



THE CENTER FOR
OPEN DATA ENTERPRISE

2017 Open Data Roundtables
Roundtable on Open Data for Economic Growth

KEY TAKEAWAYS

BACKGROUND

On July 25, 2017, the Executive Office of the President [Office of Management and Budget](#) (OMB) and the [Center for Open Data Enterprise](#) co-hosted a [Roundtable on Open Data for Economic Growth](#). The goal: to “connect government and private-sector leaders to use open data as a strategic resource for better government and growing the American economy.”

Open data is free, publicly available data that anyone can access and use without restrictions. U.S. federal open data is a strategic national resource. American businesses use this government resource to optimize their operations and supply chains, improve their marketing, and develop new products and services. Federal open data also helps guide business investment and foster innovation, improving employment opportunities.

The Roundtable on Open Data for Economic Growth brought together 78 participants from government, business, nonprofit organizations, and academic institutions to discuss the value of open data as a strategic resource. They included 41 from government, 26 from business, and 11 from nonprofits and academia. Government participants, speakers, and panelists included several data leaders from key White House offices: The Office of Management and Budget (OMB), the Office of Science and Technology Policy (OSTP), and the new Office of American Innovation (OAI). The Roundtable was held under the [Chatham House Rule](#), and participants were not asked to develop consensus recommendations but to share their own observations and suggestions.

The full agenda for the Roundtable on Open Data for Economic Growth can be found [here](#) and the list of participating organizations can be found [here](#).

OPEN DATA FOR BUSINESS

Open data is a versatile resource that can benefit businesses, consumers, and economies as a whole. Open data can promote economic growth across all sectors by enabling the development of **new products and services** and the **optimization** of existing business operations:

- **New products and services:** Companies are using open data to provide entirely new kinds of products and services. These can be as specific as mobile apps and web platforms or as wide-ranging as major companies that have been launched using weather, agriculture, and geospatial data. Across sectors, merging various types of open data enables businesses to identify industry, economic and consumer trends, and inform the creation of new products and customer experiences.
- **Optimization:** Companies are also using open data to operate more efficiently, compete more effectively, grow into new markets, and make better investment decisions. For example, open data can be used to optimize supply chains by utilizing distributor, geospatial, and inventory data; it can help create targeted marketing and sales strategies using demographics, point-of-sales, and weather data; and it can help companies make smarter investment decisions based on economic data, business registers, and other relevant statistics.

The value of federal open data to the United States has been estimated at hundreds of billions of dollars. The U.S. Department of Commerce [has estimated](#) that internet publishing, consulting and market research firms alone use this data to generate more than \$200 billion in revenues each year. Other studies have found that U.S. [weather](#), [GPS](#), [Census](#), and [health data](#) support billions more in revenue across other sectors. The [Open Data Impact Map](#), developed and maintained by the Center for Open Data Enterprise, includes more than 500 examples of American companies that use open government data as a business resource.

Through presentations and breakout discussion sections, this Roundtable focused on two issues: identifying critical datasets for business use, and developing a better enabling environment for the business use of open data. Business participants in five sectors identified key datasets and data types, while both business and government participants had recommendations for improving the open data ecosystem.

HIGH-VALUE DATA FOR KEY BUSINESS SECTORS

For discussions during breakout sessions, participants were grouped into tables by sector: Consumer and Retail, Finance, Geospatial, Healthcare, and Transportation. Each table included a mix of business and government data leaders; the tables were co-facilitated by government officials and the Center for Open Data Enterprise team. Each table was asked to identify types of business applications for their sector; high-value datasets that are critical to their work; and technical and institutional changes that could create a more enabling environment for the use of open data in their sector.

The following sections describe key takeaways for each sector, based on both discussion in the breakout sessions and research done in preparation for the Roundtable.

Consumer & Retail

Businesses in this sector use many types of data, including demographic and social data, such as the American Community Survey, agriculture, health, geospatial, and weather data. They also use data on shipping, transportation, and fuel prices in supply-chain management. Consumer and retail companies use open data to:

- **Develop new products.** By combining numerous types of data, such as demographic, weather and point of sales data, businesses can identify trends and develop new products and user experiences to better meet the needs of their customers.
- **Improve inventory management.** Many large retailers are using weather data to determine sale and placement of products, merchandising, and supply chain logistics.
- **Create targeted marketing strategies.** Consumer and retail companies are integrating proprietary data with demographic and social data to create customer segmentation models, thereby developing more relevant, personalized interactions with their customers.
- **Inform investment decisions.** Businesses in this sector are using demographic and social data from the U.S. Census such as household size, household income, and population counts to support market expansion, diversification, and acquisition strategies, and to inform the development of new products and services.

For companies in this sector, the priority is to keep the major government data sources they rely on timely and complete. This includes a commitment to major data collections such as the American Community Survey and weather and geospatial data.

Finance

This sector uses a wealth of data from numerous agencies for business intelligence and to inform and guide investment decisions. These include corporate data from the Securities and Exchange Commission (SEC), demographic data from the Census Bureau, and business and national economic data and statistics. Depending on the nature of the company and its investments, companies may also use data on bank and utility performance, patents, or drug approval data. Financial companies use open data to:

- **Assess businesses seeking financing.** Financial institutions are using economic data to evaluate small businesses and startups as well as larger companies looking to raise capital.
- **Inform investment decisions.** Financial institutions are integrating economic data including daily commodity prices, monthly agriculture production data, and unemployment rates to inform investments in companies, real estate, currencies, commodities, and other assets.
- **Identify and prevent fraud.** Firms use data on companies, professional licenses, property, court records and more to detect fraud and mitigate risks.

- **Develop research on national and global financial outlooks.** Using this data allows firms to understand consumer behavior, identify and quantify risks, and optimize their strategies.
- **Evaluate personal loan applications.** Financial institutions are using demographic and social, economic, and labor data to assess loan applicants, including those with no or limited credit history, thereby increasing financial inclusion for customers who might otherwise not have access to capital.

Companies in the financial sector would like more timely access to data and metadata for these applications. They would like to see stronger standards for identifying businesses and individuals in a clear and consistent way, such as the legal entity identifier (LEI) system. Adopting a system like this across financial regulation would provide more accurate information for investment decisions and would help prevent money laundering and fraud. Financial companies would also benefit from easier access to IRS data in a more usable form (with appropriate permission from taxpayers), and would like access to harmonized local data, such as driving, housing, and building permits.

Geospatial

Companies in this industry provide geospatial data with the infrastructure, software applications, data analytics and visualizations that make it valuable to a wide range of users. For example, geospatial data helps retailers manage their supply chains and choose sites for expansion, helps farmers increase their crop yields, helps shipping companies find efficient routes, and helps entrepreneurs assess new business opportunities. The most used types of data include National Aeronautics and Space Administration (NASA) satellite data, weather data from the National Oceanic and Atmospheric Administration (NOAA), GPS data from the Department of Defense, and Landsat data from the U.S. Geological Survey. Geospatial companies utilize open data to provide numerous products and services to their customers, including:

- **Maps for web platforms and mobile applications,** which are used by government agencies and businesses to communicate information with the general public.
- **Data analytics and visualizations,** which make it easier to understand and interpret geospatial data.
- **Predictive modeling and geospatial intelligence,** which help companies plan their growth strategies and help government agencies in such areas as transportation planning, emergency response, and public health.

Companies in this sector need more and better geospatial data. They would like government data providers to develop feedback mechanisms for correcting inaccuracies, improve mapping coverage, make the data more timely, and find ways to combine authoritative measurements with crowdsourced input.

Healthcare

The most-used types of data in this sector include data from the Centers for Medicare and Medicaid Services (CMS), the Centers for Disease Control (CDC), and the Food and Drug Administration (FDA), as well as demographic and social and geospatial data. Among other applications, companies working in the healthcare sector are using open data to:

- **Help consumers find healthcare options that meet their needs.** Healthcare companies are integrating hospital ratings data from the Centers for Medicare and Medicaid Services (CMS) to help consumers find healthcare providers and facilities.
- **Develop more effective drugs and medical devices.** Pharmaceutical companies are sharing clinical trial datasets with federal agencies including the Department of Health and Human Services (HHS) and the National Institutes of Health (NIH) via clinicaltrials.gov.
- **Improve public health.** Healthcare companies use data to predict, monitor, and respond to disease outbreaks, and to evaluate health outcomes to develop more effective treatments.

Participating companies said they would like better access to Medicare and Medicaid claims data for a number of uses, including fraud detection, cost analysis, and outcomes analyses that could help assess the quality of different providers' care. More timely CDC data would improve disease surveillance and help stop incipient outbreaks. New data strategies to match patients to clinical trials could give many more people the option to consider experimental treatment. And requirements and incentives to share federally funded research data would advance medical research and its application as a whole.

Transportation

Participants from this sector included auto manufacturers, auto insurance companies, companies working to improve public transportation, and companies that provide vehicle-sharing and other innovative models. They rely on transportation data on recalls, traffic density, population data, energy efficiency, and other data, as well as weather and geospatial data. Transportation companies are using open data to:

- **Provide accessible information about public transit, traffic, and road conditions.** Transportation companies are using information on public transit systems to develop web and mobile applications for consumers.
- **Support R&D and product innovation.** Automotive companies are using transportation data to support the development of autonomous vehicles.
- **Monitor vehicle safety.** Transportation and logistics companies are using transportation and health data to improve safety mechanisms and recall compliance.
- **Inform the pricing of insurance products.** Insurance companies are using data on transportation accidents to calculate the probabilities of these events happening.

Businesses in this sector would benefit from more real-time, structured data, particularly to make it easier to use data from different states. Better, more transparent data on vehicle price and safety would benefit consumers directly as well.

IMPROVING THE OPEN DATA ECOSYSTEM: THE BUSINESS PERSPECTIVE

Business leaders at the Roundtable had a strong overall recommendation: The U.S. government should **make open data a priority and support it by investing in a modern data infrastructure**. While open data has been identified as [a federal policy goal since 2013](#), it has generally been an underfunded effort. The current focus on IT modernization is an opportunity to put new resources into government data systems. In particular, business leaders saw a need to improve data access, quality, and interoperability for their use. Many of these findings reinforced recommendations from a series of Roundtables held by the White House and Center for Open Data Enterprise in 2016, which can be found [here](#).

For **data access**, a critical need, which is still unmet, is to **keep up-to-date data catalogs and inventories** and **make data more discoverable**. Businesses and other users need to know what data government agencies have in order to access and apply it. Government agencies should also ensure that their data is technically easy to access and use. They should **provide APIs for high-value government data** as a matter of course, and should **host government data in the cloud** for ease of access (particularly important for large data collection like geospatial or genomic data). Several business leaders also pointed out that accessible, transparent data is essential for **consumer decision-making**, and for businesses that use data to help consumers with important life choices.

Regarding **data quality**, government agencies should **focus on providing high-quality data, not on building new applications**: If government provides the data, the private sector can build the apps. Business participants see a need to **improve data quality across the board**, making government open data more timely, accurate, standardized, and granular. As part of the commitment to quality, government agencies should **develop feedback loops** so data users can help improve government data with their input.

Finally, improving **data interoperability** will require standard-setting and other efforts. Business leaders stressed that the government should **encourage interagency cooperation and data sharing** to solve the most challenging problems. In addition, businesses stressed the need to **standardize and link data across states and between state and federal data systems**. In a number of areas, including finance, healthcare, and transportation, state and federal data must be used together.

IMPROVING THE OPEN DATA ECOSYSTEM: GOVERNMENT SUPPORT FOR BUSINESS GOALS

Government participants in the Roundtable voiced their support for improving government open data in general, and improving data with a high business value in particular. Several discussed the need to set

priorities to make government open data programs effective, and their commitment to **make business needs an important part of prioritizing government open data programs**. This will require ongoing feedback and dialogue between government and the private sector.

Government officials also expressed their hope to **help businesses develop new commercial ventures to serve citizens using open government data**. A high priority for this administration is to improve services to American citizens through both government and private-sector efforts. The federal government can focus on improving a select number of high-priority services that only government can deliver, and can open up government data for the private sector to use in building other new, innovative services for citizens.

Both business and government participants also would like to **explore how companies can help provide data resources**. Many companies are interested in sharing their own data, or other data from non-government sources, in ways that can be combined with government data for greater insights. For example, private-sector data in transportation and mapping can improve geospatial knowledge and understanding of traffic flows; private data on healthcare can complement government research data; and data from finance companies can be shared to detect fraud. Several participants suggested that model agreements between companies and government agencies in some areas could help institutionalize this kind of data-sharing.

CONCLUSION

The Roundtable on Open Data for Economic Growth, with strong participation across White House Offices, underscored the administration's commitment to digital innovation and to open data as part of that innovation. White House data leaders emphasized their interest in providing and promoting open government data for public use. At the same time, business leaders from many sectors reiterated the value that open data holds for the private sector and the economy.

The Roundtable built on steps taken by the Trump Administration earlier this year to promote technological progress through collaboration and digital innovation. When the Office of American Innovation was launched in March 2017, Jared Kushner, Senior Advisor to the President and head of OAI, [said](#), "We have an opportunity to identify and implement solutions by combining internal resources with the private sector's innovation and creativity, enabling the Federal Government to better serve Americans."

Perhaps most important, both business and government recognize the need to work together to realize the value of the nation's data resources. Several Roundtable participants discussed ways to continue the public-private sector dialogue. They saw the Roundtable on Open Data for Economic Growth as a potential model and a first step in developing opportunities for public-private collaboration. We hope that this kind of collaboration will continue to develop open data's value and look forward to the progress ahead.

ABOUT THE CENTER FOR OPEN DATA ENTERPRISE

The Center for Open Data Enterprise is an independent nonprofit organization, based in Washington DC that develops smarter open data strategies for governments, businesses, and other nonprofits by focusing on data users. Our mission is to maximize the value of open data as a public resource.

We welcome feedback on this report; please send comments and inquiries to Katarina Rebello, Policy Fellow, at katarina@odenterprise.org.

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