Realizing the Potential of Open Government Data

A Roundtable with the U.S. Department of Commerce
Realizing The Potential of Open Government Data: 
A Roundtable with the U.S. Department of Commerce 

A report of findings and recommendations from a dialogue between the Department of Commerce and the stakeholders using its data.

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Executive Summary

On June 18, 2014, The Governance Lab (GovLab) at New York University and the White House Office of Science and Technology Policy (OSTP) co-hosted an Open Data Roundtable with the U.S. Department of Commerce. This Roundtable brought together data-providers in the Department of Commerce with companies and nonprofit organizations that use their data for a structured, action-oriented dialogue on ways to improve data management, dissemination and use. In synthesizing the day’s discussion, The GovLab has identified seven key areas for improvement:

- Data Discovery and Findability
- Data Access
- Data Quality
- Data Collection and Sharing
- Data Interoperability
- Data Storage and Dissemination
- Data Users as Customers

The structure of this Roundtable and its findings serve as a template for future GovLab Open Data Roundtables with other federal agencies. These Roundtables help federal agencies gather feedback from the stakeholders who use their data and inform their data strategies in order to meet the requirements of the U.S. Open Data Policy. The Department of Commerce Roundtable has shown how a broad array of stakeholders can contribute to enhancing the open data ecosystem through input, dialogue, and partnerships to help improve government data quality, storage, and dissemination.

Secretary of Commerce Penny Pritzker has announced that the Department will hire its first Chief Data Officer and establish a Data Advisory Council – both changes that she has described as responsive to concerns and recommendations raised at this Roundtable. Additionally, several bureaus of the Department of Commerce – the National Oceanic and Atmospheric Administration, the U.S. Patent and Trademark Office, the International Trade Administration, and the U.S. Bureau of Economic Analysis – have made concrete commitments to improve their data policies and management practices in significant ways.

This report presents findings and recommendations from the Roundtable and highlights the value of continued feedback and collaboration between all open data stakeholders. It describes commitments that the Department of Commerce has already made in response to the Roundtable, and opportunities for the private sector and civil society organizations to contribute solutions as well. It is designed as a public briefing document for the incoming Chief Data Officer, the Data Advisory Council and others engaged in open data efforts at the Department of Commerce, and as a resource for data stewards at other government agencies as well.

# Table of Contents

Foreword ................................................................. 5  
Introduction .......................................................... 6  
Roundtable Insights and Recommendations ................................................................. 8  
  Data Discovery and Findability ................................................................. 9  
  Data Access ................................................................. 11  
  Data Quality ................................................................. 13  
  Data Collection and Sharing ................................................................. 15  
  Data Interoperability ................................................................. 16  
  Data Storage and Dissemination ................................................................. 18  
  Data Users as Customers ................................................................. 20  
Appendix A: The Governance Lab, Open Data 500 and Open Data Roundtables ................. 22  
Appendix B: The Open Data Roundtable with the Department of Commerce ....................... 24  
  Agenda ................................................................. 24  
  Participants ................................................................. 26  
  Sponsors ................................................................. 34  
Appendix C: Current Initiatives presented by the Department of Commerce at the Open Data Roundtable . 35  
Appendix D: Media Coverage ................................................................. 37
Realizing The Potential of Open Government Data
A Roundtable with the U.S. Department of Commerce

Foreword

It is not hyperbole to call the Department of Commerce “America’s Data Agency.” No other department can rival the reach, depth, and breadth of our data programs. We are ready to utilize our data to strengthen America’s future, but we cannot do it alone. Like any startup, we need help and inspiration from partners like The GovLab.

Earlier this year, Secretary of Commerce Penny Pritzker said:

As America's data agency, the Department of Commerce was pleased to partner with The GovLab on the first Open Data Roundtable, held on June 18, 2014. The input we received from companies was invaluable and confirmed the need to make key changes in how we manage our data to maximize its value. On July 14, I announced that the Department will now hire a Chief Data Officer and establish a Data Advisory Council of business leaders – both changes that will help address the issues raised at the Roundtable. We look forward to continued work with The GovLab and the companies and organizations they have brought to the table.

I am confident that, with the help of partners like The GovLab and reports like this one, the Department of Commerce has the tools necessary to develop, test, and grow the next phase of the open data revolution. Several of the Department’s bureaus have also made further commitments to expand their data capabilities based on feedback from industry participants in the Open Data 500, and I am eager to see the results of those commitments.

Unleashing the full force of our data will be a source of innovation, a cornerstone of economic opportunity for businesses and entrepreneurs, and a foundation of greater prosperity for millions of families. We look forward to using the findings and recommendations from this report to make open data a centerpiece of our dynamic economy.

Bruce H. Andrews
Deputy Secretary of the U.S. Department of Commerce
Realizing The Potential of Open Government Data

A Roundtable with the U.S. Department of Commerce

Introduction

In today’s technology-driven economy, data has become an important resource for both new and existing businesses. In the evolving data ecosystem, publicly accessible, open data released by the federal government plays an increasingly important role. Since the fall of 2013, The Governance Lab (GovLab) at New York University, with funding from the John S. and James L. Knight Foundation, has systematically researched the ways that the private sector is using open government data as a key business resource. The GovLab’s Open Data 500 study, the first comprehensive study of its kind, has identified more than 500 companies that use open government data to fuel innovative businesses in agriculture, finance, energy, education, healthcare, and many other sectors of the economy.

The GovLab is now applying those findings to work directly with federal agencies and the businesses and other organizations that use their data. Through a series of Open Data Roundtables, The GovLab brings together federal data-providers with data-users for structured dialogue on ways to help make open government data more relevant, accessible, and actionable.

On June 18, 2014, The GovLab and the White House Office of Science and Technology Policy (OSTP) co-hosted the first Open Data Roundtable, planned and held in collaboration with the U.S. Department of Commerce. The Department of Commerce provides data to more companies than any other federal agency in the Open Data 500 study. Data is a pillar of the Department of Commerce’s “Open for Business Agenda,” and has been highlighted by Secretary Penny Pritzker as a department-wide strategic priority. The Department plans to unleash more of its data to strengthen U.S. economic growth; “to make its data easier to access, understand, and use; to maximize return on investment for businesses, entrepreneurs, government, taxpayers, and communities.” The Department of Commerce has also recognized the economic importance of open data in its July 2014 report, “Fostering Innovation, Creating Jobs, Driving Better Decisions: The Value of Government Data,” which emphasizes the importance of “comprehensiveness, consistency, confidentiality, credibility, relevance, and accessibility” in government datasets.

Under Secretary of Commerce for Economic Affairs Mark Doms led the Department’s planning and engagement with the event, and participated for the entire day. Over 20 other officials and staff from the Department of Commerce participated as well, with appearances by Secretary Penny Pritzker and Deputy Secretary Bruce Andrews. Nick Sinai, U.S. Deputy Chief Technology Officer, and Erie Meyer, Senior Advisor to the U.S. CTO, represented OSTP at the event. Over 20 companies and non-profits participated from a number of fields, including weather, finance, technology, geospatial and consulting, and open governance.

This report summarizes findings and recommendations from the participants at the Roundtable. These are not recommendations from The GovLab itself: in this process, The GovLab serves as a catalyst and facilitator for the open data community, and the recommendations reflect the participants’ views.

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The Department of Commerce Open Data Roundtable had an immediate impact. It confirmed the need to make key changes in how Commerce data is managed, how its value can be maximized, and the importance of obtaining feedback from data users to inform the Agency’s open data agenda. At the 2014 Esri International User’s Conference that took place on July 14th in San Diego, CA, Secretary Penny Pritzker announced two key changes in response to these concerns:

- Hiring the Department’s first Chief Data Officer, who will be “responsible for developing and implementing a vision for the future of the diverse data resources at Commerce. The new Chief Data Officer will pull together a platform for all datasets; instigate and oversee improvements in data collection and dissemination; and ensure that data programs are coordinated, comprehensive, and strategic.”

- Establishing a Data Advisory Council “comprised of 15 private sector leaders that will advise the Department on the best use of government data. This new advisory council will help Commerce maximize the value of its data by: discovering how to deliver data in more usable, timely, and accessible ways; improving how data is utilized and shared to make businesses and governments more responsive, cost-effective, and efficient; better anticipating customers’ needs; and collaborating with the private sector to develop new data products and services.”

In support of the Chief Data Officer’s mission, the Department of Commerce has committed to develop a support structure to facilitate sharing and incorporation of best practices regarding data within the Department. The Department will draw on different bureaus’ experience in working with their stakeholder communities to communicate changes, and draw on input from those stakeholders – the way, for example, that the National Oceanic and Atmospheric Administration (NOAA) has used notification and public comment processes in working closely with the weather industry. The new support structure under the Chief Data Officer is designed to facilitate these conversations across the major data agencies and other emerging data service areas in the Department.

This GovLab report is intended to be used as a briefing paper for the new Chief Data Officer and Data Advisory Council. In keeping with The GovLab’s commitment to make the Open Data Roundtables transparent, it is being released as a public document with the hope that it will encourage further suggestions, input, and dialogue. In addition to the Chief Data Officer and the Council, the report is designed to be of value to:

- The Department of Commerce’s data strategists and the bureaus that collect, analyze, and disseminate data;
- Officials in other government agencies working to improve their agencies’ open data capabilities;
- Individuals and organizations who use open data from the Department of Commerce, including for-profit companies, non-profit organizations, and web and app developers; and
- Members of the media and the public interested in improving the open data ecosystem in the United States.

A detailed report of the Roundtable’s insights and recommendations follows.
Roundtable Insights and Recommendations

The dialogue covered seven key areas where the Department of Commerce can further develop its open data strategy. Work in these areas can help achieve the Roundtables’ goals – to help make government data more relevant, accessible, and actionable – while increasing the amount of data available in high-priority areas as well. This classification of opportunities to improve open data, which The GovLab believes will apply to other government agencies as well, is one step in ongoing research. Beyond the value to be gained from feedback and collaboration among open data stakeholders, The GovLab recognizes the need for continued research and mapping of the open data ecosystem and a better understanding of the value open data generates.

Key areas for improvement

- Data discovery & findability
- Data storage & dissemination
- Data access
- Data interoperability
- Data collection & sharing
- Data quality
- Data user as customer
Realizing The Potential of Open Government Data
A Roundtable with the U.S. Department of Commerce

Data Discovery and Findability

For both current and new data users to tap the Department’ open data resources, they must be able to *discover and find* the datasets that are of greatest value to them.

Goal

A top priority for the Department of Commerce is to continue to develop data inventories across all bureaus and centralize datasets: each bureau should have one place to identify all datasets, catalogued in machine-readable formats.

Purpose

To make it easier for data users to discover and find Commerce data, and foster continued innovation through novel uses of government data.

Recommendations for Commerce

- Create a site map of bureaus/locations of datasets in lieu of a single site holding all datasets; easier to implement and update; and points of contact for each dataset.
- Create a standardized registry that has standard metadata and can be queried programmatically.
- Include context and documentation for each dataset. In particular:
  - Provide the identity of data owners: when identifying datasets, it is often not clear who is responsible for the data.
  - **U.S. Bureau of Economic Analysis (BEA)**: improve technical documentation to better differentiate between raw and modeled data.
  - **U.S. Census Bureau (Census)**: increase the availability of information on business formation and closure without requiring special tabulations.
  - **US Patent and Trademark Office (PTO)**: make more information available about the scope of patent rights, including expiration dates, or decisions by the agency and/or courts about patent claims. PTO should add more context to its data to make it usable by non-experts – e.g. trademark transaction data and trademark assignment.
- Improve search functionality to find patent data, which is now made available through different databases using different interfaces.
  - Consider ways to make data searchable in image form. One of the issues is that patents granted before 1976 are only available in image format; this presents a considerable challenge as the age and font vintage of the pages make page-scanning with optical character recognition (OCR) difficult. This challenge, in
turn, makes it difficult to identify prior art that may impact the patentability of new applications.

**Commitments made by Commerce**

- **BEA** is in the process of designing a new webpage oriented to the business data user. In one centralized location, business users will be able to access BEA data most pertinent to the decisions confronting them.
- By the end of FY 2014, **BEA** will expand its “Which agency produces what statistics?” webpage to include data products produced by other Commerce agencies and data partners. This list will facilitate future departmental efforts to harmonize data inventories and data products across Commerce organizations and the federal government.
- The **International Trade Administration (ITA)** has launched a Developer Portal to put diverse trade and investment data in a single place.\(^7\)

**Opportunities for companies and civil society organizations**

- Provide continued feedback on the Department’s open data platforms.

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Data Access

Data repositories use multiple methods and languages to help users access data, which may be stored in a variety of different and sometimes incompatible formats. Participants at the Roundtable made clear that: (i) different users require varying modes of access to information; and (ii) providing multiple methods of access, including data as a download, will help ensure equality of access regardless of the user’s technological capabilities.

Goal

To provide access to Commerce data in multiple formats for the Department’s diverse users.

Purpose

To increase both the number of users of and ease of access to Commerce data in an egalitarian manner.

Recommendations for Commerce

- Continue to make data available through Application Programming Interfaces (APIs). APIs provide a consistent, programmatic method for accessing a resource; and are essential tools for high quality system architectures. They expose functionality in a structured manner.
- Provide data visualization tools on the Commerce website with examples for different datasets.
- Provide for users’ needs to download large datasets.
  - Census: increase the speed of downloading large datasets.
  - Provide more transparency and notice around changes to data distribution systems.
- NOAA suggests using current processes used by the National Weather Service as a model.9
- Specific issues for PTO:
  - Move from paper-based or Portable Document Format (PDF) systems to all-digital text-searchable format. In particular, promote the system for e-filing of patent applications. Mandating universal e-filing may require legislation and may be opposed by the patent bar. In the interim, Roundtable participants recommended that PTO promote e-filing as a voluntary option and work towards uniform e-filing as a standard.
  - One possible model: the Internal Revenue Service (IRS) e-filing of Form 990.10
  - Provide APIs to enable third parties to build better interfaces for the existing legacy systems. Access to Patent Application Information Retrieval (PAIR) and Patent Trial and Appeal Board (PTAB) data are most important here.

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• Make Public Access to Court Electronic Records (PACER) accessible at lower/no cost to the user.
• Improve access to Cooperative Patent Classification (CPC)/U.S. Patent Classification (USPC) harmonization data; tie this data more closely to economic data to facilitate data analysis.

Commitments made by Commerce

▶ PTO is following up on several of the discussions that took place at the Roundtable. To that end, the PTO is holding a follow-up Roundtable, also facilitated by The GovLab, to further inform its data strategy in December 2014.

Opportunities for companies and civil society organizations

▶ Provide continued input on data priorities, modes of access and uses, and other user feedback.
Data Quality

While there are many definitions of data quality, it generally refers to the completeness, validity and accuracy of data. Issues relating to data interoperability and accessibility are addressed in other sections.

Goal

To make data more complete, representative, and “clean,” reducing noise and inaccuracy within datasets.

Purpose

To improve the usability of Commerce data and reduce the amount of work necessary to clean data for use.

Recommendations for Commerce

- Specific requests and issues for the increased utility of Census data:
  - Publish data at a more granular geographic level (where possible), with easy-to-use geographic crosswalks. For instance, the American Community Survey could produce data at the block level, and deal with privacy issues possibly by masking individuals or inviting them to opt in.
    - Explore ways to increase the value of Census data with Title 26 administrative records,\(^{11}\) while following Title 13 privacy requirements.\(^ {12}\)
  - Explore ways to increase the value of Census data with Title 26 administrative records,\(^ {11}\) while following Title 13 privacy requirements.\(^ {12}\)

- Specific requests and issues for the improvement of BEA data:
  - Simplify 4,000 categories used for County Business Patterns and update industrial classifications.

- Specific requests and issues for the increased utility of PTO data:
  - Improve attributable ownership/titleholder data, and geolocation data for inventors and assignees/titleholders.
  - Continue working on inventor and assignee disambiguation, and study what happens to patents after they are granted.
    - Explore using Census data to this end, and ways to manage privacy and confidentiality issues.
    - Evaluate crowdsourcing solutions. In principle, crowdsourcing could help correct the extensive use of special purpose business entities that are used deliberately to obfuscate business ownership. If not used well, however, crowdsourcing could add to the problem by adding more inaccurate company names to the mix.

• Use data checking software for addresses and other bibliographic data, in the hope of improving the data with nominal impact on PTO.
  • Australia's intellectual property model was suggested as a model: IP Australia.\textsuperscript{13}
• Explore legal ways to allow users who find errors in addresses or other business information to change them – currently, these changes can only be done by the inventor or power of attorney. Also, or alternatively, include error-check functionality on websites for submitting patent data.

Commitments made by Commerce

- PTO will seek to address many of these suggestions at the aforementioned event in December 2014, and incorporate further feedback in developing its data strategy.

Opportunities for companies and civil society organizations

- Communicate data quality issues to the relevant Department of Commerce bureaus.
- Explore ways in which to share the improved, cleaned data once it has been processed.

Data Collection and Sharing

By making data collection more frequent, and by tapping a larger number of detailed data sources, government agencies can make their datasets more valuable. This is particularly important as traditional methods of data collection, such as surveys, have become less effective. Once collected, data can be shared through public-private collaboration that may include sharing data collected by companies as well as by government (for example, weather data or polling data).

Goal
For government, companies and nonprofits to collaborate in the collection and integration of data.

Purpose
To make available more complete and representative information for data use and innovation.

Recommendations for Commerce
- Explore ways for promoting continued public cooperation in completing surveys and providing information.
- Identify the products and web services that can be leveraged for data collection.
- Lead effort to standardize public data licensing (this may require legislation).
- Make the business case and engage businesses to share their own data; address how to mix proprietary with public data:
  - Census, BEA: Explore the potential to combine Commerce data with industry data and/or public opinion data.
  - NOAA: Explore potential to integrate more weather data from private sources – while bearing in mind that government is limited in its ability to redistribute privately collected data. Explore also the potential to gather environmental data from “citizen sensor” projects.

Opportunities for companies and civil society organizations
- Publicize the importance of public participation in census surveys.
- Develop apps and web services that could help increased data collection.
- Explore opportunities for data philanthropy.
Data Interoperability

The value of data multiplies when datasets can be combined. This will only be possible with better interoperability across agencies, bureaus and departments at all levels of government.

Goal

To develop and implement a set of common policies, tools, taxonomies and standards across the Department of Commerce.

Purpose

To allow users to better and more easily combine different datasets and variables (across agencies, government or with private data): this makes it possible for users to analyze and visualize information and develop actionable insights in new, more efficient ways.

Recommendations for Commerce

- Advocate for robust statutory authority within Commerce to establish data definitions, fields, etc.
- Work with industry to develop better, common taxonomy and metadata standards that conform to worldwide industry standards. Good metadata (data describing data) allows users to find useful data residing in multiple datasets more easily.
- Use government-wide reporting standards such as the Legal Entity Identifier:¹⁴
  - Commerce should first pursue free identifier options, and not those that in any way put a financial burden on the client (individual or corporate). If identifiers are not free of charge, they will effectively create a paywall for full access to the data and inhibit its public use.
  - Where agencies pursue government-wide identifiers, they should also investigate permanent access Uniform Resource Locators (URLs): URLs that won’t break over time.
  - Commerce could lead a government-wide Standard Business Reporting (SBR) initiative¹⁵, following leadership of the Netherlands¹⁶, Belgium¹⁷, Australia¹⁸, and UK.¹⁹
- Where possible, build APIs on top of existing data and systems (rather than trying to rebuild them from scratch) and get APIs to talk to each other:

¹⁷ - “Central Balance Sheet Office,” National Bank of Belgium, accessed October 10, 2014. [http://www.nbb.be/pub/03_00_00_00_00/03_01_01_00_00.htm?l=fr](http://www.nbb.be/pub/03_00_00_00_00/03_01_01_00_00.htm?l=fr).
• Establish best practices, such as a Representational state transfer (REST) architecture style. REST ignores the details of component implementation and protocol syntax in order to focus on the roles of components, the constraints upon their interaction with other components, and their interpretation of significant data elements.

• C.f. The EU Public Sector Information Directive for possible models.\textsuperscript{20}

Standardize data across Commerce and with related agencies to promote interoperability. Several aspects include:

• Definitional standards and crosswalks (i.e. BEA personal income vs. Census money income);

• Geographical standards (i.e. how BEA's geographically based data connects and aligns with Census geographically based data),

  • Consider working with the Open Geospatial Consortium;\textsuperscript{21}

• Census, BEA: Geospatial data can be improved by providing simpler tabular options to make connections, providing open source tools (e.g. GitHub), and developing tools for local governments to better maintain data. Technological standards (i.e. Bureau and government-wide standardization of APIs to make mash-ups easier);

• Display of data (i.e. across press releases and dissemination tools);

• Delineation of data (i.e. common income thresholds for agencies producing income measures).

Opportunities for companies and civil society organizations

• Work with government towards the development and implementation of common standards, API processes, and metadata.

  • For instance, IBM, chair of the W3C Data on Web Best Practices Working Group,\textsuperscript{22} has welcomed participation of National Institute of Standards and Technology (NIST) and Census.

Data Storage and Dissemination

Government agencies face financial and operational challenges in storing and disseminating their data. New strategies, including collaboration with the private sector, can help make greater data resources available more widely.

Goal

To leverage government and private resources to enhance data dissemination; to create sustainable partnerships with business to increase dissemination at no net cost to the government.

Purpose

To increase the Department’s capacity to provide equal, fair access for data users to greater quantities of data which to create economic and social value.

Recommendations for Commerce

- Publish procurement processes and streamline procurement rules to facilitate Public-Private Partnerships (PPPs).
- Create business models for PPPs that can extract data to the cloud at no net cost to government, and can provide free and equal access to all data users in a fair and sustainable way.
- Look to the private sector for opportunities for partnerships to reach large audiences. Create a system where government publishes the data and the private sector develops the apps to reduce government expenditure.
  - **NOAA, Census:** Determine what products and web services can be leveraged for data dissemination.
    - E.g. The Weather Company reaches a large percentage of U.S. population with its apps; government can leverage existing apps rather than building their own. For instance, the company is also developing a global alerting platform to help supplement what the Federal Emergency Management Agency (FEMA) is doing with the Integrated Public Alert and Warning System (IPAWS).
- Leverage existing web infrastructures for API development on cloud-based open platforms.

Commitments made by Commerce

- NOAA plans to develop a statement of requirements/objectives based on input received through its Request for Information initiated in February 2014.23 A draft of the statement of requirements/objectives will be made available for comment in Q1 FY 2015. NOAA has also expressed strong interest in working with private companies that may have platforms to help disseminate its data.

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Opportunities for companies and civil society organizations

- Explore business models for the provision of cloud-based platforms at no net cost to government.
- Develop data download web services at no cost to government.
Data Users as Customers

Stakeholder input is critical to serving customers, and engagement with data users is key to helping expand the Department of Commerce's capabilities as America’s “data agency”. Similarly, greater knowledge about the array of data users and the modes in which they use data can inform our understanding of the open data ecosystem and inform government data strategies.

Goal

To establish communities of interest and feedback loops between the Department of Commerce and its data customers; increase the number and depth of interactions with its users.

Purpose

To help the Department of Commerce understand and engage with its stakeholders, and better inform its open data strategies.

Recommendations for Commerce

- Create mechanisms to better determine who Commerce data users are, how they are now using data, and their need for different types of data.
  - Leverage API analytics for this information.
  - Get reporting back from businesses/users to determine the value of open government data and create an evidence base.
- Establish communities to discuss priorities for data access and data dissemination.
  - Devise a mechanism to rank demand for different datasets.
  - Determine what is to be centralized and prioritized for dissemination.
- Encourage government staffers to attend open government meet-ups and forums (e.g. by offering compensation time).
- Continue to engage the developer community; continue to hold data jams and issue challenges; evaluate the prospects of hosting a metadata-thon.
- Ask business users to publicly disclose their use of Commerce data: it adds authority to the businesses’ work and helps increase public awareness of the value of Commerce data.
- Establish a data-sharing council within Commerce to improve communication between bureaus.
Realizing The Potential of Open Government Data
A Roundtable with the U.S. Department of Commerce

- Make it easier to report problems in the system, including security issues.
  - Post main contact for each dataset on government platform.
  - Provide whistleblower-type protection for people who report security flaws; don’t threaten them, as can happen under the Computer Fraud and Abuse Act.
- Use social media technologies to gather feedback.
- Incorporate not only members of industry but also civil society members in the Data Advisory Council.
- Share research and insights with government agencies and research agencies promoting the use of open data; conduct impact assessments of what works (and doesn’t).

Commitments made by Commerce
- Now that new measures of quarterly GDP by Industry have been released in July 2014, BEA is organizing special targeted outreach efforts to create dialogues with specific industry data users to gain more insight into how they utilize BEA industry data, explore what data products they produce, and identify what synergies could be developed. BEA expects to conduct 4-5 of these dialogues in the first phase of this effort.

Opportunities for companies and civil society organizations
- Continued customer feedback on access and use of Commerce data and response to outreach efforts.
- Co-host and participate in open data events such as hackathons and data jams.
- Cite the use of Agency data on organizations’ websites; use the Commerce logo on organizations’ websites.
- Participate in research aimed at mapping the uses and users of open data, such as The GovLab’s Open Data 500 study, to continue to improve understanding of the economic and social value open data generates.
Appendix A: The Governance Lab, Open Data 500 and Open Data Roundtables

The Governance Lab at New York University (The GovLab)

Founded in 2012, with funding from the John D. and Catherine T. MacArthur Foundation and the John S. and James L. Knight Foundation, The GovLab brings together thinkers and doers who design, implement, and study technology-enabled solutions that advance a collaborative, networked approach to reinvent institutions of governance. Its goal is to advance understanding of how 21st century citizen engagement can make governance more effective and legitimate. The release of high-value open government data for public use is an important part of that process.

Open Data 500 Study

The Open Data Roundtables draw on the findings of The Open Data 500, the first comprehensive study of U.S. companies that use open government data to generate business and develop new products and services. The core objectives of this study, conducted with funding from the Knight Foundation, are to: 1) Provide a basis for assessing the value of open government data; (2) Encourage the development of new open data companies; and (3) Help government agencies and businesses work together to determine how open government data can be made more complete, accurate, and usable.

The Open Data Roundtable Series

The Open Data Roundtables, held in Washington, DC, are designed to help federal agencies implement the U.S. Open Data Policy while meeting the Policy’s requirement that agencies collect input from those who use their data. The U.S. Open Data Action Plan, released by the White House on May 9, 2014, describes these Roundtables as a key part of meeting the commitment to “support innovators and improve open data based on feedback.” The Plan notes that “Specific, actionable feedback from these sessions [the Roundtables] and others has the potential to improve descriptions, formats, and accessibility of government data.” The Open Data 500 team at The GovLab is now planning, facilitating, and reporting on the first ever series of Open Data Roundtables with U.S. federal agencies.
OUTCOMES

The Roundtables bring together data providers in government and data users in the business and nonprofit communities to identify the kinds of datasets that have the greatest value, and to determine what is needed to make them as useful as possible. They are designed to:

- Prioritize the most important datasets in each agency for business and public use.
- Improve each agency’s data and make it easier to find, access, and work with.
- Connect businesses and organizations with government agency staff who manage the data they use, and set up a process for ongoing feedback.

PARTICIPANTS

Participants in the Roundtables include:

- Government Agencies, which determine which individual or small team are best equipped to lead their participation. Key participants’ contact information will be made public so that they can serve as the points of public contact required by the Open Data Policy.
- Companies, which are drawn from the Open Data 500 Study. Any company identified as using the federal agency’s data has been invited to participate in both the Study and the Roundtable.
- Nonprofits, NGOs, academic researchers and others who may be invited because of their interest and expertise with federal data. These participants for each roundtable are chosen based on their ability to add insights to the specific kinds of data being discussed at that roundtable.
- The GovLab’s Open Data 500 team, which facilitates and records these public-private dialogues as a neutral third party. The team designs each roundtable in collaboration with the agencies and businesses involved and guides the pre-work needed to make each event efficient and productive.

More information about the Open Data Roundtable Series is available at www.OpenData500.com, or by sending inquiries to OpenData500@TheGovLab.org.
Appendix B: The Open Data Roundtable with the Department of Commerce

Agenda

Wednesday, June 18th, 2014
White House Conference Center - Truman Room

9:00 AM  Registration, Coffee and Refreshments

9:30 AM  Welcome
Mark Doms  
Under Secretary of Commerce for Economic Affairs, U.S. Department of Commerce

9:50 AM  Structure of the Day
Joel Gurin  
Senior Advisor, The GovLab

10 AM  Open Data Bureau Briefings
David Michaud  
Acting Deputy Chief Information Officer, National Oceanic and Atmospheric Administration
Nancy Potok  
Deputy Director, U.S. Census Bureau
Brian Moyer  
Acting Director, U.S. Bureau of Economic Analysis
Alan Marco  
Acting Chief Economist, U.S. Patent and Trademark Office

11 AM  Break

11:15 AM  Breakout Session: Using Commerce Data
- Economics and Demographics
- Geospatial and Mapping
- Intellectual Property
- Technology and Data Management
- Weather and climate

12:30 PM  Lunch
Realizing The Potential of Open Government Data
A Roundtable with the U.S. Department of Commerce

1:20 PM Breakout Session: Cross-Cutting Issues

2:40 PM Break

2:50 PM Remarks and Discussion
Penny Pritzker
U.S. Secretary of Commerce

Bruce Andrews
Deputy Secretary of Commerce

3:30 PM Commitments and Next Steps
Mark Doms
Under Secretary of Commerce for Economic Affairs, U.S. Department of Commerce

Nick Sinai
U.S. Deputy Chief Technology Officer, White House

3:55 PM Closing
Joel Gurin
Senior Advisor, The GovLab

4:00 PM Adjourn for Reception
# Participants

<table>
<thead>
<tr>
<th>COMPANIES</th>
<th>Description</th>
<th>Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Round Stones</td>
<td>3 Round Stones produces an open source platform for publishing data on the Web, used by the Fortune2000 and US Government Agencies to collect, publish and reuse data, both public and proprietary.</td>
<td>Bernadette Hyland – CEO</td>
</tr>
<tr>
<td>Accuweather</td>
<td>Accuweather provides local forecasts for everywhere in the United States and over two million locations worldwide.</td>
<td>Michael Alan Steinberg – Senior Vice President for Special Initiatives</td>
</tr>
<tr>
<td>Amazon Web Services</td>
<td>Amazon provides cloud computing services through Amazon Web Services to a range of clients.</td>
<td>Frank Digiammarino – Director, Global Public Sector, Ariel Gold – Program Manager, World Wide Public Sector</td>
</tr>
<tr>
<td>Apigee</td>
<td>Apigee is a digital business platform providing enterprise tools to help companies build and scale apps, APIs and data.</td>
<td>Robert Glass – Federal Solution Architect</td>
</tr>
<tr>
<td>Appallicious</td>
<td>Appallicious is an open data visualization company that creates open data products for government agencies using a proprietary platform.</td>
<td>Ashley De Smeth – Director of Development and Government Affairs</td>
</tr>
<tr>
<td>Azavea</td>
<td>Azavea is a geospatial analysis (GIS) software development firm specializing in creating location-based web and mobile software as well as geospatial analysis services.</td>
<td>Sarah Cordivano – Data Analytics Team Project Manager</td>
</tr>
<tr>
<td>Esri</td>
<td>Esri is an international supplier of geographic information systems (GIS).</td>
<td>Laura McNulty – Manager, National Government Health &amp; Sciences Team</td>
</tr>
<tr>
<td>Company</td>
<td>Description</td>
<td>Representative</td>
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</tr>
<tr>
<td>Google Maps</td>
<td>Google Maps is a web mapping service application and technology provided by Google, powering many map-based services.</td>
<td>George Ivanov – Public Policy and Government Relations Analyst</td>
</tr>
<tr>
<td>Harris Corporation</td>
<td>Harris is an international communications and information technology company serving government and commercial markets in more than 125 countries.</td>
<td>Stephen Marley – Chief Technologist, Civil Ground Systems</td>
</tr>
<tr>
<td>IBM Smarter Cities</td>
<td>IBM is an international technology and consulting company that works with companies, cities and communities around the world to build a smarter planet.</td>
<td>Roslyn Docktor – IBM Governmental Programs Executive, Steven Adler – Information Strategist</td>
</tr>
<tr>
<td>MapQuest</td>
<td>MapQuest provides mapping and navigation tools for Internet and mobile users, developers, and businesses.</td>
<td>Ty Beltramo – Chief Technology Officer</td>
</tr>
<tr>
<td>OnDeck</td>
<td>OnDeck is a technology-powered Main Street lender that uses big data to deliver financing to small businesses.</td>
<td>Michael White – Senior Risk Analyst</td>
</tr>
<tr>
<td>Overture Technologies</td>
<td>Overture's technology powers business rules and automated underwriting applications for higher education, mortgage and small business finance industries.</td>
<td>Bala Venkatesan – Vice President, Technology</td>
</tr>
<tr>
<td>PolicyMap</td>
<td>PolicyMap is a web-based GIS and mapping company that captures and visualizes data including demographics, health data, mortgage trends, school performance scores, and crime statistics.</td>
<td>Elizabeth Nash – Director of Data and Product Development</td>
</tr>
<tr>
<td>PricewaterhouseCoopers</td>
<td>PricewaterhouseCoopers is an international network of firms providing assurance, tax and advisory services.</td>
<td>Jim Dreyer – Leadership Director in the PwC Risk Assurance Information Technology &amp; Process Assurance XBRL services practice group</td>
</tr>
</tbody>
</table>
## Social Explorer
Social Explorer provides access to census and demographic data. Its interface lets users create maps and reports to illustrate and understand demography and social change.

Representative: **Andrew Beveridge** – Co-Founder and CEO

## Socrata
Socrata provides an open data platform to how data is discovered, analyzed, and shared online.

Representative: **Kenneth Melero** – Federal Sales Director

## Think Computer Corporation
Think Computer Corporation creates web-based software that allows the general public to access a free, comprehensive, interlinked database spanning the American legal system.

Representative: **Aaron Greenspan** – President & CEO

## TuvaLabs
TuvaLabs offers teachers, parents, and students a platform and tools to engage in meaningful learning and develop their data literacy skills.

Representative: **Harshil Parikh** – Founder

## Way Better Patents
Way Better Patents chronicles the latest developments in intellectual property, innovation, inventions and patents (I3P) and the emerging innovation economy.

Representative: **Arleen Zank** – Founder and Editor in Chief

## The Weather Company
The Weather Channel and weather.com provide a national and local weather forecast for cities, as well as weather radar, report and hurricane coverage.

Representative: **Bryson Koehler** – EVP, CIO

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

Representatives:
- **Hudson Hollister** – Founder and Executive Director
- **Alexander Heit** – Policy Associate
<table>
<thead>
<tr>
<th>Organization</th>
<th>Description</th>
<th>Representative(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pew Research Center</td>
<td>The Pew Research Center is a nonpartisan American think tank that provides information on social issues, public opinion, and demographic trends shaping the United States and the world.</td>
<td>John Horrigan – Consultant</td>
</tr>
<tr>
<td>The Sunlight Foundation</td>
<td>The Sunlight Foundation is a nonpartisan nonprofit that advocates for open government globally and uses technology to make government more accountable to all.</td>
<td>Sean Vitka – Federal Policy Manager</td>
</tr>
<tr>
<td>The Governance Lab at New York University</td>
<td>The GovLab is an action-research center seeking new ways to solve public problems using advances in technology and science.</td>
<td>Stefaan Verhulst, Co-Founder and Chief of Research, Arnaud Sahuguet, Senior Technology Advisor</td>
</tr>
</tbody>
</table>

**DEPARTMENT OF COMMERCE**

The U.S. Department of Commerce promotes job creation, economic growth, sustainable development and improved standards of living for all Americans by working in partnership with businesses, universities, communities and our nation's workers.

**DEPARTMENT OF COMMERCE BUREAUS**

| Office of the Secretary | The Office of the Secretary is the general management arm of the Department and provides the principal support to the Secretary in formulating policy and in providing advice to the President. It provides program leadership for the Department’s functions and exercises general supervision over the operating units. It also directly carries out program functions as may be assigned by the Secretary, and provides, as determined to be more economic or efficient, administrative and other support services for designated operating units.                                                                 | Penny Pritzker – United States Secretary of Commerce, Mike Kruger – Director of Digital Engagement, David Langdon – Senior Policy Advisor for Economics and Statistics |

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GovLab
**National Oceanic and Atmospheric Administration (NOAA)**

NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers and other decision makers with reliable information they need when they need it. From daily weather forecasts, severe storm warnings and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product.

Representatives:
- **Ron Bewtra** – Chief Technology Officer
- **Edward Johnson** – Director, Office of Strategic Planning and Policy (NWS)
- **David Michaud** – Acting Deputy Chief Information Officer
- **David McClure** – Office of the Chief Information Officer

**Economics and Statistics Administration (ESA)**

The ESA plays three key roles within the Department of Commerce (DOC). ESA provides timely economic analysis, disseminates national economic indicators, and oversees the U.S. Census Bureau (Census) and the Bureau of Economic Analysis (BEA). In this latter role, ESA works closely with the leadership at BEA and Census on high priority management, budget, employment, and risk management issues, integrating the work of these agencies with the priorities and requirements of the Department of Commerce and other government entities.

Representatives:
- **Mark Doms** – Under Secretary for Economic Affairs
- **Austin Durrer** – Chief of Staff
- **Lauren Lipovic** – Senior Advisor
- **Rick Lattimer** – Policy Analyst
| U.S. Census Bureau (Census) | The Census Bureau’s mission is to serve as the leading source of quality data about the nation's people and economy. Part of the Department's Economics and Statistics Administration (ESA), the Bureau collects data on the following:  
- Population & Housing Census–every 10 years  
- Economic Census–every 5 years  
- Census of Governments–every 5 years  
- American Community Survey–annually  
- Surveys–both Demographic & Economic  
- Economic Indicators–each is released on a specific schedule  
Representatives:  
Nancy Potok – Deputy Director  
Avi Bender – Chief Technology Officer  
Michael Ratcliffe – Assistant Division Chief for Geocartographic Products and Criteria  
Jeffrey Sisson – Program Manager, Data Access and Dissemination Systems |
| U.S. Bureau of Economic Analysis (BEA) | BEA promotes a better understanding of the U.S. economy by providing timely, relevant, and accurate economic accounts data in an objective and cost-effective manner. Along with the Census Bureau, BEA is part of the Department’s ESA. BEA produces statistics that enable government and business decision-makers, researchers, and the American public to follow and understand the performance of the Nation's economy. To do this, BEA collects source data, conducts research and analysis, develops and implements estimation methodologies, and disseminates statistics to the public.  
Representatives:  
Brian Moyer – Acting Director  
Nicole Mayerhauser – Chief, National Income and Wealth Division  
Alexander Minor – Chief, Web Services Branch  
Shaunda Villones – Senior Economist and Special Assistant to the Director |
### U.S. Patent and Trademark Office (PTO)

PTO is the federal agency for granting U.S. patents and registering trademarks. In doing this, the PTO fulfills the mandate of Article I, Section 8, Clause 8, of the Constitution that the legislative branch “promote the progress of science and the useful arts by securing for limited times to inventors the exclusive right to their respective discoveries.” The PTO advises the president of the United States, the Secretary of Commerce, and U.S. government agencies on intellectual property (IP) policy, protection, and enforcement. The PTO furthers effective IP protection for U.S. innovators and entrepreneurs worldwide by working with other agencies to secure strong IP provisions in free trade and other international agreements.

**Representatives:**
- Vikrum Aiyer – Special Advisor to the Under Secretary
- Ajay Kundaria – Senior Advisor
- Alan Marco – Acting Chief Economist

### National Institute of Standards and Technology (NIST)

NIST’s mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

**Representative:** John Henry Scott – Physicist

### OTHER GOVERNMENT AGENCIES AND OFFICES

The mission of the Office of Science and Technology Policy is threefold; first, to provide the President and his senior staff with accurate, relevant, and timely scientific and technical advice on all matters of consequence; second, to ensure that the policies of the Executive Branch are informed by sound science; and third, to ensure that the scientific and technical work of the Executive Branch is properly coordinated so as to provide the greatest benefit to society.

**Representatives:**
- Nick Sinai – Deputy Chief Technology Officer
- Erie Meyer – Senior Advisor to the U.S. Chief Technology Officer
- Lynn Overmann – Senior Advisor to the U.S. Chief Technology Officer
### Department of Labor
The Department of Labor aims to foster, promote, and develop the welfare of the wage earners, job seekers, and retirees of the United States; improve working conditions; advance opportunities for profitable employment; and assure work-related benefits and rights.

Representative: **Hamid Ouyachi** – *Chief Technology Officer*

### Office of Management and Budget
The core mission of OMB is to serve the President of the United States in implementing his vision across the Executive Branch. OMB has offices devoted to the development and execution of the Federal Budget, various government-wide management portfolios, and OMB-wide functional responsibilities.

Representative: **Haley Van Dyck** – *Advisor*

### Senate Budget Committee
The Budget Committees are responsible for drafting Congress’ annual budget plan and monitoring action on the budget for the federal government. In addition, the Budget Committees have jurisdiction over the operation of the Congressional Budget Office (CBO).

Representative: **Jeptha Nafziger** – *Detalee, OMB*

### Senator Mark R. Warner’s Office
Mark Warner was elected to the U.S. Senate in November 2008, and serves on the Senate Finance, Banking, Budget, and Intelligence committees.

Representative: **Emma Peck** – *Legislative Correspondent*
Sponsors

OPEN DATA ROUNDTABLE SERIES SPONSORS

The GovLab thanks Amazon Web Services and PricewaterhouseCoopers for their support of the Open Data Roundtable Series. This Series is now planned to include 10 Roundtables with federal agencies and data users throughout 2014 and 2015.

Amazon Web Services offers a broad set of global compute, storage, database, analytics, application, and deployment services that help both large enterprises and start-ups move faster, lower IT costs, and scale applications. Amazon Web Services Worldwide Public Sector is helping government and education customers employ cloud services to reduce costs, drive efficiencies, and increase innovation across the globe. Public Sector organizations of all sizes use AWS to build applications, host websites, harness big data, store information, conduct research, improve online access for citizens, and more. For more information, see aws.amazon.com/gov

PricewaterhouseCoopers is a network of firms in 158 countries that delivers quality in assurance, tax and advisory services. PWC helps federal agencies meet the challenge of integrating financial and performance systems to help make decisions and improve accountability. Clients look to the PricewaterhouseCoopers Public Sector Practice to bring direct hands-on knowledge of federal standards for systems, internal controls, and financial reporting. The Practice assists clients through creating interactive data, developing an agile reporting and analytic framework, and identifying and implementing improvements to the data and information supply chain. For more information, see www.pwc.com/publicsector.

EVENT SUPPORTER

The GovLab thanks the Data Transparency Coalition for supporting the catering and reception for the Department of Commerce Open Data Roundtable.

The Data Transparency Coalition is the nation’s only open data trade association. Representing the private sector and the public interest, the Coalition advocates the publication of government information as standardized, machine-readable data. Contributing members include companies seeking to republish open data with added value, analytics experts who support data standards, and reporting vendors eager to use data standards to automate government reporting tasks. The Coalition celebrated the success of its first policy initiative on May 9, 2014, when President Obama signed the Digital Accountability and Transparency Act (DATA Act) into law. For more information, see www.datacoalition.com.
Appendix C: Current Initiatives presented by the Department of Commerce at the Open Data Roundtable

The following initiatives already under way at the Department of Commerce were presented at the Open Data Roundtable on June 18, 2014, as context for the day’s work.

National Oceanic and Atmospheric Administration (NOAA)

- NOAA is working to put all available data on one platform.
- On June 3, 2014, the NOAA National Weather Service distributed a Request for Information to industry asking for suggestions on data that they are interested in having distributed. The period of comment/suggestion closed on July 3, 2014. Currently NOAA is looking at these suggestions and working toward making some of these data available. In some cases, these data are not yet produced (e.g. producing greater temporal resolution output of some of weather models).
- NOAA is now analyzing input from its Request for Information on how to share more of its 20 terabytes of daily data quickly and at scale through a “big data partnership.” (Now only about 10 per cent is shared.) NOAA is analyzing 70 responses from individuals, academia, and industry, plus ongoing market research.
- NOAA is developing an open data inventory as required by the Open Data Policy.

U.S. Census Bureau (Census)

- Census has the ability to link individual and business data (all geocoded), but needs to protect privacy; the Bureau is now looking for ways to link data “behind the scenes” to increase its value before putting it out to the public.
- Census is providing API keys used by over 5000 developers.
- Census has started building “Find It – Connect It,” working with NIST on open standards for metadata.

U.S. Bureau of Economic Analysis (BEA)

- Three new products have been released in 2014: 1) quarterly GDP by industry, 2) inflation-adjusted state personal income, 3) consumer spending by state.
- All BEA products are on its website, and will be available in XML/CSV/JSON.
- BEA will release new Industry, Balance of Payments, Direct Investment and Multinational Companies APIs,
as well as a more standardized format for returning API metadata across the Bureau. By the end of FY 2014, BEA releases its Open Data page, which will include an inventory of BEA data sets that are currently available to the public along with the available electronic methods for retrieving those data sets.

U.S. Patent and Trademark Office (PTO)

- PTO is working to put patent data in a more centralized, easily searchable form.
- PTO is working on inventor and assignee disambiguation – working with researchers at UC Berkeley. Currently, PTO only has information available on the face of the patent.
- “Patents View” API is coming out of beta.
- PTO is currently studying what happens to patents after they are granted – e.g. court decisions.

National Institute of Standards and Technology (NIST)

- NIST is working to liberate its data to add to the Commerce open data stream and help fuel a data driven economy.
- NIST aims to develop data standards and technological infrastructure that will make parallel efforts at Commerce agencies more effective, coherent and intraoperative.
- NIST will continue to be a key contributor to Commerce open data efforts.
Appendix D: Media Coverage

Listening to Our Data Customers at the Open Data Roundtable (DOC)
By Bruce Andrews–June 19, 2014
http://www.commerce.gov/blog/2014/06/19/listening-our-data-customers-open-data-roundtable

A Big Day for Big Data: The Beginning of Our Data Transformation (ESA)
By Mark Doms–June 19, 2014
http://www.esa.doc.gov/Blog/2014/06/19/big-day-big-data-beginning-our-data-transformation

BEA Listens to Customers’ Ideas on How to Unleash Data
By U.S. Bureau of Economic Analysis–June 20, 2014

PolicyMap Attends GovLab’s Open Data 500 Roundtable
By Elizabeth Nash–June 20, 2014

Commerce secretary pledges full embrace of open data
By GCN–June 24, 2014

The GovLab Roundtables: Open Dialogues on Open Data
By Joel Gurin–June 24, 2014
http://thegovlab.org/the-govlab-roundtables-open-dialogues-on-open-data

Commerce Dept. Partners With Private Sector On Open Data (InformationWeek)
By William Welsh–June 27, 2014

OMB, OSTP to release new tools to reach big open data goals (Federal News Radio)
By Stephanie Wasko–July 3, 2014

Open Data Roundtables Set Out To Make Data Accessible To Benefit Economy (Business Solutions)
By Trisha Leon–July 7, 2014

U.S. Secretary of Commerce Penny Pritzker Delivers Remarks on the Power and Potential of Open Government Data
http://www.esa.doc.gov/Reports/fostering-innovation-creating-jobs-driving-better-decisions-value-government-data