

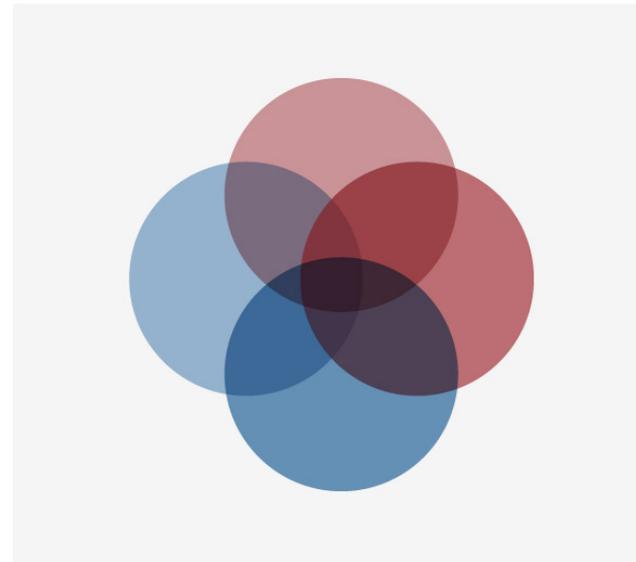
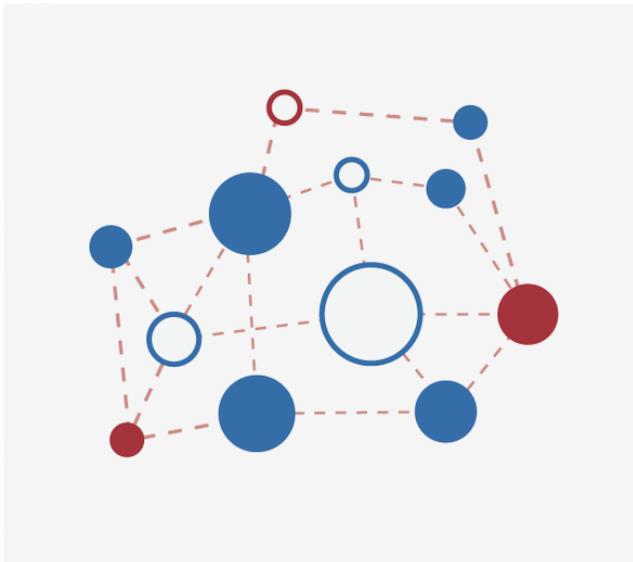
Open Data and Auditing

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Agenda

- About GAO and FAIS
- Open Data Trends
- Implications of Open Data for Auditors



U. S. Government Accountability Office

- Independent, nonpartisan congressional watchdog
- Advise Congress and executive agencies on making government more efficient, effective, ethical, equitable and responsive
- Work comes from requests, mandates, and Comptroller General authority



Forensic Audits and Investigative Service

- The **Forensic Audits and Investigative Service (FAIS)** team provides Congress with high-quality forensic audits and investigations of fraud, waste, and abuse; other special investigations; and security and vulnerability assessments.
- Our work cuts across a diverse array of government programs administered by IRS, the Centers for Medicare and Medicaid Services, the Department of Veterans Affairs, and the Department of Homeland Security, among others.

Open Data Trends – Definitions

- Open data: concept that data should be freely available for anyone to use and republish without copyright or other restrictions on use. No limits on the development of software using this data. Typically involves publishing raw data on a website.
- Open analysis: interpreting data sets for the end user while also making underlying data publicly available; often uses data visualizations to help guide the user through the data and make it more easily understood.
- Open performance: establishing measurable goals from data; sharing these goals and underlying data publicly and automatically so changes and impact are transparent.

Open Data Trends – Conditions for Success

Numerous scientists have pointed out the irony that right at the historical moment when we have the technologies to permit worldwide availability and distributed process of scientific data, broadening collaboration and accelerating the pace and depth of discovery.....we are busy locking up that data and preventing the use of correspondingly advanced technologies on knowledge

--John Wilbanks, VP Science, Creative Commons

Open Data Trends – Conditions for Success

- Open data represents a fundamental cultural shift within governments. For an organization to embrace open data it needs to first overcome some of the fundamental barriers that discourage data sharing.
 - Data sharing – you know who your end user is
 - Open data – anyone could be your end user...even your boss

Open Data Trends – Conditions for Success

- Must have the right team of champions:
 - top leadership committed to transparency and accountability
 - program official must see a tangible benefit
 - data geek for whom this is a passion project
- Combating the notion that data sharing leaves agencies vulnerable to criticism
- Fostering an attitude accepting the limitations of data sets
- Focus on the value and impact of the data for end users

Open Data Examples

- City of Chicago Open Data Portal
<https://data.cityofchicago.org/>

- City of Edmonton
<https://data.edmonton.ca/>

Open Analysis Examples

- Recovery.gov

<http://www.recovery.gov/arra/Pages/default.aspx>

- California Drought Visualization (Open Water Data Initiative)

http://cida.usgs.gov/ca_drought/

- Kansas City Open Budget

<http://budget.kcmo.gov/#!/year/default>

Open Performance Examples

- City of Chattanooga (ChattaData)

<https://performance.chattanooga.gov/>

- Kansas City

<https://kcstat.kcmo.org/>

Implications for Auditors

- How can open data help with audits?
- How do you evaluate an open data or open performance initiative?

Implications for Auditors – How can open data help with audits?

- New data sources for evaluating program performance that are readily available, regularly updated, and downloadable
 - Public transit ridership
 - Reduction in trash tonnage, increase in recycling
 - 311 data
- Sites that visualize data could offer auditors insights into data that would not otherwise have been observed.
- Potential to combine disparate data sets to gain insight into the underlying cause of a problem

Implications for Auditors – Evaluating an open data initiative

Evaluating data quality

- Open data initiatives might require a new perspective on data quality. The philosophy is to get the data out there and then use an iterative process over time leveraging one's user community to improve the data.
- If an open data initiative is in the first couple years, consider evaluating whether there is a mechanism to improve data over time, including a robust mechanism to receive end user input, and whether there is a process in place to act on information provided by the public.

Implications for Auditors – Evaluating an open data initiative

Evaluating impact on the user

- Opening data is about making that content readily available and accessible to end users. Given that goal, auditors could determine whether
 - the presentation of information is understandable to non-data savvy users. This is particularly relevant for open analysis and open performance efforts.
 - there are data sets that could add insight but have gone unnoticed by program officials and are not yet published.
 - end users have the opportunity to develop applications using the data and whether there is any economic output from doing so.

Implications for auditors

Evaluating implementation of an open data project

- Are the conditions right for a successful open data project?
 - Does the project have staff to see the project to completion (e.g., is top leadership focused on transparency and accountability, is there a data geek to move the technology forward, is a program/subject matter expert who “owns” the data participating)
 - Is the control environment / organizational culture conducive to success? (e.g., are staff expressing concerns about how “their” data will be used, whether the data could affect their program or funding, can program officials identify tangible benefits to them and their program’s mission)

Implications for auditors

- How can you imagine using or evaluating open data?



GAO on the Web

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