CITY OF OAKLAND

AGENDA REPORT

TO: Finance Committee
ATTN: Chair De La Fuente and committee members
FROM: Councilmember Libby Schaaf
DATE: March 27, 2012

RE: Adopt a Resolution Directing the City Administrator to Develop a Plan for
      Evaluating and Disseminating Data Sets Generated Within City Departments as
      "Open Data" in Accessible Raw Formats Which will be Made Available to the
      Public through a Designated Website and Will Lead to the Establishment of a
      Comprehensive Open Data Policy

SUMMARY

Publishing structured, standardized governmental data in machine-readable formats creates new opportunities for information from different sources to be combined and visualized in new and unexpected ways and for citizens to browse, interpret and draw attention to trends or issues with greater efficiency.

By passing this Resolution, the City of Oakland shows its commitment to moving Oakland forward through the dissemination of Open Data. The Resolution would direct staff to develop a plan and technical standards for evaluating and disseminating data sets generated within City Departments as "Open Data," as well as draft an "Open Data Ordinance" within 120 days of the passing of this resolution.

FISCAL IMPACT

There is no fiscal impact in passing this resolution. There may be some small costs associated with the development or licensing of a platform after a plan has been created. There may be some savings in reduced staff time responding to public records requests.

BACKGROUND

The ingenuity of the public to create innovative data visualizations is limited only by the availability of useful data. hı November, 2008, the District of Columbia Chief Technology Officer (CTO) announced the Applications for Democracy program whereby private citizens compete for $50,000 in total prize money by creating applications that utilize any of the 200 data

Item: _____
Finance Committee
March 27, 2012

feeds available through the office of the CTO website. Within thirty days, the Office of the CTO received 47 completed applications valued at $2,300,000. Applications included a carpool matchmaker, and a real time alert notification that would send alerts (crime reports, building permits, etc.) based on a user's location if they have a GPS-enabled device.

Since then, many cities and government entities (Including the United States Government: data.gov) have opened up their data and established policies, standards and best practices around the use of Open Data.

KEY ISSUES AND IMPACTS

The City of Oakland is committed to using technology to foster open, transparent and accessible government. By sharing data freely, the City of Oakland seeks to develop opportunities for economic development, commerce, increased investment, and civic engagement for the citizens of Oakland.

The City of Oakland currently makes a very small amount of public data available on various city websites and in various formats. Much of this data is currently available in only proprietary and/or visual formats (PDF's, maps), and almost none of it is raw data. The data would greatly benefit from being posted in raw formats on a central portal that utilizes a web application programming interface that would permit application programs to request and receive public data sets directly from the web portal.

Developing an Open Data Plan and Technical Standards
The attached Resolution would direct staff to develop a plan and technical standards for evaluating and disseminating data sets generated within City Departments as "Open Data," as well as draft an "Open Data Ordinance" within 120 days of the passing of this resolution. The plan would require that the data be made available on the Internet through a single web portal, formatted to enable viewing by web browsers and mobile devices and also in their raw or unprocessed format. The plan will lay the groundwork for each City Department, board, commission and agency to make reasonable efforts to make available data sets under the Department's control, provided that such disclosure be consistent with applicable laws, including laws related to privacy and security, and staff will ensure that data supplied to the City by third parties (developers, contractors, consultants) are unlicensed, in a prevailing open standard format, and not copyrighted, except if otherwise prevented by legal considerations.

Increasing Transparency, Coordination and Citizen-driven Problem Solving
The adoption of Open Standards improves transparency, access to public information, and improved coordination and efficiencies among public agencies and partner organizations across the public, non-profit and private sectors. Software applications and tools that enable Citizens to

access, visualize, and analyze public information will encourage Citizens to provide feedback on local issues and the City of Oakland seeks to encourage the local software community to develop software applications and tools to collect, organize, and share public data in new and innovative ways.

SUSTAINABLE OPPORTUNITIES

Economic: The proposed ordinance is unlikely to create any negative economic impact, but may possibly spur innovation in the software sector, which indirectly causes positive economic impact.

Environmental: The proposed ordinance is unlikely to lead to any environmental impact.

Social Equity: An open data policy will greatly promote social equity through increased information diffusion to all citizens and stakeholders, as software developers make use of open data and create applications that make data far more accessible. All residents with any access to the internet, computers, and mobile phones will have a greater opportunity to access data through new software applications designed to make city data more accessible to the public.

DISABILITY AND SENIOR CITIZEN ACCESS
Making more information available on the Internet, rather than requiring citizens to physically travel to City Hall makes government data more easily accessible to those with limited mobility. Additionally, written data will become more accessible to visually impaired citizens who employ screen readers.

ACTION REQUESTED OF THE CITY COUNCIL
We recommend that the City Council receives the report and approves the Resolution.

Respectfully submitted,
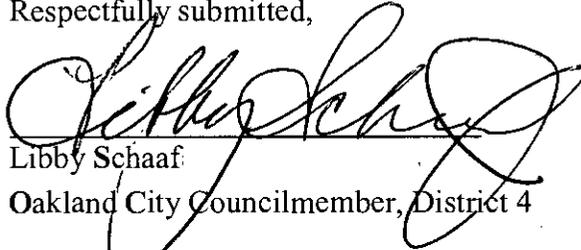
Libby Schaaf
Oakland City Councilmember, District 4

Prepared by:
Bruce Stoffmacher, Policy Analyst
Office of Oakland Councilmember Libby Schaaf

Item: _____
Finance Committee
March 27, 2012

ATTACHMENT A

10 PRINCIPLES OF OPEN GOVERNMENT DATA

On December 8, 2007, a group of 30 open government advocates developed ten principles that define open government data. The principles were then published by the Sunlight Foundation. While these principles are not binding, they are instructive, and should be used in crafting an Open Data plan:

1. Completeness
Datasets released by the government should be as complete as possible, reflecting the entirety of what is recorded about a particular subject. All raw information from a dataset should be released to the public, except to the extent necessary to comply with federal law regarding the release of personally identifiable information. Metadata that defines and explains the raw data should be included as well, along with formulas and explanations for how derived data was calculated. Doing so will permit users to understand the scope of information available and examine each data item at the greatest possible level of detail.

2. Primacy
Datasets released by the government should be primary source data. This includes the original information collected by the government, details on how the data was collected and the original source documents recording the collection of the data. Public dissemination will allow users to verify that information was collected properly and recorded accurately.

3. Timeliness
Datasets released by the government should be available to the public in a timely fashion. Whenever feasible, information collected by the government should be released as quickly as it is gathered and collected. Priority should be given to data whose utility is time sensitive. Realtime information updates would maximize the utility the public can obtain from this information.

4. Ease of Physical and Electronic Access
Datasets released by the government should as accessible as possible, with accessibility defined as the ease with which information can be obtained, whether through physical or electronic means. Barriers to physical access include requirements to visit a particular office in person or requirements to comply with particular procedures (such as completing forms or submitting FOIA requests). Barriers to automated electronic access include making data accessible only via submitted forms or systems that require browser oriented technologies (e.g., Flash, Javascript, cookies or Java applets). By contrast, providing an interface for users to download all of the information stored in a database at once (known as "bulk" access) and the means to make

Item: _____
Finance Committee
March 27, 2012

specific calls for data through an Application Programming Interface (API) make data much more readily accessible. (An aspect of this is "findability," which is the ability to easily locate and download content.)

5. Machine readability

Machines can handle certain kinds of inputs much better than others. For example, handwritten notes on paper are very difficult for machines to process. Scanning text via Optical Character Recognition (OCR) results in many matching and formatting errors. Information shared in the widely used PDF format, for example, is very difficult for machines to parse. Thus, information should be stored in widely used file formats that easily lend themselves to machine processing. (When other factors necessitate the use of difficult to parse formats, data should also be available in machine friendly formats.) These files should be accompanied by documentation related to the format and how to use it in relation to the data.

6. Nondiscrimination

"Nondiscrimination" refers to who can access data and how they must do so. Barriers to use of data can include registration or membership requirements. Another barrier is the uses of "walled garden," which is when only some applications are allowed access to data. At its broadest, nondiscriminatory access to data means that any person can access the data at any time without having to identify him/herself or provide any justification for doing so.

7. Use of Commonly Owned Standards

Commonly owned (or "open") standards refers to who owns the format in which data is stored. For example, if only one company manufactures the program that can read a file where data is stored, access to that information is dependent upon use of the company's processing program. Sometimes that program is unavailable to the public at any cost, or is available, but for a fee. For example, Microsoft Excel is a fairly commonly used spreadsheet program which costs money to use. Freely available alternative formats often exist by which stored data can be accessed without the need for a software license. Removing this cost makes the data available to a wider pool of potential users.

8. Licensing

The imposition of "Terms of Service," attribution requirements, restrictions on dissemination and so on acts as barriers to public use of data. Maximal openness includes clearly labeling public information as a work of the government and available without restrictions on use as part of the public domain.

9. Permanence

The capability of finding information over time is referred to as permanence. Information released by the government online should be sticky: It should be available online in archives in perpetuity. Often times, information is updated, changed or removed without any indication that

an alteration has been made. Or, it is made available as a stream of data, but not archived anywhere. For best use by the public, information made available online should remain online, with appropriate version tracking and archiving over time.

10. Usage Costs

One of the greatest barriers to access to ostensibly publicly available information is the cost imposed on the public for access—even when the cost is *de minimus*. Governments use a number of bases for charging the public for access to their own documents: the costs of creating the information; a cost recovery basis (cost to produce the information divided by the expected number of purchasers); the cost to retrieve information; a per page or per inquiry cost; processing cost; the cost of duplication etc. Most government information is collected for governmental purposes, and the existence of user fees has little to no effect on whether the government gathers the data in the first place. Imposing fees for access skews the pool of who is willing (or able) to access information. It also may preclude transformative uses of the data that in turn generates business growth and tax revenues.

OFFICE OF THE CITY CLERK
OAKLAND
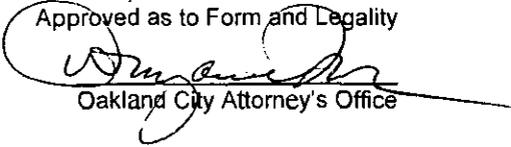
12 MAR 15 PM 4:55 **OAKLAND CITY COUNCIL**

Resolution No. _____C.M.S.

Introduced by Councilmember Libby Schaaf

RESOLUTION DIRECTING CITY ADMINISTRATOR TO DEVELOP A PLAN FOR EVALUATING AND DISSEMINATING DATA SETS GENERATED WITHIN CITY DEPARTMENTS AS "OPEN DATA" IN ACCESSIBLE RAW FORMATS THAT WILL BE MADE AVAILABLE TO THE PUBLIC THROUGH A DESIGNATED WEBSITE AND WILL LEAD TO THE ESTABLISHMENT OF A COMPREHENSIVE OPEN DATA POLICY

WHEREAS, "Open Data" refers to data generated by public sector entities that is legally accessible should be available to the public electronically via the internet in accessible unprocessed formats; and

WHEREAS, "Open," refers to the use of non-proprietary software or systems used to encode the data; and

WHEREAS, "Raw," refers to data that has not been processed; and

WHEREAS, the City of Oakland is committed to using technology to foster open, transparent, and accessible government; and

WHEREAS, by sharing data freely, the City of Oakland seeks to develop opportunities for economic development, commerce, increased investment, and civic engagement for citizens of Oakland; and

WHEREAS, publishing structured standardized data in machine readable formats creates new opportunities for information from different sources to be combined and visualized in new and unexpected ways, for niche markets to be identified and developed and for citizens to browse, interpret and draw attention to trends or issues with greater efficiency; and

WHEREAS, the adoption of open standards improves transparency, access to public information, and improved coordination and efficiencies among bureaus and partner organizations across the public, non-profit and private sectors; and

WHEREAS, the City of Oakland seeks to encourage the local software community to develop software applications and tools to collect, organize, and share public data in new and innovative ways; and

WHEREAS, Software applications and tools that enable Citizens to access, visualize, and analyze public information will encourage Citizens to provide feedback on local issues;

RESOLVED: That the Oakland City Council hereby directs the City Administrator to develop a plan and technical standards for evaluating and disseminating data sets generated within City Departments as "Open Data," as well as draft an "Open Data Policy" ordinance within 120 days of the passing of this resolution; and be it

FURTHER RESOLVED: That the plan require that the data be made available on the Internet through a single web portal, formatted to enable viewing by web browsers and mobile devices and also in their raw or unprocessed format; and be it

FURTHER RESOLVED: That in developing rules and standards for the Open Data Policy and plan, the City Administrator may consider the eight principles of open government data that were developed by a group of open government advocates and published by the Sunlight Foundation to provide guidance for entities implementing open data policies; and be it

FURTHER RESOLVED: That the City Administrator shall assure that each City Department, board, commission and agency ("Department") makes reasonable efforts to make available all data sets under the Department's control, provided that such disclosure be consistent with applicable laws, including laws related to privacy and security; and be it

FURTHER RESOLVED: The City Administrator will ensure that data supplied to the City by third parties (developers, contractors, consultants) are unlicensed, in a prevailing open standard format, and not copyrighted except if otherwise prevented by legal considerations; and be it

FURTHER RESOLVED: All public data sets shall be updated as often as necessary to preserve the integrity and usefulness of the data sets; and be it

FURTHER RESOLVED: The web portal hosting the public data sets shall make use of web syndication technology to notify the public of all updates; and be it

FURTHER RESOLVED: The portal shall utilize a web application programming interface that shall permit application programs to request and receive public data sets directly from the web portal.

IN COUNCIL, OAKLAND, CALIFORNIA, _____, 2012

PASSED BY THE FOLLOWING VOTE:

AYES -

NOES -

ABSENT -

ABSTENTION -

ATTEST:_____
LaTonda Simmons
City Clerk and Clerk of the Council
of the City of Oakland, California