits	This dataset provides locations which have the Bridge Hold as one of the stipulations. The information gives the location of all the blocks and the intersections within 100 feet of a Bridge Structure.	December 31, 2018
Bridge Strike	Database of Bridge Strikes occurrences on NYC streets that have low clearances	December 31, 2019
Bus Lanes	LION segments for all blocks with bus lanes in NYC	December 31, 2019
Bus Pad Tracking	Inventory of defective and/or bus pad installation requests and contract status of each location.	December 31, 2019
Authorized Parking Call Center Phone System	Authorized Parking Call Center system, tracks call volume & average wait time, and calls answered within 30 secs. A daily report.	December 31, 2019
Carshare Member Surveys	As part of DOT's carshare pilot, we will be conducting three surveys of carshare members in NYC. UC Berkeley will be developing and hosting the survey and providing us with the resulting data.	December 31, 2019
Carshare Parking Pilot Spaces	A shapefile of carshare pilot spaces (on-street and in municipal lots)	December 31, 2018
Carshare Parking Demand Evaluation	DOT will be conducting parking counts in four neighborhoods as part of the carshare pilot. These counts will occur three times during the pilot.	December 31, 2019
Carshare Use Data	As part of the carshare pilot, DOT is requiring participating carshare organizations to share monthly data on a quarterly basis. DOT will publish summary statistics on usage, likely on an annual basis.	December 31, 2019
Central Business District (CBD)	Traffic (vehicle & bicycle) volume data on various avenues between 60th and 61st	December 31, 2019

Commercial Bicycle Inspections	DOT's Commercial Bicyclist Unit (CBU) conducts inspection of businesses that use bicycles for commercial purposes. This dataset lists the results of those inspections.	December 31, 2018
Commissioner's Correspondence	Correspondences are received, tracked, and responses generated for CCU and Borough Commissioner's offices.	December 31, 2018
Temporary Art Community Commissions Tracking	DOT Art collaborates with community-based organizations to commission artists to design and install temporary art on DOT property.	December 31, 2019
Concrete Costs	Shows assessments prices by construction season for each sidewalk repair contract.	December 31, 2019
Staten Island Ferry Cost Per Passenger	Compares total expenditures with the total ridership to come up with the Staten Island Ferry cost per passenger. Done on a yearly basis	December 31, 2019
Crushing Operation	Tracks crushed debris by in-house construction crews.	December 31, 2019
Curb Metal Protruding Database	Database to track all reports of curb with protruding metal (steel faced curb).	December 31, 2019
Design Marking Plans	Pavement Markings Plan - Official records for all of the City.	December 31, 2019
Emergency Snow Report	Emergency Snow Reporting application allows Office of Emergency Response (OER) to support snow tracking/reporting process by automating coordination across DOT divisions, while providing standard data input templates, scheduled electronic reports for each snow event and a searchable report repository.	December 31, 2019
Enhanced Crosswalk	Uncontrolled crosswalk	December 31, 2019
Expedited Sidewalk Repair Database	Database tracks property owner requests and sidewalk repair within the Expedited Program (quicker sidewalk repair at a premium cost to mobilize a sidewalk contract outside of the assigned Community Board)	December 31, 2019
Express Lane Travel Permit	Travel Permits issued to companies with ambulates, commuter vans, shuttles, and vehicles bearing bus plates to provide access to the Long Island & Gowanus Expressways' HOV Express lanes.	December 31, 2019
Ferry Staff Training	Tracks staff training activities at Ferry Operations	December 31, 2019

FOIL Request and Responses Freedom of Information Law system, tracks requests for information available from DOT units	from public December 31, 2019
GangMenu Tracks workers and work performed by Arterial Main crews.	December 31, 2019
Highway Signs Database that tracks all signs installed in-house on h	ighways December 31, 2019
Highway Travel Permit (Annual) Travel Permits issued almost exclusively to companie high occupancy vehicles (i.e. commuter/ school buse for use of parkways otherwise available only to passe	es and vans) 2019
Highway Travel Permit (Single Use) Travel Permits issued to not-for-profit organizations, camps and others using high occupancy vehicles (e. Construction projects, school buses and vans) to according or otherwise available only to passenger cars for a short time.	g. 2019 cess parkways
Intercity Bus Stop Permits The system enables NYC to collect revenues from the free shuttles and private tour groups that carry people outside the boroughs as well as shuttle people within boroughs.	e to NYC from 2018
Language Access Requests The Language Access Database application tracks the document translations	December 31, 2019
Leaning Bars Resting Bars for SBS [select bus service]	December 31, 2019
Martello Bollards A bollard embedded in the ground to ensure a high leading protection from vehicles in pedestrian areas.	December 31, 2019
On-Street Application (SU) (Single Use) Travel Permits issued for a particular purpose in desi parking zones or at specific locations for prearranged time, and is not issued for commercial activities or to vehicles.	d periods of 2019
Over Dimensional Vehicle Permit is a web application of the public to apply for Daily Permits for over dimensional Vehicle Permit is a web application of the public to apply for Daily Permits for over dimensional Vehicle Permit is a web application of the public to apply for Daily Permits for over dimensional Vehicle Permit is a web application of the public to apply for Daily Permits for over dimensional Vehicle Permit is a web application of the public to apply for Daily Permits for over dimensional Vehicle Permit is a web application of the public to apply for Daily Permits for over dimensional Vehicle Permit is a web application of the public to apply for Daily Permits for over dimensional Vehicle Permit is a web application of the public to apply for Daily Permits for over dimensional Vehicle Permits for over	
Staten Island Ferry Total ridership for Staten Island Ferry	December 31,
Passenger Counts	2019

Pavement Safety Marking Tracking System (For Construction)	Amount of work inspected per work order sent to the contractor. Has billing info of contractor. (Life of pavement markings from inspection to payment)	December 31, 2019
Pedestrian Space Added	Tracking sheet of pedestrian space added.	December 31, 2019
Permanent Projects Tracking	In collaboration with the NYC Department of Cultural Affairs (DCLA) Percent for Art Program, DOT commissions permanent art as part of the Percent for Art ordinance. DOT designates facilities such as: bridges, sidewalks, ferries, medians, plazas, etc. for permanent art as part of DOT capital construction projects. Project-specific selection panels review artists to develop proposals in collaboration with the project design team. DOT selects new sites each year and determines eligibility for permanent artwork. For more information on the DCLA Percent for Art Program, visit: www.nyc.gov/culture.	December 31, 2019
PPPD Temporary On-Street Tracking (Single Use Tracking)	Temporary Use On-Street Parking permit (NYC-PPPD)- 3 month permit issued to City PPPD permit holders whose permits have expired while awaiting a recertification decision by DOHMH.	December 31, 2019
Private Ferry Monthly Ridership	Total ridership for private ferry operators	December 31, 2019
Real Time Passenger Information (RTPI) Bus Sign Locations	Bus stop points with Bus Time pole signs	December 31, 2019
Screenline Traffic Volume (may be the same thing as NYC Screenline Traffic Flow)	Traffic volume entering and leaving the boundaries of the city	December 31, 2019
Sequenced Traffic Signal Control	Signaling devices positioned at road intersections, pedestrian crossings, and other locations to control flows (progressions and simultaneous traffic control) of traffic and the right-of-way for vehicles arriving at an intersection, which can reduce traffic delay and accident-producing conflicts. It also makes an intersection safe by determining whether vehicles or pedestrians should proceed.	December 31, 2019
Sidewalk Database	Sidewalk Management tracks, organizes and reports on status of New York City sidewalks.	December 31, 2019
Sidewalk Dismissal Tracking	Database to track all dismissal inspection requests and dismissal inspections for sidewalk repair performed through a non DOT contract.	December 31, 2019

Sidewalk Weekly Production Output	Shows sidewalk contract productivity by item in each active contract.	December 31, 2019
Sidewalks Correspondence	Database tracks all written correspondence for the Sidewalk Program.	December 31, 2019
Special Projects Tracking	DOT Art commissions temporary artwork in conjunction with a priority agency initiative up to twice a year. Selected artists are eligible to receive up to \$20,000 towards direct project costs. Artists should visit the Program Tracks and Opportunities page on a consistent basis to learn of upcoming open calls or sign up for the e-newsletter. Examples of past projects outside of the four Program Tracks include: Asphalt Art Activations, Summer Streets Interventions, and Construction Fence Banner Wraps.	December 31, 2019
Speed Reducers	Workflow-based application to track Speed Reducer requests, studies and implementations.	December 31, 2019
Street Construction Inspections and Corrective Action Requests	Dynamic Application System for HIQA application allows HIQA supervisors to assign street work permits inspections to inspectors and provide options for inspectors to complete/submit inspection results using PC tablets in the field with wireless connectivity.	December 31, 2018
Street Construction Permits and Stipulations	Internet, intranet and mobile-based, GIS map integrated, permit management system with a permit search module for all DOT permits currently available in MOSAICS, Back Fill Confirmation module, and Permit Life Cycle module for Series 01, 02, 03, 04, 05, 07, 15, 16. Permittee registration and management, Location management, and Pre-Approval waivers.	December 31, 2018
Street Defect Locations	Intranet and mobile-based, GIS integrated defect search and dashboard application for internal employees.	December 31, 2019
Street Improvement Project (SIP)	All completed and planned street changes that are part of a street improvement projects	December 31, 2019
Street Name Signs (SNS) Management System	This application assists the Street Name Signs group with an information system for managing signs inspection request as well as field inspection. The system is divided into two modules: back office administration & field inspection modules. The Back office module will be utilized by an Administrator to create and assign inspection Requests, as well as approve work orders. The field inspection module will be conducted by DOT inspector as well as the contractor. Photo evidence of sign damage and repairs are also required in the field inspection module.	December 31, 2018

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Street Seats is a citywide program where partners apply to transform underused streets into vibrant, social public spaces between the months of March through December (the Season). Street Seats are installed in the roadbed along the curb line to create an attractive setting for eating, reading, working, meeting a friend or taking a rest.	December 31, 2019
Permit to allow approved business vehicles to travel on Church Street Bus Way at Battery Park and Greenwich Street, an otherwise restricted road.	December 31, 2019
TIMS standardizes the workflow for accessing and analyzing traffic count data, capturing accurate geographic and temporal information and Streamlining the process of requesting data.	December 31, 2019
The Staten Island Ferry carries over 24 million passengers a year between St. George Terminal in Staten Island and Whitehall Terminal in Manhattan. On a typical workday, the ferry makes 118 trips. This General Transit Feed Specification (GTFS) (https://developers.google.com/transit/gtfs/) dataset includes information about the ferry terminal, and all scheduled weekday, weekend and holiday trips. The ferry's schedule may be adjusted due to heavy weather or low visibility. Adjustments are announced by email and in DOT's Twitter stream.	December 31, 2019
Each record represents a location where a study was requested. For example, one request asking for traffic control devices at 3 intersections will create 3 records.	December 31, 2019
The Annual Overweight Load Permits (AOL) is a web application used by the Trucking companies to apply for Annual Permits for Overweight, SP Crane and Bulk Milk Permits.	December 31, 2018
This data set contains the locations of existing WalkNYC Wayfinding maps throughout New York City	December 31, 2019
Provides truck volume, speed, gross vehicle weight, axle weight of trucks at Weigh-In—Motion sensors embedded within the roadway located on Van Dam St and Rockaway Blvd in Queens, NY	December 31, 2019
	transform underused streets into vibrant, social public spaces between the months of March through December (the Season). Street Seats are installed in the roadbed along the curb line to create an attractive setting for eating, reading, working, meeting a friend or taking a rest. Permit to allow approved business vehicles to travel on Church Street Bus Way at Battery Park and Greenwich Street, an otherwise restricted road. TIMS standardizes the workflow for accessing and analyzing traffic count data, capturing accurate geographic and temporal information and Streamlining the process of requesting data. The Staten Island Ferry carries over 24 million passengers a year between St. George Terminal in Staten Island and Whitehall Terminal in Manhattan. On a typical workday, the ferry makes 118 trips. This General Transit Feed Specification (GTFS) (https://developers.google.com/transit/gtfs/) dataset includes information about the ferry terminal, and all scheduled weekday, weekend and holiday trips. The ferry's schedule may be adjusted due to heavy weather or low visibility. Adjustments are announced by email and in DOT's Twitter stream. Each record represents a location where a study was requested. For example, one request asking for traffic control devices at 3 intersections will create 3 records. The Annual Overweight Load Permits (AOL) is a web application used by the Trucking companies to apply for Annual Permits for Overweight, SP Crane and Bulk Milk Permits. This data set contains the locations of existing WalkNYC Wayfinding maps throughout New York City Provides truck volume, speed, gross vehicle weight, axle weight of trucks at Weigh-In—Motion sensors embedded within the roadway

Recommendations for Better Citywide Compliance

In the 2016 E&V report, MODA wrote that empowering ODCs was fundamental to improving compliance with the Open Data Law. The 2017 E&V report shed additional light on the challenges ODCs face – namely, that different ODCs have unique needs according to their role and the type of operations and services delivered by their agencies. The 2018 process reinforced 2016 and 2017 recommendations listed in **Appendix F**, and also raised the following five items.

Agencies should embed data analysts in their Open Data programs to support in the preparation of datasets for publication.

Data analysts are often familiar with business cases for data and can advise on how to best format data releases to be useful for public users.

The Open Data team should provide guidance on whether and how to disclose specific common data types and elements to Open Data.

The Open Data team should work with the City's Chief Privacy Officer, the Law Department, and DoITT to provide agencies guidance on whether and how to release specific categories of data, such as information collected from sensors and employment record numbers. These guidelines should be prescriptive and reflect best practices for data classification and information disclosure through Freedom of Information Law (FOIL) requests.

The Open Data team should develop guidance and provide oversight on publishing inter-agency and integrated data products.

The agencies that completed the E&V process commented that they share datasets with other agencies, including the Mayor's Office, for inter-agency initiatives. There may be more utility in coordinating releases of integrated datasets and data tables that share a common identifier as collections, rather than by each agency individually.

Agencies should work with DoITT to explore technology enhancements that improve data discovery, compliance reporting, and stakeholder management.

The E&V dataset questionnaire provided a structured way to evaluate where data existed across agencies, but ODCs said the spreadsheet format was cumbersome and that the process was time consuming for staff. The Open Data team should explore a data and metadata management solution that connects directly to agency data systems, such as data catalog systems or logical data warehouses. This could allow agencies to track datasets by IT system and manage compliance as new data is created, rather than after-the-fact during annual reporting. This would greatly benefit large agencies such as DOT that have hundreds of datasets to track across dozens of agency divisions and data owners. It would also help data

discovery shift from a dataset-orientation to a systems-orientation, allowing for more holistic evaluation of dataset releases.

Agencies need a way to track and manage their data inventories, including performance and usage metrics.

Specific improvements include:

- a. Agencies should be able to make direct edits to metadata for their Open Data inventories.
- b. Agencies should have a way to know when dataset automations fail. Currently, agencies do not know if an automation fails unless a user complains about stale data. A more proactive quality assurance approach to inventory management would allow agencies to respond soon after a problem occurs.
- c. Agencies should have a way to understand usage of their inventory and to understand the status existing data feeds.

Improving Citywide Compliance with the Open Data Law

Over the past year, the Open Data team has taken steps to improve compliance with the Open Data Law by developing new policy and tools for complying with open data standards.

Better tracking and performance management

In December 2017, Local Laws 244 and 251 of 2017 were ratified, extending the duration of the Open Data Law and creating new annual reporting requirements. For the first time this year, the Open Data team is reporting, in **one comprehensive tracker ("Published Asset Inventory)**, a full inventory of all datasets on the platform. Each dataset now contains metadata on its scheduled and actual publication date, and whether automation is feasible among other metadata. Compiling this information in one place has given the Open Data team, ODCs, as well as the public, a better view of agency compliance with data standards, timely publication, and updates to datasets—meaning a more effective mechanism for holding agencies accountable.

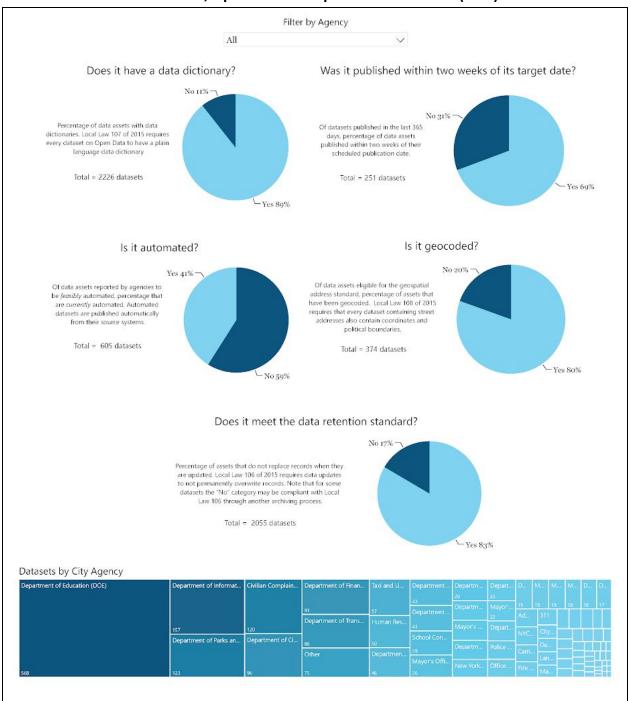
The Open Data team has also developed a compliance dashboard that visualizes metrics for the City's compliance with applicable local laws. This <u>dashboard is available</u> on the Open Data Website and contains the following metrics, which can be viewed either for specific agencies or for the program at large:

- Datasets with Data Dictionaries: Percentage of data assets with data dictionaries. Local Law 107 of 2015 requires every dataset on Open Data to have a plain language data dictionary.
- Datasets Published Within Two Weeks of Target: Of datasets published in the last 365 days, percentage of data assets published within two weeks of their scheduled publication date.
- Feasibly Automated Datasets: Of data assets reported by agencies to be feasibly automated, percentage that are currently automated. Automated datasets are published automatically from their source systems.
- Geocoded Datasets: Of data assets eligible for the geospatial address standard, percentage of assets that have been geocoded. Local Law 108 of 2015 requires that every dataset containing street addresses also contain coordinates and political boundaries.
- Data Retention Standard: Percentage of assets that do not replace records when they
 are updated. Local Law 106 of 2015 requires data updates to not permanently overwrite
 records. Note that for some datasets the "No" category may be compliant with Local
 Law 106 through another archiving process.

Released as a beta in November 2018, the dashboard will undergo user testing in December and January to optimize its effectiveness as a tool for public information. Users are additionally invited to submit their feedback on the dashboard by January 31, 2019 through the "Contact Us" page on the Open data website.

The dashboard is updated daily, and can be viewed online here: https://opendata.cityofnewyork.us/dataset-compliance-dashboard/

Screenshot, Open Data Compliance Dashboard (beta)



Policy improvements

- Removing a Dataset from the Portal: A process and guidelines on removing an existing data asset from the Open Data Portal.
- MODA-DOITT-DORIS MOU: Through a memorandum of understanding between MODA, DoITT, and the Department of Records and Information Services (DORIS), agencies can meet legislated data reporting requirements by maintaining datasets in a machine-readable form on the Open Data Portal, rather than transmitting PDFs of tabular data to the municipal library.

New resources for Open Data Coordinators

- Open Data Collections: A Data Collection is a dataset release format consisting of multiple datasets related to each other through primary and foreign keys. City data is often stored in relational databases. The Open Data Collection allows agencies to publish related datasets.
- Annual Compliance Plan Reporting Playbook: Detailed guidance for the 2018 Annual Compliance Plan Reporting Process.
- Upgraded compliance reporting workbook: A new workbook for reporting on agency compliance, included additional steps to help improve documentation of data owners within agency lines of business, which will help the Open Data team help coordinate transition when ODCs turnover.

Open Data Coordinator recruitment, convenings, and training

After recruiting ODCs for every agency, pursuant to Local Law 251 of 2017, the Open Data team partnered in March 2018 with Socrata, BetaNYC, the Sunlight Foundation, BuildWith and the Department of Citywide Administrative Services to host the first full-day training for NYC ODCs, providing expert insight on best practices for data publishing and civic engagement. Training materials can be found on the Open Data Coordinators resource page. In addition, the Open Data team has continued to host Open Data Coordinator convenings and onboard additional agencies to respond to public inquiries directly on the Open Data Help Desk.

Survey of Open Data Coordinators

An annual survey of ODCs helps the Open Data team understand how well the compliance reporting process works for agency ODCs, and where there are additional opportunities for improving the compliance and training process. Insights include:

- 40% of the 43 respondents were completing annual compliance reporting for the first time
- 56% were very happy with how their agencies were represented in the final report
- Half of the respondents spent 10 or more hours working on compliance reporting for their agencies

Recommended Reading

"NYC Data at Work: 2018 Open Data Plan and *Open Data for All* Progress Report." September 14, 2018.

https://opendata.cityofnewyork.us/wp-content/uploads/2018/09/2018-OD4A-report-complete-DIGITAL.pdf

"2017 Open Data Examination and Verification Report." December 1, 2017. https://opendata.cityofnewyork.us/wp-content/uploads/2017/12/Examination-and-Verification-2017-Findings-Report.pdf

"2016 Open Data Examination and Verification Report." December 1, 2016. https://www1.nyc.gov/site/analytics/initiatives/examination-and-verification-2016-findings-report.page

"Open Data for All." July 15, 2015. http://www1.nyc.gov/assets/home/downloads/pdf /reports/2015/NYC-Open-Data-Plan-2015.pdf

Appendix A: Local Law 8 of 2016

Passed by New York City Council on December 16, 2015 and approved by the Mayor on January 5, 2016.

Introduced by Council Members Vacca, Koo, Constantinides, Greenfield, Kallos, Mealy and Vallone.

A LOCAL LAW

In relation to an open data law agency compliance examination.

Be it enacted by the Council as follows:

Section 1. Open data law agency compliance examination. a. An office or agency designated by the mayor shall conduct a series of examinations and verifications, as described in subdivision c, and make recommendations to improve the disclosure and inclusion of all public data sets required to be on the single web portal pursuant to section 23-502 of the administrative code of the city of New York.

b. Within 60 days of the effective date of this local law, an office or agency designated by the mayor shall present to the commissioner of investigation a plan for conducting the examinations and verifications described in subdivision c. The commissioner of investigation shall review such plan to ensure that it conforms with either a generally accepted auditing process or a process that the department of investigation would itself use in such an examination. The commissioner of investigation shall report to both the mayor and the council when a plan has been approved. The office or agency designated by the mayor may amend the plan with the approval of the commissioner of investigation.

c. Not later than December 1, 2016, and each December 1 thereafter for the next two years, the office or agency designated by the mayor shall conduct an examination and verification of the compliance with the requirements of subdivision a of section 23-502 of the administrative code of the city of New York, of no less than three mayoral agencies and submit the findings of such examination and verification to the mayor, the council and the examined mayoral agencies. Such findings shall include a list of all public data sets that such mayoral agencies did not make available on the single web portal in accordance with subdivision a of section 23-502 of the administrative code of the city of New York or disclose in the agency compliance plan required by section 23-506 of the administrative code of the city of New York as of the date of the findings, as well as a description of any deviations in the examination and verification process from the plan approved pursuant to subdivision b. For the findings due December 1, 2016, the mayoral agencies examined shall at a minimum consist of the department of sanitation, the department of correction and the department of housing preservation and development. For the findings due December 1, 2017, the mayoral agencies

examined shall at a minimum consist of the department of buildings, the department of environmental protection and the fire department. For the findings due December 1, 2018, the mayoral agencies examined shall at a minimum consist of the business integrity commission, the department of transportation and the department of small business services. In preparing such findings, the office or agency designated by the mayor shall accept suggestions from the public as to possible public data sets within mayoral agencies that have not yet been disclosed.

- d. Not later than December 1, 2019, the office or agency designated by the mayor shall submit a written report to the mayor and the council describing the city's compliance with the requirements of subdivision a of section 23-502 of the administrative code of the city of New York, including a complete list of public data sets discovered by the office or agency designated by the mayor that were not previously made available on the single web portal or disclosed in the agency compliance plan and recommendations to improve the disclosure and inclusion of all public data sets required to be on the single web portal. In preparing this report, the office or agency designated by the mayor shall also accept suggestions from the public as to possible public data sets within mayoral agencies that have not yet been disclosed.
- e. The report and findings required by this local law shall be posted on the city's website no later than ten days after being submitted.
- § 2. This local law takes effect immediately.

Appendix B: Executive Certification Letter template

As the Commissioner of	, or their designee, I do
hereby certify that, to the best of my knowled attached inventory, submitted pursuant to sa	
inventory and confirmed that all datasets list	or other senior legal counsel has reviewed this ed therein have been evaluated according to the ocal Law 11 of 2012, for publication on the Open
	osites, pursuant to Local Law 110 of 2015, and all through said agency's responses to Freedom of
December 31, 2018, this inventory states the	le available on the Open Data Portal on or before reasons why such set or sets cannot be made date by which the said agency believes that it will
Commissioner signature	_
Printed name	-
Title	-
Date	-
Legal counsel signature	_
Printed name	-
Title	-
Date	-

Appendix C: 2018 Examination and Verification – Request for Public Comment

Request for Public Comment

The public is invited to submit feedback on agencies' workbooks until 11:59pm on Wednesday October 17, 2018 in this webform. You may use this form to:

- 1. **Request** a dataset you believe to be maintained by the agency but not already in the Open Data Plan
- 2. **Identify** what you believe to be an omission from any section of the agency's dataset inventory
- 3. **Disagree** with the agency's reported rationale for why any dataset is or is not public
- 4. **Ask** a question about something reported in the survey, including questions on existing datasets on the Open Data Portal or datasets scheduled for future release

While requests for new datasets are accepted for any agency at any time the NYC Open Data Help Desk, DOT, SBS, and BIC will be required to respond to questions and feedback as part of the official Examination and Verification process. These questions and agency responses will be included in an Appendix in the 2018 Open Data Examination and Verification Report, which will be released on December 1, 2018.

Appendix D: Open Data Coordinator Debrief Interview Template

In addition to the verification of agency compliance with the Open Data Law, Local Law 8 of 2016 requires MODA to recommend ways to improve the City's open data program at large. MODA asks that agencies involved in the process meet for a "debrief" interview to discuss the challenges and opportunities Open Data Coordinators face, which helps MODA reflect those agencies' needs in overall program strategy and written recommendations to City Council.

Objectives:

- Learn the lifecycle from record creation to data publishing in agency
- Learn about organizational structure of agency data publishing teams
- Learn about agency pain points
- Learn about agency's priorities for open data program
- Improve E&V process

Questions:

- 1. E&V process:
 - a. What, if anything, was useful about the E&V workbook? What should be changed?
 - b. Was 4 months a reasonable amount of time to complete the dataset questionnaire?
 - c. What advice would you give to agencies going through this process next year?
- 2. Data publishing lifecycle questions:
 - a. How do you identify pre-existing and new datasets for publication?
 - b. Once the dataset is identified, how to decide what attributes to include? How does privacy/security play a role?
 - c. Who writes the metadata/data dictionary?
 - d. How do you decide which datasets need automated feeds?
 - e. How do you determine if something is private/public?
- 3. Who from legal, comms, or leadership needs to be involved, and at which steps?
- 4. Are you aware of who uses open data within or outside your agency?
 - a. What would you be willing to do to engage more directly with them?
- 5. Are you aware when your agency sets up a data feed to another agency or outside entity? How could that be rolled into the open data process?
- 6. What would you like to see changed about the open data program?
- 7. What resources do you need in order to do your job effectively?
- 8. Would you want to play a bigger role in citywide governance of open data?

Appendix E: Open Data 2018 Compliance Process Feedback Survey to ODCs

Respondents:

- 1. 43 responses
- 2. 80% of respondents are the official ODC
- 3. 42% of respondents said it was their first time participating in this process

Insights:

- 1. Breakdown of responses to how happy the respondent is with how their agency is represented in the report & compliance plan:
 - 1. 56% Very happy
 - 2. 26% Somewhat happy
 - 3. 14% Haven't read the final report
 - 4. 2.3% (1) Not happy
 - 5. 2.3% (1) Happy
- Respondent confidence in completing or contributing to compliance reporting requirements:
 - 1. 35% Somewhat confident
 - 2. 65% Very confident
- 3. Which reporting requirements did you find confusing?
 - 1. 55.8% None
 - 2. 16.3% (7) Future releases, automation feasibility
 - 3. 14% (6) Future releases, automation feasibility
 - 4. 14% (6) FOIL requirements
 - 5. 7% Civic engagement requirements
- 4. Timing starting in April thoughts from respondents:
 - 1. 98% Worked for me
 - 2. 2% Too early
- 5. When did you start working on 2018 compliance reporting within your agency?
 - 1. 30% prior to April
 - 2. 23% May
 - 3. 19% April
 - 4. 14% June
 - 5. 9% July
- 6. How much time did you spend working on or supporting compliance reporting?
 - 1. 47% 10+ hours
 - 2. 30.2% 1-4 hours
 - 3. 16% 5-9 hours
 - 4. 2% (1) 40-50 hours

- 7. Which resources were found to be helpful:
 - 1. 77% Email reminders from the Open Data Team
 - 2. 72% Contacting a member of the Open Data Team
 - 3. 58% Open Data Compliance Reporting Handbook
 - 4. 44% Open Data Coordinator Resource Page
 - 5. 44% Open Data Coordinator Convening in June
 - 6. 35% Open Data Compliance Workbook Optional Webinar
 - 7. 5% (2) I didn't use any of these resources
- 8. Which stakeholders, if any, would respondents like the Open Data team to engage with more frequently to help with Open Data reporting requirements?
 - 1. 42% None
 - 2. 28% FOIL Officers
 - 3. 23% General Counsel
 - 4. 21% Communications / PR / External Affairs
 - 5. 19% Data Owners
 - 6. 16% IT team
 - 7. 14% Chiefs of Staff
 - 8. 12%- Deputy Commissioners
 - 9. 5% (2) Commissioners
 - 10. ~6% (3) Responses along the lines of the agency being too small to need this support
- 9. How familiar would you say key stakeholders are in your agency (those outlined above)?
 - 1. 56% Somewhat familiar
 - 2. 23% Very familiar

Appendix F: 2016 and 2017 Recommendations to Improved Citywide Compliance

2016 Recommendations

- 1. Agencies should make their technical ecosystems more accommodating to Open Data by:
 - i. Using automations, rather than manual uploads, to update datasets currently on the Open Data Portal.
 - ii. Writing Open Data requirements into procurements of new data systems and analytics technologies.
 - iii. Allocating more resources to Open Data personnel, especially Open Data Coordinators.
- 2. The Open Data team should empower Open Data Coordinators by:
 - i. Surveying Open Data Coordinators to better understand their roles, priorities, and communication preferences.
 - ii. Producing documents clarifying the roles and responsibilities of Open Data Coordinators, including guidelines on complying with legal mandates.
- 3. The Open Data team should empower Open Data Coordinators by:
 - i. Consulting with the Department of Investigation on potential improvements.
 - ii. Creating clear guidelines and definitions of "data" and "dataset."
 - iii. Creating clear guidelines on determining whether a dataset is "public" or "private."

2017 Recommendations

- 1. The Open Data Team should help Open Data Coordinators craft Open Data strategies unique to their agencies and provide additional documentation on open data organizational structures, return on investment, and compliance best practices.
- 2. The Mayor's Office should regularly communicate the Administration's ongoing commitment to ensuring the success of Open Data not just as a transparency goal, but also as a data governance policy with well-documented return on investment.
- 3. MODA should develop internal awareness campaigns to assist Open Data Coordinators in making more agency staff aware of the benefits of Open Data.

- 4. Agencies should assess demand for public information across multiple public-facing touch points including dataset requests, public records requests, and 311 service requests and work with MODA to identify ways in which they can proactively engage public stakeholders through Open Data.
- 5. MODA should continue to demonstrate the value of open data for data governance and analytics use cases through its Open Source Analytics Project Library and additional channels.
- 6. MODA should provide proactive guidance to Agency commissioners on ODC selection.
- 7. Agencies should have internal, cross-functional data governance teams that regularly convene and have Open Data on the agenda.
- 8. MODA and DoITT should align Open Data reporting with other reporting requirements, including performance reporting and public records requests, to build on existing resource allocations for process efficiencies.
- 9. When an ODC leaves their position, MODA and DOITT should provide proactive support to assist in handoff to ensure smooth transition and knowledge transfer.
- MODA and DOITT should investigate tools for metadata documentation and management.