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.

Published by The Center for Open Data Enterprise, [www.opendataenterprise.org](http://www.opendataenterprise.org) (2017)
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.

The Center for Open Data Enterprise thanks our Open Data Partners, Accenture Federal Services and Booz Allen Hamilton, for supporting the Center’s work on the 2017 Open Data Roundtables.

Accenture Federal Services, a wholly owned subsidiary of Accenture LLP, is a U.S. company with offices in Arlington, Virginia. Accenture’s federal business has served every cabinet-level department and 30 of the largest federal organizations. Accenture Federal Services transforms bold ideas into breakthrough outcomes for clients at defense, intelligence, public safety, civilian and military health organizations.

For more than 100 years, business, government, and military leaders have turned to Booz Allen Hamilton to solve their most complex problems. They trust us to bring together the right minds: those who devote themselves to the challenge at hand, who speak with relentless candor, and who act with courage and character. They expect original solutions where there are no roadmaps. They rely on us because they know that— together— we will find the answers and change the world. To learn more, visit BoozAllen.com.
LIST OF PARTICIPATING ORGANIZATIONS

COMPANIES, NONPROFITS & ACADEMIA

Abt Associates is a government and business research and consulting firm that works in the fields of health, social and environmental policy, and international development.

Accenture Federal Services, a wholly owned subsidiary of Accenture LLP, delivers federal solutions to clients at defense, intelligence, public safety, civilian and military health organizations.

Azavea is a geospatial analysis software development firm specializing in the creation of location-based web and mobile solutions, as well as geospatial analysis services to enhance decision-making.

Bloomberg is a global business and financial information and news firm, that connects decision-makers to a dynamic network of information, people and ideas.

Booz Allen Hamilton is a provider of management consulting, technology, and engineering services to the U.S. government in defense, intelligence, and civil markets, and to major corporations, institutions, and nonprofit organizations.

The Center for Open Data Enterprise is an independent nonprofit organization that develops smarter open data strategies for governments, businesses, and other nonprofits by focusing on data users.

The Credit Junction is a data-driven lending platform that helps small and mid-size businesses access financial capital.

The Data Coalition advocates on behalf of the private sector and the public interest for the publication of government information as standardized, machine-readable data.

The Data Foundation is an industry-focused open data research organization.

Demand Progress works to win progressive policy changes for ordinary people through organizing, and grassroots advocacy.

Esri provides geographic information systems (GIS), a mapping software that visualizes, questions, analyzes, and interprets data to understand relationships, patterns, and trends.

Published by The Center for Open Data Enterprise, www.opendataenterprise.org (2017)
Experian assists lenders in managing consumer credit risk and empowers consumers to understand and responsibly use credit in their financial lives.

Garmin designs, manufactures, markets, and sells navigation, communication, and information devices for automotive, mobile, wireless, outdoor recreation, marine and aviation applications.

Harvard Kennedy School, also known as The John F. Kennedy School of Government, is a graduate and professional school for leadership, economic development, policy making, and social entrepreneurship.

IBM is a multinational corporation offering a range of business consulting services and technological products.

Kellogg Company is a manufacturer and marketer of ready-to-eat cereal and convenience foods.

Mastercard engages in the global payments industry that connects consumers, financial institutions, merchants, governments, and business.

OnDeck uses data aggregation and electronic payment technology to evaluate the financial health of small and medium sized businesses and efficiently deliver capital to a market underserved by banks.

OptumHealth is a health services and innovation company that helps modernize the health system's infrastructure, advance care and empower individuals as they take control of their own health.

Panjiva provides an intelligence platform for global trade professionals. The company's technology makes sense of massive amounts of diverse, fragmented data on more than 10 million companies across 190 countries.

Progressive Insurance provides personal and commercial automobile and property insurance, other specialty property-casualty insurance and related services.

Quintiles IMS is a multinational company serving the combined industries of health information technologies and clinical research.

S&P Global is a provider of ratings, benchmarks and analytics in the global capital and commodity markets.

Sunlight Foundation is a national, nonpartisan, nonprofit organization that uses technology, open data, policy analysis and journalism to make governments and politics more accountable and transparent.

Van Scyoc Associates Inc. is a full-service federal government affairs firm which represents variety of local governmental, and non-governmental organizations across the US and abroad.

Zipcar is a car-sharing company and a subsidiary of Avis Budget Group.

ZocDoc is a service to help patients find and book appointments with a wide range of medical specialties in 1,900+ cities and towns across the United States.
GOVERNMENT AGENCIES & OFFICES

The CIO Council, known formally as the Federal Chief Information Officers Council, is the principal interagency forum for improving agency practices related to the design, acquisition, development, modernization, use, sharing and performance of federal information resources.

The Millennium Challenge Corporation is an independent U.S. foreign aid agency that is helping lead the fight against global poverty through supporting economic growth.

The U.S. Air Force is the aerial warfare service branch of the United States Armed Forces, whose mission is to defend the United States in air, space and cyberspace.

The U.S. Department of Agriculture is the federal executive department responsible for developing and executing federal government policy on farming, agriculture, forestry and food.

The U.S. Department of Commerce’s mission is to create the conditions for economic growth and opportunity. The Department works with businesses, universities, communities, and the Nation’s workers to promote job creation, economic growth, sustainable development and improved standards of living for Americans.

The Bureau of Economic Analysis produces economic accounts statistics that enable government and business decision-makers, researchers, and the American public to follow and understand the performance of the Nation’s economy.

The International Trade Association strengthens the competitiveness of U.S. industry, promotes trade and investment, and ensures fair trade through the rigorous enforcement of our trade laws and agreements.

The National Technical Information Service’s mission is to promote the Commerce Department’s and Federal data priorities, including open access and open data, by providing information and data services to the public, industry, and other federal agencies in ways that enable U.S. innovation and economic growth.

The U.S. Census Bureau’s mission is to serve as the leading source of quality data about the nation’s people and economy. The Census Bureau is overseen by the Economics and Statistics Administration.

The U.S. Department of Health and Human Services is a cabinet-level department of the U.S. federal government with the goal of protecting the health of all Americans and providing essential human services.

The National Institutes of Health is the nation’s medical research agency. The NIH is a part of the U.S. Department of Health and Human Services.

The U.S. Department of State’s mission is to shape and sustain a peaceful, prosperous, just, and democratic world and foster conditions for stability and progress for the benefit of the American people and people everywhere.

Published by The Center for Open Data Enterprise, www.opendataenterprise.org (2017)
The U.S. Department of Transportation's mission is to ensure a fast, safe, efficient, accessible and convenient transportation system that meets national interests and enhances the quality of life of the American people, today and into the future.

The U.S. Digital Service's mission is to deliver better government services to the American people through technology and design.

The U.S. General Services Administration's mission is to deliver the best value in real estate, acquisition, and technology services to government and the American people.

The U.S. Geological Survey is a science organization that provides impartial information on the health of our ecosystems and environment, the natural hazards that threaten us, the natural resources we rely on, the impacts of climate and land-use change, and the core science systems that help us provide timely, relevant, and useable information.

The White House, National Security Council advises and assists the President of the United States on national security and foreign policy matters.

The White House, Office of American Innovation makes recommendations to the President of the United States on policies and plans that improve government operations and services, improve the quality of life for Americans now and in the future, and spur job creation.

The White House, Office of Management and Budget's mission is to serve the President of the United States in implementing his vision across the Executive Branch.

Office of Information and Regulatory Affairs is the U.S. government’s central authority for the review of Executive Branch regulations, approval of government information collections, establishment of government statistical practices, and coordination of federal privacy policy.

The White House, Office of Science and Technology Policy advises the President on the effects of science and technology on domestic and international affairs. It also develops, coordinates, and implements science and technology policies and budgets.

Published by The Center for Open Data Enterprise, www.opendataenterprise.org (2017)
Eisenhower Executive Office Building | Washington, DC | July 25, 2017

**Purpose:** Connect government and private-sector leaders to use Open Data as a strategic resource for better government and growing the American economy.

12:00 pm  Registration, Networking, and Refreshments

12:45 pm  **Welcome with Structure of the Day and Goals for the Roundtable**
Dr. Kristen Honey, Senior Policy Analyst, White House Office of Management and Budget (OMB)

1:00 pm  **Opening Remarks - Open Data, DATA Act, and Blockchain Fueling American Business**
The Honorable Mick Mulvaney, Director, OMB

1:15 pm  **White House Offices - Crosscut Panel on Open Data**
- **Jack Wilmer**, Senior Policy Advisor for Cybersecurity and IT Modernization, White House Office of Science and Technology Policy
- **Matt Lira**, Special Assistant to the President for Innovation Policy and Initiatives, White House Office of American Innovation (OAI)
- **Margaret Graves**, Acting Federal Chief Information Officer, OMB
  
  Moderator: Dr. Kristen Honey

1:40 pm  **Lightning Talks - How Open Data Drives New Products and Services**
*Business leaders discuss how entrepreneurs and innovators can use Open Data for new business ventures.*
- **Sergio Rodriguera, Jr**, Chief Strategy Officer, Credit Junction
- **Andrew Turner**, Director and Chief Technology Officer of the Research and Development Center, Esri
- **James Psota**, Chief Technology Officer and Co-Founder, Panjiva

2:00 pm  **Breakout Session 1 - High-Value Data for Business**
*Participants will identify important applications of Open Data and high-value datasets*

3:00 pm  Networking Break

*The 2017 Roundtable on Open Data for Economic Impact is designed to elicit individual views and suggestions for improving Federal data from stakeholders and experts in the field.*

*To ensure openness of discussion, the Roundtable will be held under the Chatham House Rule: Any participant is free to use information from the day but is not allowed to reveal who made any comment.*

*Participants may tweet using the hashtag #OpenData and share their White House experience on social media without attributing ideas to any one individual or organization to maintain anonymity of ideas and encourage ideas exchange.*
The 2017 Roundtable on Open Data for Economic Impact is designed to elicit individual views and suggestions for improving Federal data from stakeholders and experts in the field.

To ensure openness of discussion, the Roundtable will be held under the Chatham House Rule: Any participant is free to use information from the day but is not allowed to reveal who made any comment.

Participants may tweet using the hashtag #OpenData and share their White House experience on social media without attributing ideas to any one individual or organization to maintain anonymity of ideas and encourage ideas exchange.

3:20 pm  **Lightning Talks - How Businesses Use Open Data to Innovate**  
*Business leaders describe how Open Data helps companies improve operations and strategy.*  
- Shali Mohleji, Government and Regulatory Affairs Manager, Technology Policy, IBM  
- Nate Haskins, Chief Data Officer, S&P Global Market Intelligence  
- Hugh McDonough, Director of Global Innovation, Abt Associates

3:40 pm  **Breakout Session 2 - Sharing Expertise to Put Open Data to Use**  
*Breakout groups address ways that government and the private sector can create an enabling environment for the business use of Open Data.*

4:30 pm  **Presentation of Highlights**  
*Breakout groups present key insights, takeaways, and next steps*

5:00 pm  **America’s Emerging Technologies and Data-Driven Solutions**  
Michael Kratsios, Deputy Assistant to the President and Deputy U.S. Chief Technology Officer, White House Office of Science and Technology Policy

5:15 pm  **Closing Remarks - Harnessing Data to Innovate for the Future**  
Chris Liddell, Assistant to the President and Director of the American Technology Council, OAI

5:30 pm  **Adjourn for Networking Reception**