GO Committee #1
September 9, 2013
Worksession

MEMORANDUM

September 5, 2013

TO: Government Operations and Fiscal Policy (GO) Committee

FROM: Natalia Carrizosa, Research Associate NC
Carl Scruggs, Research Associate
Office of Legislative Oversight

SUBJECT: **Worksession on OLO Report 2013-7: *Best Practices in Open Data Initiatives***

On September 9th, the GO Committee will hold a worksession on OLO Report 2013-7. The Council received and released this report on July 9th.

This report responds to the Council's request to review best practices in open data initiatives in other jurisdictions.

Executive Branch representatives expected to attend the Committee worksession include:

- Fariba Kassiri, Assistant Chief Administrative Officer
- Sonny Segal, Chief Information Officer, Department of Technology Services
- Dieter Klinger, Chief Operating Officer, Department of Technology Services
- Dan Hoffman, Chief Innovation Officer
- David Gottesman, CountyStat Manager

A. Summary of OLO Report 2013-7

OLO staff will provide the Committee with an overview of the report, and a four-page executive summary of OLO's major findings and discussion questions is attached at ©1. Key findings from the report include:

- The terms "open data" and "open government" have different meanings. "Open government" refers to providing the public with legal access to government records. "Open data" refers to making information publicly and easily available to individuals without the need for a request to the government.
- Other jurisdictions have implemented open data initiatives to promote innovation, to increase transparency, and to efficiently meet demands for government data.
- President Obama's recent open data policy initiatives have established new standards for generating and releasing government data, and are intended to help serve as a template for state- and local-level government data initiatives.

- Creating and maintaining key technology leadership positions, such as Chief Technology Officers and Chief Data Officers, have driven the implementation open data initiatives in cities like Chicago, New York City, and Philadelphia.
- In managing and prioritizing the release of data, other jurisdictions have found it important to: 1) engage community stakeholders extensively in the process, and 2) consider the potential costs of releasing specific datasets.
- Software developers represent key stakeholders of open data initiatives who can use open data to create innovative software tools or "apps", and other jurisdictions have worked to encourage and support their involvement in a number of ways.
- The potential uses of specific datasets are not always immediately apparent, and outside parties often use datasets in unexpected ways to benefit the community.
- Geographically coded data that can be mapped are useful to software developers that create "apps" because the majority of open data apps let users see data on an interactive map.
- Jurisdictions can help software developers and other stakeholders combine data from multiple jurisdictions by contributing datasets to regional data portals and by complying with established data standards for specific types of data.
- While the success of open data initiatives depends in part on whether external stakeholders use the data, it is difficult for jurisdictions to quantify how stakeholders use data released through these initiatives.
- Individuals involved in open data initiatives see the potential for the initiatives to help existing businesses grow and provide building blocks for new businesses.

A. Worksession on OLO's Discussion Questions

OLO's review of best practices in open data initiatives illustrates opportunities to ensure that the County Government maximizes the benefits of open data. OLO has developed five discussion questions to structure a conversation between the Council and Executive Branch representatives.

Discussion Question #1: How do the County Government's internal information management policies compare to recommended structures developed by the federal government and other open data advocacy organizations?

Internal data management systems – such as ERP systems – that allow departments to automate the release and maintenance of datasets on open data portals can reduce the resource costs of releasing datasets. In the federal government, President Obama's Executive Order and accompanying Open Data Policy require Executive agencies to design their data collection and creation efforts with longer-term usability in mind and to develop "data asset portfolio" management requirements to help safeguard their data.

Discussion Question #2: How does the structure of the leadership and management of dataMontgomery compare to best practices and how is the leadership identifying and addressing any internal barriers to the release of data?

Several open data experts emphasized the importance of effectively structuring the management of open data initiatives – finding the right individuals to serve in key positions such as Chief Technology Officers and/or Chief Data Officers. These leaders and their staff play key roles in implementing open data initiatives and serve as a bridge between departments – which may have limited expertise in open data – and external stakeholders and users of data.

Discussion Question #3: How will the County identify datasets for release through dataMontgomery?

Identifying datasets for release that will be useful to stakeholders and users raises several issues for jurisdictions:

- Datasets that the community will find useful may not always be obvious to the government;
- Preparing and maintaining datasets for release on open data portals can require a significant investment of resources – recommending a cost/benefit analysis to examine whether the community is interested in certain datasets; and
- Some jurisdictions provide opportunities for stakeholder feedback to help identify datasets for release.

Discussion Question #4: What is the County Government's strategy for providing geo-coded location data with datasets released on dataMontgomery?

Numerous open data applications ("apps") use location data to let users view geographical points or boundaries on an interactive map. Feedback from software developers revealed that providing "geo-coded" location data with datasets that allows for the mapping of data helps developers use the data in their apps.

Discussion Question #5: What strategies can the County Government employ to engage the private sector in generating value from open data?

OLO found that in other jurisdictions outside parties such as private software developers play a key role in maximizing the benefits of open data initiatives. Software developers create applications using open data that provide useful information to businesses, consumers, and entrepreneurs that help support economic development efforts – such as zoning district boundary data, property tax and ownership data, vacant property data, food inspection data, and building permit data.

Best Practices in Open Data

OLO Report Number 2013-7 July 9, 2013

This Office of Legislative Oversight (OLO) report examines how other jurisdictions have implemented open data initiatives and how these initiatives have resulted in the creation of software applications or "apps" that benefit communities.

Open data initiatives seek to make government data publicly available in a way that individuals can access and easily use the data without having to make a request to the government, typically publishing datasets on a public website or "open data portal" and reaching out to the public to solicit input and encourage use of the datasets. Jurisdictions often develop data-supported online applications and services that let users view and manipulate released data and often provide online forums and message boards to allow feedback from people who use the data.

Open Data Users

Three groups typically seek out and use government data:

Residents can use government data to seek government services and hold public officials accountable. For example, some jurisdictions provide real-time transit information with bus and train schedules and locations.

Businesses can use government data to provide information to the public and to analyze aspects that impact their businesses. For example, online real estate search engines such as Trulia and Zillow compile data from a variety of sources, including local data on property transactions, crime, and schools, to create tools that help consumers make decisions about real estate transactions.

Software Developers use government data to build applications or "apps" that let users access and interact with the data. Some developers, for example, create "mash-ups" – which combine data from two or more sources (including government sources) in an application.

Federal Open Data Policies

On his inauguration day in 2009, President Obama issued an "open government directive" that instructed the Federal Government's executive departments and agencies to make government information publicly available in new ways. President Obama hired a federal Chief Information Officer who launched Data.gov, the federal government primary website for public access to federal government data, in May 2009.

In 2013, the federal Office of Management and Budget released a new Open Data Policy that requires federal executive branch departments and agencies to:

- Collect or create information in a way that users can manipulate and use the data;
- Build information systems that work together and that make data accessible;
- Strengthen data management and release practices; and
- Strengthen measures to ensure that privacy and confidentiality are fully protected and that data are properly secured.

Additionally, the White House has made the federal government's Open Data Policy and framework widely available and open to public input and development, intending for it to serve as a template on which local governments can model their own open data initiatives.

Local Government Open Data Policies and Practices

At least 39 U.S. states, 34 U.S. cities and counties, 41 international countries and 132 other international regions have developed open data initiatives, according to Data.gov, the Federal Government's main open data resource. OLO's research and observations revealed some common practices among local governments with respect to open data:

Many jurisdictions have developed open data initiatives based on directives from their executive leadership. Directives from the mayors in the Cities of Chicago, Philadelphia, and New York (and the NYC City Council) spurred the development of open data initiatives in these cities. These jurisdictions have prioritized the hiring and retention of data and systems analysts and other key leadership positions.

Local governments use several common methods to prioritize the release of data and datasets. These include:

- Focusing on specific issue-related solutions, such as presenting a data-related problem or issue to local developers and asking for solutions,
- Establishing data disclosure requirements,
- Performing audits of existing data, and
- Soliciting input from the community on the types of data or datasets to release.

Some local governments, however, face resistance from departments to releasing data, where staff may be hesitant to give up any perceived "value-added" services that they provide.

Local governments use a range of methods to engage with software developers, residents and other public "stakeholders" in open data initiatives. These include:

- Campaigns and public initiatives,
- Contests, competitions, and development programs,
- "Hackathons" which are specialized conferences that encourage the active participation of attendees to collaborate at the event on software projects,
- "Unconferences," which differ from traditional conferences in their increased focus on participation by attendees, and
- Social media outlets such as Facebook, Twitter, and Tumblr.

Local governments can act as a "matchmaker" between data producers and data consumers. Jurisdictions often are in the best position to understand the nature and value of the data that they release and can help facilitate the public's use of the data. However, tracking and measuring the use of open data and determining the long-term impact of open data initiatives can be difficult because jurisdictions do not have a good method to determine *how* residents use open data.

Centralized web portals can help government track and monitor datasets following release. Government web portals can help local governments track the use of and identify popular datasets. Representatives from several jurisdictions report the popularity of crime and fire data, energy usage data, financial data, property data; and transportation and traffic data.

Local governments use a range of common standards, platforms and practices to manage open data. Following common data standards allows jurisdictions build on and augment successful models without having to develop new ones from scratch. For example, common standards exist for bus and train departure and arrival times allowing compatibility with applications such as Google Transit and other trip planning apps, and geographic information systems (GIS) standards that allow for the geographic coding (mapping) of data.

Open Data "Apps"

Software developers can use open data to create software applications or "apps". Apps can add value to open data by combining data from different sources together or allowing users to see data on an interactive map. Among other things, apps can increase government transparency, facilitate access to public services, keeping residents and businesses informed about local events or incidents, helping to mobilize community action around specific problems or issues, and promoting economic development. Apps can include both mobile apps, which can be used on mobile devices, and web-based apps, which can be accessed online via a web browser.

Open Data Apps and Economic Development

As a case study, OLO examined open data apps from other jurisdictions that can further economic development. OLO found that volunteer software developers, nonprofit organizations and businesses often use government data in unexpected ways to build innovative apps. Some examples are described in the table below.

Examples of Apps that Use Open Data

App	Description
Site Selector	Maps available commercial properties in Chicago alongside economic incentive zone boundaries and nearby amenities
2nd City Zoning	Shows Chicago zoning districts' boundaries and provides zoning rules for each district
Why Don't We Own This?	Maps the locations of Detroit properties for sale in tax auctions or at risk of foreclosure and provides a user discussion forum
Hidden Value in Abandoned Buildings	Locates abandoned buildings in the Brownsville area of Chicago along with amenities within walking distance of the buildings
Can I Park My Food Truck Here?	Maps areas within 200 feet of restaurants in Chicago where food trucks are prohibited from parking
DontEat.at	Alerts restaurant-goers on their mobile devices of health code violations at the restaurants they are visiting
Yelp	Includes food establishment inspection data for restaurants in San Francisco alongside customer restaurant reviews

Representatives from other jurisdictions and software developers report seeing great potential for open data initiatives to boost local businesses and economies by providing useful data to help existing businesses grow and providing building blocks for new businesses to create revenue-generating apps.

Representatives from other jurisdictions were familiar with a limited number of startup companies making revenue-generating open data apps, including real-time transit apps, parking apps, and an app that provides campaign finance data to newspapers. These representatives anticipate that more businesses will begin using open data to develop apps in the future.

Importance of Location Data

Many open data apps allow users to see data points (such as locations or incidents) on a map. Several software developers report that providing geographically coded (or "geo-coded") location data in data sets is helpful for application development.

Discussion Questions

The Office of Legislative Oversight's review of open data initiatives and best practices in other jurisdictions revealed some common strategies that jurisdictions use to manage open data initiatives, solicit input from community stakeholders, and help residents garner the maximum benefit from the data. OLO has developed a set of discussion questions to structure a conversation between the Council and Executive Branch representatives about Montgomery County's implementation of its open data initiative – dataMontgomery.

Discussion Question #1: **How do the County Government internal information management policies compare to recommended structures developed by the federal government and other open data advocacy organizations?**

Internal data management systems – such as ERP systems – that allow departments to automate the release and maintenance of datasets on open data portals can reduce the resource costs of releasing datasets. In the federal government, President Obama's Executive Order and accompanying Open Data Policy require Executive agencies to design their data collection and creation efforts with longer-term usability in mind and to develop "data asset portfolio" management requirements to help safeguard their data.

Discussion Question #2: **How does the structure of the leadership and management of dataMontgomery compare to best practices and how is the leadership identifying and addressing any internal barriers to the release of data?**

Several open data experts emphasized that individuals in key positions such as Chief Technology Officers and/or Chief Data Officers play a key role in implementing open data initiatives and serve as a bridge between departments – which may have limited expertise in open data – and external stakeholders and users of data.

Discussion Question #3: **How will the County identify datasets for release through dataMontgomery?**

Preparing and maintaining datasets for release on open data portals can require a significant investment of resources. At the same time, jurisdictions may not know what datasets the community will find useful. Some jurisdictions provide opportunities for external stakeholders to provide feedback to help identify datasets for release.

Discussion Question #4: **What is the County Government's strategy for providing geo-coded location data with datasets released on dataMontgomery?**

Feedback from software developers revealed that including geo-coded location data in open datasets plays an important role in generating value to users and application developers, allowing for the mapping of data.

Discussion Question #5: **What strategies can the County Government employ to engage the private sector in generating value from open data?**

Open data has the potential to promote economic development by allowing private software developers to create applications using open data that can generate revenue and/or provide useful information to businesses, consumers, and entrepreneurs.