

Data Coordinator Guide

Exhibit 1

Version 1.0

OPEN DATA PLAYBOOK





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1 INTRODUCTION

Under the City of Seattle's open data policy, each department is responsible for publishing its own data, with centralized support from the open data team in Seattle IT. As outlined in the policy, each department appoints an "open data champion" to lead their department's work and participate in the Citywide network of champions. This playbook is intended primarily for open data champions in the City of Seattle. Whenever we use the word "you," we are referring to the open data champions. Whenever we use the word "we," we are referring to the open data team in Seattle IT.

1.1 THE CITY OF SEATTLE'S OPEN DATA PROGRAM

The City of Seattle's open data program launched in early 2010 with the launch of our open data portal, data.seattle.gov. Since then, Seattle has become a leader in making government data available to the public. Our program is ranked sixth in the country by the Code for America Open Data Census, and in 2015, the Governing Institute named the program its Citizen Engagement Project of the Year.

We were the first in the nation to publish 911 dispatch data from our police and fire departments in near-real-time, which remain among the most popular datasets on our portal. Currently, there are more than 600 datasets and maps available. They include information on schools, public facilities, public art, and numerous other publicly regulated activities that affect life in Seattle. Approximately 14,000 people visit our portal each month.

In 2016, under Mayor Ed Murray, the City created an official Open Data Policy that is backed by an executive order from the Mayor. It directs all City departments to make their data "open by preference," which both sets the expectation that public data will be public and makes clear that we have a responsibility to protect privacy. The new policy lays out clear goals that guide our work as a program.

Over the next few years, our program will focus on quality over quantity, prioritize datasets based on the public interest, improve governance of our open data through improved metadata and regular updates to datasets, and engage our users proactively throughout the process. We want to publish data that is meaningful and usable, maximizing the benefit to the public of the resources we spend to manage the program.



1.2 ROLES & RESPONSIBILITIES

Seattle IT

Seattle's IT Department, led by the Chief Technology Officer, provides leadership for the overall open data program, liaising with the Mayor's Office and City Council as necessary, oversees the policy, and, via the privacy program, ensures that publication of open data is consistent with our privacy policy.

Open Data Team

The open data team, part of Seattle IT's Digital Engagement division, is responsible for day-to-day management of the open data program, including training, process management, and quality control for all datasets published to the open data portal, as well as the open dataset inventory. The open data team is responsible for producing an annual report to the Mayor and the public, an annual plan that outlines the program's strategy for the coming year, and an annual risk assessment of both the program and all the data available on the portal.

Additionally, in collaboration with the City's Civic Technology Advocate, the program offers:

- Data Camp, an annual training for open data champions
- Breakfast of Champions, a monthly engagement for open data champions that blends program management, training, and exposure to civic technology opportunities
- Regular opportunities to engage with the civic technology community in Seattle and beyond

Open Data Champions

Each department's open data champion is responsible for managing their department's participation in the program. They work with leadership to set priorities, oversee the publication and ongoing management of datasets for their department, and participate in ongoing activities with the network of champions. They also keep the open dataset inventory up-to-date and contribute to annual reports and plans.

Data Owners

Data owners across City government contribute datasets to the inventory and to the portal.

Department Leadership

Department directors and managers guide their department's participation in the open data program, setting open data-related performance goals for their teams, updating policies and procedures to reflect the open data policy, and making sure their staff have the time and resources to participate in the program. As needed, they work with open data champions to set priorities, engage stakeholders, and work through any sensitivities in their datasets prior to publication. They consult with open data champions at the start of new projects and software implementation to ensure that they facilitate compliance with the City's open data policy.



2 HOW TO CREATE A DATASET INVENTORY

2.1 WHAT IT IS

The open data program's dataset inventory serves as:

- a way to see, at a glance, what data the City has that might be appropriate for publication as open data under the new open data policy
- a tool for the open data team to keep track of all the potential open data in the City so we can manage the program and report up to the Mayor's Office and out to the public
- a tool for open data champions to keep track of their department's open data and make sure it is managed well on an ongoing basis

The dataset inventory is part of the City's comprehensive data inventory, which is managed by the Chief Privacy Officer. Unlike the comprehensive data inventory, which includes all data collected and stored by the City, the open data program's dataset inventory is focused on existing datasets that are already in use. This is a first step that may or may not lead to publication of the dataset, in full or in part.

2.2 HOW TO CONTRIBUTE

Each department is different in terms of how it is managed, how much data you own, what *kind* of data you own (ranging from reports created with other people's data, usually published in pdf, to huge database systems where datasets are not always easy to extract), and how you work together as a department. Depending on what works for you, you may want to start with any or all of these steps:

- meet with your department director and/or team leaders to share what open data is, what the Mayor's expectations are for the inventory, and how you might best go about soliciting input from data owners
- meet with your department's communications team, public information and/or public records officer, or persons responsible for performance management reporting
- meet directly with data owners to talk to them about what they own

At this point, do not exclude any datasets based on privacy, security, sensitivity or quality concerns. Every dataset will be reviewed and approved before it's published.

2.3 GUIDING QUESTIONS

- What data does your department use for internal performance and trend analysis?
- What data populates your monthly or quarterly reports?
- What information is published as a performance metric (e.g. on performance.seattle.gov)?
- What information do you report to local, state, or federal agencies?
- What information do you share with other City departments?
- What information do you share with external partners?
- What information is repeatedly requested by the public, via the public disclosure process and/or open data requests?
- What kinds of open data are your peer agencies across the country publishing?

Hint: Check out [Chicago](#), [Philadelphia](#), and [San Francisco](#) to start

2.4 TEMPLATE

The open data program has provided a template for the common inventory, currently available as an Excel spreadsheet. It includes fields in three categories:

Basic information

Department	Work Group	Dataset Name	Data Description	Data Source	Data Source Type	Technical Details	Data Owner/Contact	Technical Contact
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At-a-glance assessment

Assessment						Notes
Quality	Privacy/PII	Security	Sensitivity	Performance	Priority	

Post-publication tracking

Date Published	Update Period	Date Last Updated	Date of Next Update
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2.5 DEFINITIONS

The at-a-glance assessment is a tool for the inventory that is intended to assist with prioritization. It is not a substitute for the in-depth data quality and privacy assessments that are required prior to publication. In the template itself, you will find definitions for each assessment category as well as examples. Most fields are a drop-down.

Here are the definitions as included in the template:


Quality

<i>Good</i>	This dataset is used routinely, is managed in a way that makes it legible to users besides the owner, and is reasonably accurate
<i>Acceptable</i>	This dataset is used routinely but not necessarily legible to non-owners and/or has some gaps or discrepancies that limit its usability
<i>Poor</i>	This dataset exists but is not regularly used, updated, or otherwise managed in a way that makes it valuable

Privacy/PII

This is a flag only; datasets will be reviewed for privacy prior to publication. PII includes but is not limited to:

Name and initials in any combination
Identification number (e.g., Social Security #)
Birthdate



Age
Gender
Home address
Home telephone number
Personal cellular, mobile or wireless number
Personal e-mail address
Drivers' license number
Information on medical or health conditions
Financial information (credit card/PCI, billing info, account info)
Health information
Marital status
Nationality
Sexual behavior or sexual preference
Physical characteristics
Racial or ethnic origin
Religious, philosophical or political beliefs
Trade union membership
Biometric data
Household information
Consumer purchase or billing history
Unique device identifiers (IP/ MAC addresses)
Location (e.g., GPS) info (including that provided by mobile devices)

Security

Public Public information can be or currently is released to the public. It does not need protection from unauthorized disclosure, but does need integrity and availability protection controls. This would include general public information, published reference documents (within copyright restrictions), open source materials, approved promotional information and press releases.

Examples:

- Information provided on City web sites
- Information for public distribution (e.g. budget documents after public release)
- GIS maps
- Meeting agendas and minutes

Sensitive Sensitive information may not be specifically protected from disclosure by law and is for official use only. Sensitive information is generally not released to the public unless specifically requested. Although most all of this information is subject to disclosure laws because of the City's status as a public entity, it still requires careful management and protection to ensure the integrity and obligations of the City's business operations and compliance requirements. It also includes data associated with internal email systems and City User account activity information.



Examples:

- Work phone numbers
- Organizational charts
- Interdepartmental documents
- Policies, procedures, and standards

Confidential Confidential information is information that is specifically protected in all or in part from disclosure under the State of Washington Public Disclosure Laws ([See Link to State Disclosure Law in Appendix B](#)).

Examples:

- Personally Identifiable Information (PII)
- Information concerning employee personnel records
- Information regarding IT infrastructure and security of computer and telecommunications systems, information security plans
- Information related to law enforcement (e.g. witness protection information)
- Information related to minors (e.g. adoption and foster records)

Special Handling

Some confidential information is specifically protected from disclosure by law and subject to strict handling requirements dictated by statutes, regulations, or legal agreements. Serious consequences could arise from unauthorized disclosure, such as threats to critical infrastructure, increased systems vulnerability and health and safety, or legal sanctions. Departments handling this category of information must demonstrate compliance with applicable statutes, regulatory requirements and legal agreements.

Examples:

- Payment Card Industry (PCI) information
- North American Electric Reliability Corporation (NERC)
 - Performance and standards metrics
 - Risk management and capability information
- Criminal Justice Information Services Division (CJIS)
 - NCIC data
 - Open investigations
- HIPAA personal health records information, such as:
 - Health insurance
 - Patient treatment information
- Family Education Rights and Privacy Act (FERPA) information, such as:
 - Tax records of parents and students
 - Grades



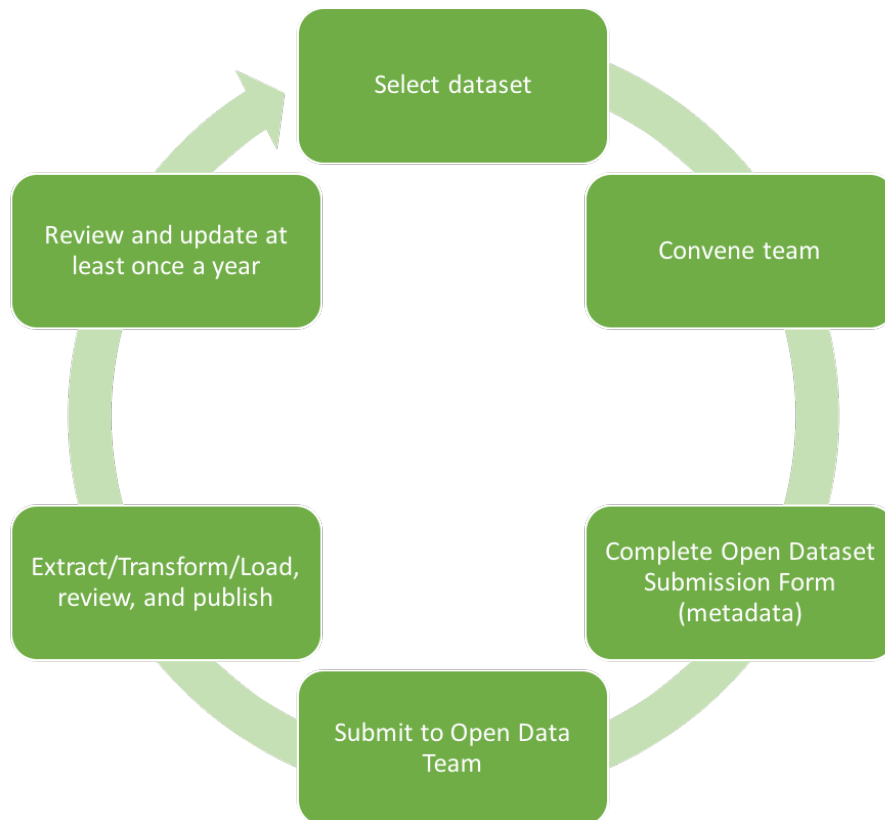
Sensitivity

<i>High</i>	This information is considered sensitive by stakeholders, leadership, or the Mayor's Office, such that it would likely require outreach to those groups prior to publication (e.g. labor, vendors, impacted populations)
<i>Medium</i>	This information has an impact on stakeholders that should be taken into account, but is unlikely to be disruptive to ongoing processes
<i>Low</i>	This information is already public in some form or does not contain data that would be surprising to stakeholders

Priority

<i>High</i>	There is demand for this dataset by the department and/or the public, or it is relevant to high-profile work or objectives
<i>Medium</i>	The dataset should be published but is not an immediate priority
<i>Low</i>	There is no apparent demand yet for this dataset

3 HOW TO PUBLISH A SINGLE DATASET



3.1 SELECT A DATASET

While the City’s open data policy makes our data “open by preference,” in reality, publishing each dataset requires work on both a one-time and ongoing basis – to standardize the data, make it machine-readable, write good metadata, and take steps to protect privacy and mitigate security risks. Each department will need to prioritize which datasets to publish based on a variety of factors, including input from the public.

3.2 CONVENE DATASET TEAM

To prepare the dataset for publication, you will need a team. Here’s who you’ll want on it:

- **Open data champion**
The person responsible for oversight of all of the department’s open data
- **Dataset owner(s)**
The person or people who manage the data and/or work related to it, who understand what it is used for, who can provide the context/metadata that ensures the public understands what it means, and who can lead stakeholder engagement

- **Technical resource**

The person who has the technical skill to extract datasets from databases and outer sources, prepare the data for publication and ultimately publish the data to data.seattle.gov

These do not need to be separate people. For example, depending on the dataset, the business owner may have the technical skills or also serve as Open data champion. You will enter the information about who is on the team, and which member is responsible for which task, into the Open Dataset Submission Form.

3.3 COMPLETE THE OPEN DATASET SUBMISSION FORM (METADATA)

To submit a dataset for publication, you will fill out the open dataset submission form, which also acts as the metadata for each dataset. This information will be accessible to the public alongside the dataset itself. This is where you will want to put any information that does not belong inside the dataset but is important for understanding what it is and how to use it. Relevant links may be included, so long as you take care to keep them up to date.

The submission form has two parts: general dataset information and a sample record. Here is what you will be asked to provide:


- A title, utilizing the City's naming standards
- Description & business purpose (any additional information about the dataset that will be useful)
- Keywords describing the data that help people searching for it
- URL's that link to the department and other websites related to the dataset
- Primary contact information
- Source and source type
- How the dataset is extracted and prepared for publication
- How the dataset is published to data.seattle.gov
- How often the dataset is published to data.seattle.gov

For each column in the dataset, you will document the:

- Column (field name)
- Data type (text, date/time, geocode, etc.)
- Sample value
- Column metadata description (what the data in the column represents or means)

You will also include a one-record example of dataset with all fields populated. Here is a great example from the Sold Fleet Equipment dataset:

Field Name	Data Type	Value	Metadata Description
EQUIP_ID	Text	1404	Vehicle equipment identification number
YEAR	Text	2000	Vehicle manufacture year
MAKE	Text	PLYMOUTH	Vehicle make
MODEL	Text	NEON	Vehicle model
DESCRIPTION	Text	SUBCOMPACT SEDAN	Type of vehicle



DEPT	Text	SPD	City department
SALE_PRICE	Text	3700	Vehicle sale price
SOLD_BY	Text	BIDADOO ONLINE AUCTION	Sales agent

You can learn more about metadata for open data through this guide, published by the Center for Government Excellence at Johns Hopkins University: <https://centerforgov.gitbooks.io/open-data-metadata-guide/content/>

3.4 SUBMIT TO THE OPEN DATA TEAM FOR REVIEW

The open data team will review each dataset for privacy, security, and quality prior to publication. If there is a significant risk of privacy harm, they will escalate the review to the Chief Privacy Officer. If they notice security issues, they will work with you to reduce the risk of harms prior to publication. They will flag any quality concerns so they can either be addressed prior to publication or described in the metadata, so that users are aware of the dataset's limitations.

3.5 DATASET TEAM: PUBLISH THE DATASET

There are three methods for publishing datasets to data.seattle.gov:

Manual. This is generally used for datasets that are relatively small and uncomplicated, and where the refresh rate is quarterly or longer. With some training, this method is easily mastered by non-technical data providers.

Automated. This is recommended when datasets will be updated more frequently than quarterly. The tool we use for this, Socrata's DataSync, can also be mastered by non-technical data providers.

Programmatic (API to API). This is ideal for real- or near-real-time transfers. Application development skills are required.

For any of the methods above, the following steps are required.

EXTRACT

Export data from the source system. Every system is different so the method for doing this will vary. If possible, you should export only the data fields (or columns) that correspond with the schema you defined in the Dataset Submission Form (see Section 3.2 above).

TRANSFORM

If necessary, modify the exported data so that the data structure matches the data schema defined in the Dataset Submission Form.

LOAD

Using one of the publication methods described above, upload the data into data.seattle.gov.



PUBLISH PRIVATELY

Initially, the dataset will be marked "private" and is limited to you, selected testers, and the open data team. The open data team will review the privately published dataset and work with data owners and appropriate stakeholders to make any needed changes. The open data manager will determine when it is ready for final publication.

OPEN TO THE PUBLIC

Once the data is ready for publication, the open data manager will authorize it to be released to the public.

3.6 REVIEW AND UPDATE

Once the dataset has been published, the open data champion is responsible for keeping it up-to-date, handling questions about the dataset from the public, and working with the open data team to resolve any issues that emerge. At least once a quarter, you should review all your department's published datasets to ensure they are being updated on the basis promised in the metadata. This is true for datasets updated automatically as well as those that require a manual update. The dataset inventory serves as a tool for you to keep track of what has been published so it is easier to verify that the data are up-to-date.

4 HOW TO MAKE THE BEST USE OF OPEN DATA

4.1 ENGAGE STAKEHOLDERS

Open data has many stakeholders: those who are impacted by the data directly, those who are impacted by the data indirectly, those who use of the data, and those who consume the data. Anyone who is affected by or interested in what's happening in our city is a stakeholder in open data.

We recommend engaging stakeholders at all stages in the process – as you determine demand for datasets from the public, as you prepare to release each dataset, and on an ongoing basis to ensure the dataset is as useful as it can be. This also allows you to see how people react to your proposed data before it is published, identifying areas of potential confusion or unnecessary limitations on its usefulness. It can also reveal opportunities for us to work together with outside groups to make the most of the data for the public good.

For example, a dataset that reveals information about Police Department activity is likely to have a broad group of stakeholders, from victims of crime and their families to officers and their labor union to the Chief of Police and the Mayor, as well as the general public. If we simply publish that data without first engaging with those whose lives it touches, we do them a great disservice. However, if we think about these many stakeholders from the beginning, that dataset can be the basis for an open and transparent conversation between the Police Department and the community.

Let's define each of these groups.

Direct Stakeholders: People and institutions who are represented directly in the data.

For example:

- Police officers identified in the officer-involved shootings dataset
- Non-profit providers of free meals listed in the meal programs dataset
- Owners of the buildings listed in the unreinforced masonry dataset

Indirect stakeholders: People and institutions who may be impacted by the release of the data or analysis conducted on it. For example:

- Residents of zip codes listed as having high rates of households below the poverty level
- Property owners in neighborhoods where crime rates are higher than average
- Students at schools that are underperforming

Users: People and institutions who will use the raw data. For example:

- Journalists who will look for possible stories in the data (e.g. [“How racially diverse is your school?”](#), [The Seattle Times](#))
- App developers who want to build tools on top of the data (e.g. [ArtQuest Seattle](#))
- Companies that ingest the data (e.g. [Zillow](#))

- City departments who use it to communicate with stakeholders (e.g. [Spacefinder](#) from the Office of Arts & Culture)

Consumers: Anyone who reads or uses the information. The list is endless, but this can include:

- People in the City administration who use it to inform their work and/or performance, such as the data owner, the department's leadership, the Mayor, and policy advisors
- People with a political interest in the work it represents, such as City Council members and their staff, community organizations, and activists
- People managing similar programs or who have similar goals, such as other jurisdictions, the county, the state, the federal government, philanthropists, and non-profits
- People who pay attention to what is happening in the city, including researchers, media, local businesses, residents, and people who work here, as well as those generally interested in urban planning

As you can imagine, there are many people and institutions who are impacted by the data in different ways. The more you can map them out as you think about your datasets, the easier it will be to make decisions about what to include (or what not to), what format to provide the data in, and what activities you might undertake around its release to ensure the data is well understood.

We recommend looking at all of this through an equity lens. The open data program provides outreach opportunities and can help to connect you with users of data as well as to support your efforts to engage those impacted by the data in the process, from publication to promotion. However, we rely on your subject matter expertise to consider the possible impacts and start brainstorming about who needs to be engaged.

Here's a great [Slideshare](#) from Laurenellen McCann of the New America Foundation that offers more insights.

4.2 PARTICIPATE IN LARGER EFFORTS

The City of Seattle has participated in national efforts to release more and better data, such as the What Works Cities program and White House Police Data Initiative. We also collaborate with regional jurisdictions, such as the county and state, and share best practices with other cities in our area. These connections allow us to share and adopt the best approaches, creating a community of practice that makes all this work easier in the long run.

There are many efforts underway to create and implement open data standards, allowing for comparability of data and interoperability of applications built for cities. Standards significantly improve the potential for useful analysis and drive down the costs of development for civic technology. For example, the General Transit Feed Specification, or GTFS, powers the OneBusAway app and allows for it to be used in other cities that publish transit information in GTFS.

Here are some well-known Open Data standards that we will strive to use in the future, along with examples of applications that use them, could use them, or could expand significantly if our City's data were available in this standard:

- [Open 311](#) (all non-emergency issue reporting)
Sample use cases: [FixMyStreet UK](#), [SeeClickFix](#), [Chicago Works](#)
- [Open Referral](#) (community resources and social services)
Sample use cases: [Purple Binder](#) and [mRelief](#), *Chicago*
 - [Open Eligibility](#)
 - [Human Services Data Specification](#)
- [Open Trails](#) (public trails and related geographic data)
Sample use cases: [Trails Editor](#), [Totago](#)
- [Housefacts](#) (residential buildings)
Sample use case: [Trulia](#)
- [Building & Land Development Specification \(BLDS\)](#) (commercial buildings and permits)
Sample use case: [Seattle in Progress](#)
- [Open Contracting](#) (public contracting)
Sample use case: [dgMarket](#)
- [General Transit Feed Specification \(GTFS\)](#) (transit)
Sample use cases: [OneBusAway](#), [TransitApp](#)
- [State Decoded](#) (laws, codes, and statutes)
Sample use case: [LawHelp.org](#)
- [Federal Spending Transparency](#) (budget information)
Sample use case: [USAspending.gov](#), [Open Budget](#)


4.3 PARTICIPATE IN LOCAL EFFORTS

Seattle IT's new civic technology program works closely with the open data program to facilitate better communication between the City and the technology community. As a participant in the Network of Champions, you will have regular opportunities to learn about what's happening in the open data movement, to collaborate with civic technologists, and to participate in local events, from hackathons to ongoing volunteer projects. This information is shared internally via a listserv and a Sharepoint calendar for easy access and is mentioned at the monthly Breakfast of Champions meetings.

4.4 JOIN THE GLOBAL COMMUNITY

Open data is a global movement that is helping governments improve their operations, better communicate with the public, power analysis that makes cities "smarter," and stimulate the development of civic technology tools that improve people's quality of life. By becoming an Open data champion, you also become part of a growing network of public servants working to build 21st-century government. We think this is exciting work, and we hope you will, too.

If you want to explore open data in an open-ended way on your own, we suggest checking out the following online resources:

- 
- The U.S. federal government's open data site
data.gov
 - Code for America, a national nonprofit that partners with government and builds open-source tools
codeforamerica.org
 - What Works Cities, a national networked initiative from Bloomberg Philanthropies
whatworkscities.bloomberg.org
 - The Open Data Handbook, a project of the Open Knowledge Foundation that includes resources and case studies
opendatahandbook.org
 - Open Gov Foundation, a project of Open Gov
opengovfoundation.org
 - The "I Quant NY" blog by data scientist Ben Wellington, plus his amusing & insightful TEDx talk (yes, we are encouraging you to use YouTube on City time!)
[IQuantNY](https://IQuantNY.com) and [TEDx video](https://www.youtube.com/watch?v=...)

Social media is another great way to get engaged. Use the hashtags #opendata, #civictech, and even #civitech, and follow accounts like Code for America founder Jen Pahkla [@pahlkadot](https://twitter.com/pahlkadot), Sunlight Foundation analyst Alex Howard [@digiphile](https://twitter.com/digiphile), Code for America Brigade program manager Chris Whitaker [@civicwhitaker](https://twitter.com/civicwhitaker), GovTech magazine [@govtechnews](https://twitter.com/govtechnews), and the City of Seattle's civic technology program [@civitechsea](https://twitter.com/civitechsea).



5 SUPPORTING DOCUMENTS

- Open Dataset Inventory Template
- Open Dataset Submission Form
- Privacy One-Pager

Technical Standards Manual
Exhibit 2



Open Data Policy and Technical Standards Manual

April 2018

**City of New York
Department of Information Technology and Telecommunications**

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1.0 Executive Summary

On March 7, 2012, Mayor Bloomberg signed Local Law 11 of 2012, which amends the administrative code to mandate that qualifying City-managed digital data be made available to the public-at-large through a single web portal. By September 2012, the City's Department of Information Technology and Telecommunications (DoITT) is to prepare and publish a technical standards manual for City agencies, setting forth policies and standards for open data.

This document is the Technical Standards Manual (TSM) that defines the Citywide policies, standards, and guidelines required to support the legislation.

2.0 Introduction

2.1 Background, Authority, and Governance

Local Law 24 of 1995 established DoITT as "New York City's information technology and telecommunications agency."

Chapter 48 §1072(a) of the New York City Charter established the authority of DoITT by assigning powers and duties "to plan, formulate, coordinate and advance information technology and telecommunications policies for the city."¹

Under the administration of Mayor Bloomberg, DoITT published "PlanIT" in 2007 to drive IT development, improve and transform service delivery, and make City government more open by expanding the accessibility, transparency, and accountability of City government to its residents, businesses, visitors, and employees.

In late 2009, DoITT launched the NYC DataMine, which served as the City's first effort to identify data sets and make them available to the public for download. In February 2010, DoITT published its "30-Day Report: Enabling the Connected City,"² which committed to establishing Citywide open data policies to improve access to public information.

Executive Order No. 140 of 2010 directed DoITT to "be responsible for establishing and enforcing Citywide IT policies and for ensuring that such policies are aligned with the City's business needs and investments, as well as the individual business needs of each agency."³

In October 2011, DoITT launched the [NYC Open Data Portal](#), advancing beyond simple downloads to fully interactive viewing, searching, and visualizing of City data. Additionally, the NYC Open Data Portal provides sophisticated feedback mechanisms, metrics, and Representational State Transfer (REST) Application Programming Interfaces (APIs).

In 2012, the New York City Council passed Local Law 11, which was subsequently signed by Mayor Bloomberg, to make City data available online using open standards to ensure that City government is transparent, effective, and accountable to the public

Local Law 11 streamlines intra-governmental and inter-governmental communication and interoperability, permits the public to assist in identifying efficient solutions for government, promotes innovative strategies for social progress, and creates economic opportunities. Local

Law 11 directs DoITT to produce the TSM for the publishing of public data sets in raw or unprocessed form. These public data sets are to be made available on the Internet, accessible through a single web portal that is linked to *NYC.gov* (or any successor website maintained by, or on behalf of, the City of New York).

The TSM identifies the reasons why each technical standard was selected and the types of data for which it is applicable, and may recommend or require that data be published in more than one technical format. The TSM includes a plan to adopt or use a web application programming interface that permits application programs to request and receive public data sets directly from the single web portal. DoITT will update the TSM as necessary, as required by the law.

2.2 Definitions

Several terms in the TSM have specific meanings as defined in the Local Law 11 and these are included in the list below. When a term is defined in the law, it is so indicated.

Term	Definition
Agency	<p>An Agency, when the term is capitalized, means an office, administration, department, division, bureau, board, commission, advisory committee or other governmental entity performing a governmental function of the city of New York. (Per Local Law 11 definition)</p> <p>When not capitalized, the term agency means either an agency in another jurisdiction, such as federal or state, or an exact quotation from another published City document, such as a City Local Law or Executive Order.</p>
City	The City of New York is referred to interchangeably as New York City, NYC, or the City.
Citywide Standard	An industry standard or <i>de facto</i> standard which is adopted and/or mandated by DoITT to be used in relation to the City's information technology systems and services. DoITT is directed by the City Charter and subsequent Executive Order to establish Citywide standards that apply to all New York City Agencies.

Term	Definition
Data	<p>(Per Local Law 11 definition)</p> <p>Final versions of statistical or factual information</p> <ol style="list-style-type: none"> 1. In alphanumeric form reflected in a list, table, graph, chart or other non-narrative form, that can be digitally transmitted or processed; and 2. Regularly created or maintained by or on behalf of and owned by an agency that records a measurement, transaction, or determination related to the mission of an agency. <p>Data shall not include information provided to an agency by other governmental entities, nor shall it include image files, such as designs, drawings, maps, photos, or scanned copies of original documents, provided that it shall include statistical or factual information about such image files and shall include geographic information system (GIS) data.</p>
Data Set	A named collection of related records on a storage device, with the collection containing individual data units organized or formatted in a specific and prescribed way, often in tabular form, and accessed by a specific access method that is based on the data set organization.
DoITT	The New York City Department of Information Technology and Telecommunications. The term “department,” as used in Local Law 11, is defined as “the department of information technology and telecommunications or any successor agency.”
Metadata	Contextual information that makes the public data sets easier to understand and use.
ODC	An Open Data Coordinator. An ODC is a City employee designated by an Agency to act as the coordinator of open data efforts for that Agency.
Open Standard	<p>(Per Local Law 11)</p> <p>A technical standard developed and maintained by a voluntary consensus standards body that is available to the public without royalty or fee.</p>

Term	Definition
Public Data Set	<p>A comprehensive collection of interrelated data that is available for inspection by the public in accordance with any provision of law and is maintained on a computer system by, or on behalf of, an Agency, excluding any data to which an Agency may deny access pursuant to the Public Officers Law or any other provision of law or any federal or state rule or regulation.</p> <p>The entry above is only a summary. Please consult Local Law 11 for the full authoritative definition.</p>
Requirement	<ol style="list-style-type: none"> 1. A condition or capability needed by a stakeholder (such as an entity, member of the public, or the City) to solve a problem or achieve an objective. 2. A condition or capability that must be met or possessed by a solution or solution component to satisfy a contract, standard, specification, or other formally imposed document. 3. A singular documented need of what a particular product or service should be or perform.
Technical Standard	<p>(Per Local Law 11 definition)</p> <p>A standard that includes:</p> <ol style="list-style-type: none"> 1. The common and repeated use of rules, conditions, guidelines, or characteristics for products or related processes and production methods, and related management systems practices; and 2. (i) The definition of terms; (ii) classification of components; (iii) delineation of procedures; (iv) specifications of dimensions, materials, performance, designs, or operations; (v) measurement of quality and quantity in describing materials, processes, products, systems, services, or practices; (vi) test methods and sampling procedures; or (vii) descriptions of fit and measurements of size or strength.

Term	Definition
Voluntary Consensus Standards Body	<p>(Per Local Law 11 definition)</p> <p>A domestic or international organization that develops and maintains a technical standard. A Voluntary Consensus Standards Body utilizes a transparent deliberative process, permits the participation of any party, and achieves general consensus, although not necessarily unanimity, of the participating parties, including a process for attempting to resolve any differences in viewpoint.</p>

3.0 City Policies

In accordance with Local Law 11, DoITT has established the following policies. Citywide open data policies apply to all City Agencies as defined by this law.

3.1 Governance and Oversight

3.1.1 Chief Open Platform Officer

DoITT must designate a Chief Open Platform Officer (COPO). The COPO will act as the overall manager for information technology initiatives as they pertain to open government, and making machine-readable data and transactional services available for public use. The COPO will have the following responsibilities:

- Oversee the operation and ongoing evolution of the City's Open Data program, and manage DoITT's Open Data team;
- Engage with Agency Open Data Coordinators (as described below) and with executive leadership to strategically plan, and provide support for, the publishing of data sets;
- Coordinate the delivery of transactional services and the development of related developer ecosystems;
- Publish the annual Compliance Plan (as mandated by Local Law 11);
- Determine, operationalize, and support the public engagement strategy, including outreach and public inquiries;
- Collaborate with other local, state, and federal government entities on open government strategies and data specifications; and
- Ensure the appropriate governance and technical controls exist as required by the City's Chief Information Security Officer.

Pre-existing processes such as Freedom of Information Law requests or public hearing governance will not be part of the COPO's responsibilities.

3.1.2 Open Data Coordinators

Each Agency must designate one of its employees as the Agency's Open Data Coordinator (ODC). Each ODC will act as the coordinator of open data efforts for that Agency. Each ODC will have the following responsibilities:

- Identify and enable the delivery of data sets to the single web portal;
- Develop the Agency portions of the citywide compliance report;
- Liaise with the Chief Open Platform Officer and the DoITT team supporting the Open Data program; and
- Address feedback from the public for the Agency's public data sets.
- Perform public outreach and presentations with the aim of increasing strategic use of the City's data sets.

The ODC should be well-connected to or a part of the following Agency teams, in order of preference:

- Analytics / Strategic / Management Planning;
- Web Content / Communications;
- Legal; and
- Information Technology.

3.1.3 Agency Compliance Plan

DoITT submitted a compliance plan to the Mayor and the City Council on September 9, 2013. Updated versions must be released annually, on or before July 15 of each year. DoITT will supply a template to each Agency to facilitate development of the compliance plan and updates. City agencies must cooperate with DoITT in the preparation of their plans. DoITT must make the final version of the compliance plan available to the public on the single web portal.

The compliance plan submitted to the Mayor and the City Council shall include a summary description of public data sets under the control of each Agency, prioritization of public data sets for inclusion on the single web portal, and a timeline for their publication or update. If a public data set cannot be made available on the single web portal by December 31, 2018, the plan shall clearly state the reasons why that set cannot be made available, and, to the extent practicable, the date by which the data will be available on the single web portal.

3.1.4 Open Data Dashboard

DoITT maintains a public Open Data dashboard to promote public and internal accountability. The dashboard tracks agency compliance plans and interim progress – specifically which data sets have been published through the NYC Open Data Portal or by direct public access. The dashboard also displays by Agency:

- Scheduled data set releases;

- Inventory of data sets released; and
- Data set releases behind schedule.

3.1.5 Civic Engagement Reporting

In the required annual open data compliance reporting process, to ensure the engagement of the public by an agency's public open data assets, Open Data Coordinators will be required to liaise with their agency's communications, digital media and / or community affairs teams to identify 3 public engagement commitments their agency can commit to in the following year. Guidance on commitments to undertake is provided by the Open Data Team in the annual reporting compliance workbook issued annually.

3.2 Technology Projects

3.2.1 New Technology Systems

All new City projects to implement information technology systems, excluding infrastructure, must include funding, staffing, and tasks to comply with Open Data legislation, policies, and technical standards.

"Infrastructure" refers to those projects that solely involve the procurement and deployment of desktop computers, servers, operating systems, telephones, routers, firewalls, networks, and similar hardware capabilities.

3.2.2 Existing Technology Systems

All operating information technology systems, excluding infrastructure, must be evaluated for data that is eligible for publication. For each system, the Agency that owns or prepares the data must create a plan to publish data to comply with the Open Data legislation, policies, and technical standards. An updated summary of the plan must be provided to DoITT for inclusion in each Compliance Plan.

3.3 Tools

3.3.1 Enterprise Open Data Platform

DoITT manages the NYC Open Data Portal, the City's public data set catalog. All public data sets must be identified and referenced on this site. The single web portal includes interactive features to solicit public feedback. Public feedback includes discussion of Open Data policies, standards, guidelines, data sets, and prioritization of data set releases. Whenever practicable, DoITT will ensure the platform uses open Internet standards and specifications.

3.3.2 Enterprise Data Publishing Tools

DoITT will provide and manage automation tools to extract data from City technology systems, applying transformations, and loading data into the NYC Open Data platform. Agencies should leverage these tools as much as possible.

3.4 Data Sets

3.4.1 Open By Default

All public data sets must be considered open unless they contain information designated as sensitive, private, or confidential as defined by the [Citywide Data Classification Policy](#), or information that is exempt pursuant to the [Public Officers Law](#), or any other provision of a federal or state law, rule or regulation or local law. The Agency submitting the data set is required to review its status and maintain currency with public disclosure requirements.

3.4.2 Alignment to Open Specifications

The structure of published data sets should align to New York State, national, or international specifications, where they exist. Agencies may consult with DoITT regarding current specifications.

3.4.3 Metadata

Every Agency must create, publish, and maintain on the NYC Open Data Portal accurate metadata for each public data set as set forth in the City Standards for metadata in this document.

3.4.4 Maintenance

Every Agency must ensure that each public data set and associated metadata is kept current to the extent that the agency regularly maintains or operationally updates the public data set.

3.4.5 Third-Party Search Engines

All public data sets must be accessible to the public through the NYC Open Data Portal and accessible to third-party (Internet-based) search engines. In any exceptional case in which for technical reasons it is not feasible to host a public data set on the NYC Open Data Portal itself, the NYC Open Data Portal must provide a direct link to the public data set that is hosted elsewhere. An Agency may self-host the public data set, provided that the public data set is accessible through the link on the NYC Open Data Portal to the public and to third-party (Internet-based) search engines.

3.4.6 Language

Agency data sets, including metadata, are not required to be published in additional languages beyond those used at their sources. The City may opt to implement automated language translation of data sets in the future.

4.0 City Standards

4.1 Data Sets

4.1.1 Data Content

4.1.1.1 Data Types

Data sets may contain the following data types:

- Numbers, money, and percentages;
- Dates/times (ISO-8601 preferred);
- Booleans;
- E-mail addresses;
- URLs; and
- Location columns.

4.1.1.2 Address Data

For any dataset on the NYC Open Data Portal that includes row-level address fields, agencies must separate locational information into “core address” and “core geospatial reference” attributes. These attributes will appear on the Portal according to a standard column naming convention.

Agencies will be responsible for separating **core address** information into five standard column fields:

- “NUMBER”
- “STREET”
- “UNIT”
- “POSTCODE”
- “BOROUGH”

Agencies will also be required, with technical guidance from the Open Data team, to include eight standard column fields of **core geospatial reference** information:

- “LATITUDE”
- “LONGITUDE”

- “COMMUNITY BOARD”
- “COUNCIL DISTRICT”
- “CENSUS TRACT”
- “BIN” (Building Identification Number)
- “BBL” (Borough-Block-Lot)
- “NTA” (Neighborhood Tabulation Area)

If an agency cannot comply with these standards, Local Law 110 of 2015 requires it to report why it has failed to comply and how it plans to comply in the future. The Open Data team will work with noncompliant agencies to identify when an exemption is appropriate, how to report the reason for exemption, and what can be changed to ensure future compliance.

As per current Open Data policy, agencies will be alerted but are not required to change their database of record when records on the Portal are incorrect as a result of a data entry error. Similarly, the Open Data team does not warranty the accuracy of data that is incomplete or in error as the result of Geosupport. However, the Open Data team will work with agencies to mitigate known issues, and regularly considers internal and public feedback for future updates to standards and technical tools.

4.1.1.3 Geocoding

We recommend agencies whose datasets do not already contain the eight *core geospatial reference* fields to use Geosupport, a publicly available tool that also serves as the City of New York’s geocoder of record maintained by the Department of City Planning. *Core address* data entered into Geosupport can return all required *core geospatial reference* data. Agencies may geocode their locational data at the database level or the extraction level. Alternatively, agencies may elect to have the Open Data team establish an automated feed, in which datasets are passed through an ETL (Extract-Transform-Load process) where they are geocoded and uploaded directly to the Portal.

When a dataset is geocoded, its data dictionary must designate which attribute fields were reported directly by the agency, and which attribute fields were created by geocoding in order to meet these standards. Finally, agencies with datasets that do not have address fields but include other locational data are encouraged, but not required, to populate as many *core geospatial reference* fields as possible using Geosupport.

4.1.2 Metadata

4.1.2.1 Data Dictionaries

As mandated by Local Law 107 of 2015, all datasets on the Open Data Portal must be accompanied by a plain language data dictionary, with the goal of making the data more understandable.

Outlined below are the minimum standards that must be adhered to:

- Agency name, dataset name, dataset description, and update frequency must all be provided
- Each column name should be listed and defined
- Where applicable and reasonable ,terms, acronyms, codes, and units of measure should be defined
- To the extent practical, a range of possible values should be included
- History of modifications to dataset format should be documented

Agencies may choose to provide additional information deemed relevant, including but not limited to, method of collection, relationship with or between other datasets, system of record, field lengths, etc.

Data dictionaries can be provided in a file format of an agencies choosing, but must include the above minimum requirements.

4.1.2.2 Standards for Data Citation

An Agency should include any preferred citation for a data set in the data set's metadata or supporting documentation.

4.2 Data Set Publishing

The Agency ODC should work closely with DoITT during the initial data set publishing process to identify the best technical approach to automate delivery to the public. The following mechanisms are supported:

4.2.1 Database Management System (DBMS) Access

For Agencies that require DoITT assistance to extract data from back-office systems, the Agency should provide read-only DBMS credentials for the necessary databases, tables, stored procedures, and/or views. The credentials should not permit access to tables, columns, or other entities that contain information that is not included within the definition of public data set because it is exempt from disclosure.

If the Agency operates a data warehouse, it should provide access to extract public data sets from the warehouse rather than the source operational system.

4.2.2 File Transfers

Agencies may choose to publish files to a location on the City intranet that DoITT staff or DoITT-managed automation tools can access. Specific details, such as location, formats, naming conventions, and sizing, should be discussed with DoITT.

4.2.3 Enterprise Service Bus

Agencies may leverage DoITT's Enterprise Service Bus (DataShare) to publish public data sets. This option may be especially desirable if DataShare already automatically transfers the data set.

4.2.4 Self-Hosting

In any exceptional case in which transaction volumes, data structure, technical barriers, or resource limits prevent hosting a public data set on the NYC Open Data portal itself, the NYC Open Data Portal must provide a direct link to the public data set that is hosted elsewhere so that the data set is accessible to the public through the NYC Open Data Portal. In such an exceptional case, an Agency may self-host the relevant public data set, provided that the public data set is accessible to the public through the link on the NYC Open Data Portal according to following standards:

- The agency must provide a single, unique, publicly accessible URL for each data set along with the data set-level metadata. This information will be made available in the NYC Open Data Portal's catalog of data sets. It is strongly preferred that the URL be the location of the data set, and not an intermediate web page.
- The data set must be machine-readable and in one of the formats listed in the Public Standards section of this document. The Portable Document Format (PDF) is not permitted.
- The data set may be encapsulated in a single archive file (and optionally compressed) if it consists of multiple related files.

4.3 Maintenance

Data sets published on the NYC Open Data Portal must be maintained for accuracy, timeliness, and accessibility, as set forth below.

4.3.1 Data Set Content Updates

Agency ODCs are responsible for identifying an update frequency for each public data set as an element in its data set metadata, and for ensuring that their data set content updates are maintained and published according to the data set's identified schedule or to the extent that the agency regularly maintains or updates the public data set.

4.3.2 Structural Changes (Fields, Data Types)

The ODC or Agency liaison must not modify existing data structure during normal updates to the data set. The number of data elements per record, name, format, and order of the data elements must be consistent with the originally-published version. The Agency ODC should notify DoITT prior to any structural changes to data sets.

4.3.3 Content Support

DoITT will contact the Agency ODC to obtain feedback or a direct answer to comments or inquiries from the public that relate to data set contents or supporting documentation. The Agency will provide DoITT with an expected timeframe to resolve the support inquiry as soon as possible. The Agency must then notify DoITT when the updates or corrections are ready for publication.

An Agency that proactively identifies defects or improvements related to its data set content or supporting documentation must notify DoITT prior to publication of any changes.

4.4 Ownership, Responsibility, and Retention

4.4.1 Ownership

Agencies retain ownership over the data sets that they submit. All data and data sets remain the property of the originating Agency and public users acquire no ownership rights to Agency data or data sets.

The data sets published on *NYC.gov* or the NYC Open Data Portal become a public resource available to anyone with access to the Internet. The public use of the data sets may include development of applications. In this case, the developers retain all intellectual property ownership in their applications, excluding the Agency data itself, whose ownership continues to reside with the Agency.

4.4.2 Responsibility

The Agency that owns the data set is responsible for all aspects of the quality, integrity, and security of the data set contents, as detailed below, and as subject to limitations on liability contained in Local Law 11. Agencies do not relinquish control of their data to DoITT when the data set is submitted for publication on the NYC Open Data Portal.

Agencies are responsible for ensuring that all of their submitted data has been reviewed by appropriate Agency management for confidentiality, privacy, security, and all other content limitation issues consistent with Local Law 11 before the data is submitted for publication. The Agency supplying the data is also responsible for maintaining records of information privacy status and public-disclosure requirements.

The Agency is responsible for updating its data according to the frequency identified in the data set metadata or to the extent that the agency regularly maintains or updates the public data set.

4.4.3 Retention and Archiving

On November 30, 2015, Local Law 106 of 2015 amended the Open Data Law of 2012 to mandate the preservation of the New York City historical record as represented by the City's

official data. This standard establishes requirements and guidelines for retaining row data and archiving datasets on the Open Data Portal.

The Open Data team must evaluate each dataset on the Portal with the Agency that maintains the data to determine a retention and archiving solution. This solution should both maximize usability of the data for all users and also allow users to perform analyses most suited to the dataset type and content.

The archiving process for each dataset will be specified in its metadata. The Open Data team will periodically review public and internal feedback to determine when the approved retention and archiving process can be improved.

The Open Data team will modify inaccurate or non-public data that is represented in error in order to ensure accuracy of all records on the Open Data Portal.

4.4.3.1 Tabular Datasets

Each unique identified record at the row-level must never be removed from the Portal. Examples of data retention protocol for tabular datasets include:

- Some datasets containing only “active” records that are updated frequently should have a complementary dataset for records that become “inactive,” which includes the date on which the records are archived.
- Some datasets refer to a roughly fixed set of data points (e.g., restaurants in the City) for which updated data is routinely collected. As new data is collected, new records should be added alongside existing records and include their date of creation.
- Some datasets on the Portal are not subject to regular updates and bear no risk of removed records, and therefore require no separate archiving protocol.

4.4.3.2 Geospatial Files

When geospatial files are updated, the most recent copy must be moved to an archive folder and indexed according to date of archive. The archive folder will be accessible through the up-to-date dataset on the Portal.

4.4.3.1 Non-data Files

When non-data files are updated, the most recent copy must be moved to an archive folder and indexed according to date of archive. The archive folder will be accessible through the up-to-date dataset on the Portal.

4.5 Exemption from Public Access

Public data to be made available per Local Law 11 does not include any data set to which an Agency may deny access pursuant to the [Freedom of Information Law \(FOIL\)](#) or any other provision of a federal or state law, rule or regulation or local law.⁴ (That notwithstanding, by itself, Local Law 11 *does not prohibit* Agencies from releasing such FOIL-deniable data.)

Records deniable under FOIL are those that:

- (a) are specifically exempted from disclosure by state or federal statute;
- (b) if disclosed would result in an unwarranted invasion of personal privacy;
- (c) if disclosed would impair present or imminent contract awards or collective bargaining negotiations;
- (d) are trade secrets or are submitted to an agency by a commercial enterprise or derived from information obtained from a commercial enterprise and which if disclosed would cause substantial injury to the competitive position of the subject enterprise;
- (e) are compiled for law enforcement purposes and which if disclosed would:
 - i. interfere with law enforcement investigations or judicial proceedings;
 - ii. deprive a person of a right to a fair trial or impartial adjudication;
 - iii. identify a confidential source or disclose confidential information relative to a criminal investigation; or
 - iv. reveal criminal investigative techniques or procedures, except routine techniques and procedures;
- (f) could if disclosed endanger the life or safety of any person;
- (g) are inter-agency or intra-agency communications, except to the extent that such materials consist of:
 - i. statistical or factual tabulations or data;
 - ii. instructions to staff that affect the public;
 - iii. final agency policy or determinations; or
 - iv. external audits, including but not limited to audits performed by the comptroller and the federal government;
- (h) are examination questions or answers that are requested prior to the final administration of such questions;
- (i) if disclosed, would jeopardize an agency's capacity to guarantee the security of its information technology assets, such assets encompassing both electronic information systems and infrastructures;

- (j) are photographs, microphotographs, videotape or other recorded images prepared under authority of section eleven hundred eleven-a of the vehicle and traffic law (this exemption will be repealed effective December 1, 2014);
 - (k) are photographs, microphotographs, videotape or other recorded images prepared under authority of section eleven hundred eleven-b of the vehicle and traffic law (this exemption will be repealed effective December 1, 2014); or
 - (l) are photographs, microphotographs, videotape or other recorded images produced by a bus lane photo device prepared under authority of section eleven hundred eleven-c of the vehicle and traffic law (this exemption will be repealed effective September 20, 2015).
- For subparagraphs (j) through (l) above, such information must be included on the date such subparagraphs will be repealed.

Local Law 11 specifies the following additional exemptions:

- any portion of such data set to which an agency may deny access pursuant to the public officers law or any other provision of a federal or state law, rule or regulation or local law;
- any data set that contains a significant amount of data to which an agency may deny access pursuant to the public officers law or any other provision of a federal or state law, rule or regulation or local law and where removing such data would impose undue financial or administrative burden;
- data that reflects the internal deliberative process of an agency or agencies, including but not limited to negotiating positions, future procurements, or pending or reasonably anticipated legal or administrative proceedings;
- data stored on an agency-owned personal computing device, or data stored on a portion of a network that has been exclusively assigned to a single agency employee or a single agency owned or controlled computing device;
- materials subject to copyright, patent, trademark, confidentiality agreements or trade secret protection;
- proprietary applications, computer code, software, operating systems or similar materials; or
- employment records, internal employee-related directories or lists, and facilities data, information technology, internal service-desk and other data related to internal agency administration.

Nothing in the legislation, policies, or standards shall be deemed to prohibit an Agency from voluntarily disclosing information not otherwise defined as a public data set, nor shall it be deemed to prohibit an agency from making such voluntarily disclosed information accessible through the NYC Open Data Portal.

5.0 City Guidelines

5.1 Data Set Selection

Agencies should use the following guidelines to select and prioritize their data sets for publication.

5.1.1 Prioritization Criteria

For purposes of prioritizing public data sets, Agencies should consider whether information embodied in the public data set:

- Increases Agency accountability and responsiveness;
- Improves public knowledge of the Agency and its operations;
- Responds to a need or demand identified by the public;
- Furthers the mission of the Agency;
- Reduces the impact of automated tools which scan the City's website for data;
- Fosters agency/interagency efficiency; or
- Creates economic opportunity.

5.1.2 Public Input and Participation

Public input is essential to selecting and disseminating information. The NYC Open Data Portal includes an online forum to solicit feedback from the public and to encourage public discussion on open data policies and public data set availability. Agencies should use this forum to solicit recommendations regarding the presentation of data, data types, and metadata from individuals, groups, and organizations.

5.1.3 Inter-agency Coordination

Interoperability makes data more valuable by making it easier to derive new uses from combinations of data. If data sets from two or more Agencies refer to the same kinds of things, the Agencies that create the data sets should strive to make them interoperable. This may mean developing a shared data specification or adopting an existing specification, through coordination between Agencies. The use of open data formats often, but not always, entails interoperability. However, Agencies must weigh the advantages of distributing non-interoperable data quickly against the net gain of investing in interoperability and delaying a release of the data.

5.2 Guidelines for the Division of Large Datasets

Local Law 106 of 2015 amended the Open Data Law of 2012 to mandate the creation of a set of guidelines for users who may experience technical difficulties manipulating and downloading the larger datasets on the Portal.

Users may specify multiple conditions restricting the number of records that appear on the dataset using the “Filter Panel.” In this panel, users may “Add a New Filter Condition” and select attribute values that are exact matches with the “is” condition, or a fall within a range of values with the “contains” condition. A narrower selection of results will require less computing power to view and manipulate on the Portal and will create smaller data files that are quicker to download onto a user’s local device.

For more information on filtering tabular datasets, including video tutorials, see the “Filters” topic in the Socrata Knowledge Base: <https://support.socrata.com/hc/en-us/sections/200469748-Filters>

6.0 Public Policies

Local Law 11, specifically § 23-502 d, requires that data sets must be available without registration requirement, license requirement, or usage restrictions, except as provided in Sections 6.1 through 6.4 below.

6.1 Terms of Use

The following Terms of Use apply to visitors to the NYC Open Data Portal and application developers who obtain City data through this single web portal:

By accessing data sets and feeds available through the NYC Open Data Portal (or the “Site”), the user agrees to all of the [Terms of Use of NYC.gov](#) as well as the [NYC.gov Privacy Policy](#). The user also agrees to any additional terms of use defined by entities providing data or feeds through the Site. Entities providing data include, without limitation, agencies, bureaus, offices, departments and other discrete entities of the City of New York (“City”). Public data sets made available on the NYC Open Data Portal are provided for informational purposes. The City does not warranty the completeness, accuracy, content, or fitness for any particular purpose or use of any public data set made available on the NYC Open Data Portal, nor are any such warranties to be implied or inferred with respect to the public data sets furnished therein.

The City is not liable for any deficiencies in the completeness, accuracy, content, or fitness for any particular purpose or use of any public data set, or application utilizing such data set, provided by any third party.

Submitting City Agencies are the authoritative source of data available on NYC Open Data. These entities are responsible for data quality and retain version control of data sets and feeds accessed on the Site. Data may be updated, corrected, overwritten and/or refreshed at any time. The anticipated update frequency is indicated for each data set on the Site. Older versions of data sets will not be retained.

6.2 Ensuring Continued Public Access to Data Sets

DoITT may implement rate-limiting on a per-visitor basis to ensure that the NYC Open Data Portal's system resources are shared fairly between all visitors.

6.3 Protecting the NYC Open Data Portal

DoITT may implement rate-limiting and other security mechanisms to ensure that the NYC Open Data Portal is not abused, damaged, or impaired.

6.4 Improving Service Delivery

DoITT may implement registration capabilities in order to gather usage metrics, particularly for third-party applications which routinely access the NYC Open Data Portal. In addition, the developers of third-party applications will benefit from receiving updates from DoITT as enhancements to the site and the data it contains are applied over time.

The goal is to improve the way the NYC Open Data Portal functions and the data available through it, by using registration only to ensure access to public data sets, to protect the single web site housing public data sets from unlawful abuse or attempts to damage or impair use of the web site, or to analyze the types of data being used to improve service delivery.

7.0 Appendix A: NYC Administrative Code (Title 23, Chapter 5)

Chapter 5: Accessibility to Public Data Sets

§ 23-501 Definitions

As used in this chapter:

- a. "Agency" means an office, administration, department, division, bureau, board, commission, advisory committee or other governmental entity performing a governmental function of the city of New York.
- b. "Data" means final versions of statistical or factual information (1) in alphanumeric form reflected in a list, table, graph, chart or other non-narrative form, that can be digitally transmitted or processed; and (2) regularly created or maintained by or on behalf of and owned by an agency that records a measurement, transaction, or determination related to the mission of an agency. Such term shall not include information provided to an agency by other governmental entities, nor shall it include image files, such as designs, drawings, maps, photos, or scanned copies of original documents, provided that it shall include statistical or factual information about such image files and shall include geographic information system data. Nothing in this chapter shall be deemed to prohibit an agency from voluntarily disclosing information not otherwise defined as "data" in this subdivision, nor shall it be deemed to prohibit an agency from making such voluntarily disclosed information accessible through the single web portal established pursuant to section [23-502](#).
- c. "Department" means the department of information technology and telecommunications or any successor agency.
- d. "Determination" means any final decision made by an agency with respect to a person, including, but not limited to:
 - (1) eligibility for services or benefits;
 - (2) issuing a permit;
 - (3) registration, certification and licensing; and
 - (4) liability for civil and criminal penalties.
- e. "Measurement" means to quantify by means of comparison to a reference standard any characteristic of an observable event, occurrence or object.
- f. "Open standard" means a technical standard developed and maintained by a voluntary consensus standards body that is available to the public without royalty or fee.

- g. "Public data set" means a comprehensive collection of interrelated data that is available for inspection by the public in accordance with any provision of law and is maintained on a computer system by, or on behalf of, an agency. Such term shall not include:
- (1) any portion of such data set to which an agency may deny access pursuant to the public officers law or any other provision of a federal or state law, rule or regulation or local law;
 - (2) any data set that contains a significant amount of data to which an agency may deny access pursuant to the public officers law or any other provision of a federal or state law, rule or regulation or local law and where removing such data would impose undue financial or administrative burden;
 - (3) data that reflects the internal deliberative process of an agency or agencies, including but not limited to negotiating positions, future procurements, or pending or reasonably anticipated legal or administrative proceedings;
 - (4) data stored on an agency-owned personal computing device, or data stored on a portion of a network that has been exclusively assigned to a single agency employee or a single agency owned or controlled computing device;
 - (5) materials subject to copyright, patent, trademark, confidentiality agreements or trade secret protection;
 - (6) proprietary applications, computer code, software, operating systems or similar materials; or
 - (7) employment records, internal employee-related directories or lists, and facilities data, information technology, internal service-desk and other data related to internal agency administration.
- h. "Technical standard" means (1) the common and repeated use of rules, conditions, guidelines or characteristics for products or related processes and production methods, and related management systems practices; and (2) (i) the definition of terms; (ii) classification of components; (iii) delineation of procedures; (iv) specifications of dimensions, materials, performance, designs or operations; (v) measurement of quality and quantity in describing materials, processes, products, systems, services or practices; (vi) test methods and sampling procedures; or (vii) descriptions of fit and measurements of size or strength.
- i. "Transaction" means any interaction between an agency and any person related to the mission of an agency.
- j. "Voluntary consensus standards body" means a domestic or international organization that develops and maintains a technical standard that utilizes a transparent deliberative process, permits the participation of any party, and achieves general consensus, although not necessarily unanimity, of the participating parties, including a process for attempting to resolve any differences in viewpoint.

§ 23-502 Public data set availability

- a. Within one year of the effective date of this chapter and thereafter, the public data sets that agencies make available on the Internet shall be accessible through a single web portal that is linked to nyc.gov or any successor website maintained by, or on behalf of, the city of New York. If an agency cannot make all such public data sets available on the single web portal pursuant to this subdivision, the agency shall report to the department and to the council which public data set or sets that it is unable to make available, the reasons why it cannot do so and the date by which the agency expects that such public data set or sets will be available on the single web portal.
- b. Such public data sets shall be made available in accordance with technical standards published by the department pursuant to section [23-505](#) of this chapter and shall be in a format that permits automated processing and shall make use of appropriate technology to notify the public of all updates.
- c. Such public data sets shall be updated as often as is necessary to preserve the integrity and usefulness of the data sets to the extent that the agency regularly maintains or updates the public data set.
- d. Such public data sets shall be made available without any registration requirement, license requirement or restrictions on their use provided that the department may require a third party providing to the public any public data set, or application utilizing such data set, to explicitly identify the source and version of the public data set, and a description of any modifications made to such public data set. Registration requirements, license requirements or restrictions as used in this section shall not include measures required to ensure access to public data sets, to protect the single web site housing public data sets from unlawful abuse or attempts to damage or impair use of the web site, or to analyze the types of data being used to improve service delivery.
- e. Such public data sets shall be accessible to external search capabilities.
- f. Agencies shall review responses to freedom of information law requests that include the release of data to determine if such responses consist of or include public data sets that have not yet been included on the single web portal or the inclusion of which on the single web portal is not provided for in the compliance plan prepared pursuant to section [23-506](#). Each agency shall disclose in the update to such compliance plan the total number, since the last update, of such agency's freedom of information law responses that included the release of data, the total number of such responses determined to consist of or include a public data set that had not yet been included on

the single web portal and the total number of such responses that resulted in voluntarily disclosed information being made accessible through the single web portal.

§ 23-503 Web portal administration

- a. The department may take reasonable measures to maintain bandwidth availability of the web portal.
- b. The department shall conspicuously publish the open data legal policy, as provided in section [23-504](#), on the web portal.
- c. The department shall implement an on-line forum to solicit feedback from the public and to encourage public discussion on open data policies and public data set availability on the web portal.
- d. Requests received via the on-line forum for inclusion of particular public data sets shall be considered by agencies in making determinations as to priority for public data set inclusion on the single web portal pursuant to paragraph 5 of subdivision b of section [23-506](#). The department shall provide an initial response to each such request within two weeks of receipt. The agency to which the department refers the request shall post its final determination as to the request on the single web portal within two months of receipt.

§ 23-504 Open data legal policy

- a. Public data sets made available on the web portal are provided for informational purposes. The city does not warranty the completeness, accuracy, content or fitness for any particular purpose or use of any public data set made available on the web portal, nor are any such warranties to be implied or inferred with respect to the public data sets furnished therein.
- b. The city is not liable for any deficiencies in the completeness, accuracy, content or fitness for any particular purpose or use of any public data set, or application utilizing such data set, provided by any third party.
- c. This chapter shall not be construed to create a private right of action to enforce its provisions. Failure to comply with this chapter shall not result in liability to an agency.

§ 23-505 Internet data set policy and technical standards

- a. Within one hundred eighty days of the effective date of this chapter, the department shall prepare and publish a technical standards manual for the publishing of public data sets in raw or unprocessed form through a single web portal by city agencies for the purpose of making public data available to the greatest number of users and for the greatest number of applications and shall, whenever practicable, use open standards for web publishing and e-government. Such manual shall identify the reasons why each technical standard was selected and for which types of data it is applicable and may recommend or require that data be published in more than one technical standard. The manual shall include a plan to adopt or utilize a web application programming interface that permits application programs to request and receive public data sets directly from the web portal. Such manual shall be updated by the department as necessary.
- b. The department shall consult with voluntary consensus standards bodies and shall, when such participation is feasible, in the public interest and is compatible with agency and departmental missions, authorities and priorities, participate with such bodies in the development of technical and open standards.
- c. Each data set on the single web portal shall include a plain language data dictionary; provided that for any data set available on the single web portal before the effective date of the local law that added this subdivision, a data dictionary shall be added to such data set no later than December 31, 2017; and provided further that for any data set made available on the single web portal on or after the effective date of the local law that added this subdivision and before December 31, 2017, a data dictionary shall be added to such data set no later than thirty days after such data set is made available on the single web portal. Such data dictionary shall provide a description for each column heading used within the data set and shall include a description of any acronym, technical term, unit of measure, range of possible values, relationship between or among columns within the data set, frequency of updates to the data set, and other information or description that can provide context to the data, such as the method of collection, a history of modifications to the data set format, data or methods of collection, or any other contextual information that the agency providing the data deems relevant or the technical standards manual requires. Such data dictionary shall be in a format and layout to be determined by the technical standards manual. The data dictionary accompanying each data set, or a link to such data dictionary, shall be included directly on the single web portal. The most recent upload date and generation date for each data set shall be included directly on the single web portal.

§ 23-506 Agency compliance plan

- a. Within eighteen months of the effective date of this chapter, the department shall submit a compliance plan to the mayor and the council and shall make such plan available to the public on the web portal. Each agency shall cooperate with the

department in its preparation of such plan. The plan shall include a summary description of public data sets under the control of each agency on or after the effective date of this chapter, and shall prioritize such public data sets for inclusion on the single web portal on or before December 31, 2018 in accordance with the standards promulgated by the department pursuant to section [23-505](#) and shall create a timeline for their inclusion on the single web portal. If a public data set or sets cannot be made available on the single web portal on or before December 31, 2018, the plan shall state the reasons why such set or sets cannot be made available, and, to the extent practicable, the date by which the agency that owns the data believes that it will be available on the single web portal.

- b. For purposes of prioritizing public data sets, agencies shall consider whether information embodied in the public data set: (1) can be used to increase agency accountability and responsiveness; (2) improves public knowledge of the agency and its operations; (3) furthers the mission of the agency; (4) creates economic opportunity; or (5) responds to a need or demand identified by public consultation.
- c. No later than July fifteen, 2014 and every July fifteen thereafter, the department shall submit and post on the web portal an update of the compliance plan to the mayor and the council until all public data sets have been made available through a single web portal in compliance with this chapter. Such update shall include the specific measures undertaken to make public data sets available on the single web portal since the immediately preceding update, specific measures that will be undertaken prior to the next update, an update to the list of public data sets, if necessary, any changes to the prioritization of public data sets and an update to the timeline for the inclusion of data sets on the single web portal, if necessary. If a public data set cannot be made available on the single web portal on or before December 31, 2018, the update shall state the reasons why it cannot and, to the extent practicable, the date by which the agency believes that such public data set will be available on the single web portal.

8.0 Appendix B: End Notes

- ¹ “New York City Charter: As Amended Through December 18, 2009,” State of New York Legislative Bill Drafting Commission, February 2010, retrieved 02/28/2011 from <http://www.nyc.gov/html/charter/downloads/pdf/citycharter2009.pdf>.
- ² New York City Department of Information Technology & Telecommunications, “30-Day Report: Enabling the Connected City,” February 2010, retrieved 02/28/2011 from http://www.nyc.gov/html/doitt/downloads/pdf/30_day_report.pdf.
- ³ Michael R. Bloomberg, Mayor, City of New York, “Executive Order No.140: Authorizing the Department of Information Technology and Telecommunications to Consolidate the Infrastructure of and Establish Coordinated Citywide Policies for Information Technology and Telecommunications for the City of New York,” issued October 20, 2010, retrieved 02/04/2011 from http://www.nyc.gov/html/doitt/downloads/pdf/eo_140.pdf.
- ⁴ Freedom of Information Law (FOIL) is codified at [New York Department of State, Public Officers Law, Article 6, Sections 84-90](#).

City of Chattanooga Data Inventory Guide

The following steps are meant to guide the identification and release of City of Chattanooga datasets in a strategic, transparent, and meaningful way. This guide was developed in coordination with the City's Open Data Advisory Committee, the City's Office of Performance Management and Open Data and Bloomberg philanthropies What Works Cities initiative. This guide is a living and breathing document and will be updated as the City's open data program matures. The **five** steps included in this guide are as follows:

[Step 1: Identify potential datasets](#)

[Step 2: Provide details about the dataset](#)

[Step 3: Determine internal dataset publication priority](#)

[Step 4: Determine external publication priority](#)

[Step 5: Create release schedule based on all the above steps](#)



Step 1: Identify Potential Datasets from Each City Department

Each city department collects data as part of their daily operation. These datasets have great potential value for increasing transparency, operational efficiency and actionable insights. For all these reasons it is important to understand the data assets currently housed within the city. As the Open Data Coordinator of your department you know best the datasets found within your department. The very first step for the inventory is to start thinking about the data assets maintained by your department.

The following questions may help the you identify data assets in your department:

- What data populates your monthly or quarterly reports?
- What data is currently publicly available online?
- What data does your organization use for internal performance and trend analysis?
- What information is published as a performance metric?
- What data is included in reports to federal, state or local departments/agencies?
- What are the trends in Public Information Act requests?
- What data do other departments/agencies ask for?
- What kinds of open data are similar departments across the country publishing?
- Which datasets are related to citywide goals and priorities, or your department's mission?
- What are the metrics used in the city's budgeting process?
- What datasets that you regularly create, maintain, or manage are used to record a measurement or transaction and/or provide information on government services, initiatives, or resources?
- What is the data that drives lists, tables, graphs, charts, maps, or other visualizations that your department uses?



Dataset Title
Human-readable name of the asset. Should be in plain English and include sufficient detail to facilitate search and discovery. Avoid acronyms.

As you start answering these questions you can keep track of the potential datasets in the [City of Chattanooga Data Inventory Spreadsheet](#). At this point, there is no need to fill out all the fields in the spreadsheet, just fill in the “Dataset Title” column as you identify as you ask yourself the questions above. It is a good best practice to share this initial list with others in your department to see if they can think of any other datasets. Remember, at this point the goal at this point is breadth not depth. Potential datasets could be anything from information keep solely in paper files, to spreadsheets in personal computers or on a network drive to databases for the third party systems you use.

To access your department’s inventory spreadsheet and begin inventorying datasets click on your department’s name below.

City Attorney’s Office	CARTA	CDOT	City Courts	Economic and Community Development
Finance	Fire		Human Resources	Information Technology
	Library	Mayor’s Office	Office of Performance Management	Office of Multicultural Affairs
Police	Public Works	Purchasing	Regional Planning Agency	Youth and Family Development



Step 2: Provide details about the dataset

Once your department has identified any and all potential datasets the next step is providing some basic information about those datasets. This is where we shift to depth and start to provide the details that will be needed to evaluate, prioritize, schedule and ultimately begin releasing your department's datasets. Below are the basic fields you need to fill in for the inventory. You should have already filled out the "Dataset Title" column of the inventory spreadsheet in [step 1](#) of this guide. The next step is to determine if the data has sensitive data and if so, how best to manage this data to still make the data sharable.

A note about privacy: Do not exclude any datasets based on privacy or confidentiality concerns! To make the data inventory as useful as possible, it should include data that may be sensitive, private, or unlikely to be released. Always include a description of the sensitivity concerns. In addition to setting up the open data program on a strong and transparent foundation, an open data inventory can provide a roadmap for creating release timelines and help identify where new data may need to be collected.



Division	Data Steward's Email Address	Contents	System of Record	Contains Sensitive Data	Sensitive Data Comments
<i>Division where the data is maintained. If more than one department or division is responsible, list the primary owner of the dataset.</i>	<i>Data Steward's email address. Who manages the data and / or is responsible for granting permission to access the data? Who understands what the dataset includes and can answer questions about it?</i>	<i>What the dataset describes. Provide a longer description of the data that can be readily understood by non-technical users.</i>	<i>What is the original system/application/file that houses it? Please provide additional comments as necessary.</i>	<i>Does the dataset contain sensitive data, such as personal phone numbers, Social Security Numbers, etc.?</i>	<i>What could be done to make the data shareable?</i>



Step 3: Determine Internal Dataset Publication Priority

After identifying datasets and their technical characteristics, the next step is to determine the relative value in publishing a given dataset. To assist with that process a scoring rubric show below was created to prioritize the datasets.

Data Quality	Data Value	Data Accessibility	Internal Priority Score
What is the quality of the dataset?	How valuable is the dataset to the city internally? External value will be gathered by engaging the public.	How easy is it to access and publish the data on the open data portal?	Sum of the data quality, data value and data accessibility scores.

Internal Prioritization Scoring Rubric

	<u>Value</u>	<u>Value Description</u>
Data Quality	10	Excellent Data Quality: The data is complete, accurate and updated regularly.
	5	Adequate Data Quality: The data is somewhat complete, accurate and updated fairly regularly.
	0	Poor Data Quality: The data is not complete, accurate or updated regularly.
Data Value	10	Excellent Data Value: The data is relevant to city's goals and or department core functions and would greatly increase transparency.
	5	Adequate Data Value: The data is somewhat relevant to city's goals and or department core functions and would greatly increase transparency.
	0	Poor Data Value: The data is not relevant to city's goals and or department core functions and would not increase transparency.



Data Accessibility	10	Excellent Data Accessibility: The data is machine readable, easily accessed, and publishable in current format.
	5	Adequate Data Accessibility: The data is easily convertible to be machine readable, somewhat difficult to access, and somewhat publishable in current format.
	0	Poor Data Accessibility: The data is not easily convertible to be machine readable, very difficult to access, and not publishable in current format.



Step 4: Determine external publication priority

Now that the data has been identified, inventoried and the internal prioritization set, the next step is to engage the public in the decisions about what to release, to meet the needs of residents. The process on how to gather community input has yet to be worked out and will be crafted by the Open Data Advisory Group.

Screenshot of [Philadelphia's Data Inventory](#)

Citywide Data Inventory

Fire

Licenses & Inspections

Streets

Parks and Recreation

Commerce

City Commissioners

Ethics

Emergency Management

Energy Office

search

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Title	Contents	Comments	Details
Fire Incident Reports	Any time there is a fire, information is gathered relating to the event and the people involved, including the incident number, when the incident occurred, if any died in the fire, extent of the fire, location of the property, if any injuries occurred.	10	add comment
Emergency 911 Calls	This data set contains information related to the calls received by the Fire Communications 911 unit. These entries are timestamped with when the call was received, when a unit was dispatched, when the unit arrived on the scene, and has additional information regarding what happened while the incident was being mitigated.	5	add comment
Budget	Budget reported monthly, quarterly, and annually	4	add comment
Jury Duty Paper Work	Employees that have been called for jury duty, when they were out and additional details	3	add comment
FCC Phone Database	The FCC Phone Database contains information on all incoming calls for a given day. This information is broken down into specific time frames as well as type of call which could be 911EMS, 911 FIRE, or NON-911 calls. Cumulative totals for time frames and type of calls are also recorded.	3	add comment
FCC Dispatcher Database	This database contains the total number of dispatches for a given day. Data contained within each record is broken down by time frames, and type of incidents (fire, medical, etc.)	3	add comment
Daily number of calls received	The number of 911 calls received on a given day.	3	add comment


In addition to asking the public for feedback, Philadelphia hosts and curates a discussion board focused on open data and transparency. Topics include mislabeled datasets, 404 errors, posts about new datasets with requests for feedback,





questions and requests for new datasets, research questions, and notifications about new data initiatives. An example of an interaction between Philadelphia's Chief Data Officer and the community is below.

Screenshot of [Philadelphia's Open Data Discussion Board](#)

[Open Data Philly](#) ›
17 new data sets and new data platform
2 posts by 2 authors  8+1


**Tim Wisniewski**



Jun 4  

★ Hey guys, just wanted to share today's news with this group:

- [Planes, Trains, and Civic Hacking](#) by Stacey Mosley, highlighting the 17 transportation-focused data releases today
- [Adding Socrata to the Mix](#) by Adel Ebeid, detailing the integration of Socrata into the OpenDataPhilly stack for City datasets

In addition, Code for Philly is hosting [Apps for Philly Transportation](#) this weekend. The reception / idea pitching is Friday evening outside 30th Street Station and the hackathon itself is in the Septa building. There's still a couple spots open so I hope to see you there!

**Paul**

Jun 4  

★ Great news!

Cheers-
Paul

Tapping the networks of stakeholders, such as a local civic tech group or Code For America brigade, nonprofits that may be interested in the subject matter of the datasets, and businesses that may have an economic use for the data can be a valuable way to leverage these groups to get the word out about a city's open data and transparency efforts.



Step 5: Create Release Schedule

The final creation of the release schedule will be done by the Office of Performance Management and Open Data in coordination with the Open Data Advisory Group.

