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How government can promote open data

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Open data has the potential not only to transform every sector of the economy but also to unleash more than $3 trillion in global economic value annually. Government has a critical role to play.

Institutions and companies across the public and private sectors have begun to release and share vast amounts of information in recent years, and the trend is only accelerating. Yet while some information is easily accessible, some is still trapped in paper records. Data may be free or come at a cost. And there are tremendous differences in reuse and redistribution rights. In short, there are degrees when it comes to just how "open" data is and, as a result, how much value it can create.

While businesses and other private organizations can make more information public, we believe that government has a critical role in unleashing the economic potential of open data. A recent McKinsey report, *Open data: Unlocking innovation and performance with liquid information,*[1] identified more than $3 trillion in economic value globally that could be generated each year in seven domains through increasingly "liquid" information that is machine readable, accessible to a broad audience at little or no cost, and capable of being shared and distributed. These sources of value include new or increased revenue, savings, and economic surplus that flow from the insights provided by data as diverse as census demographics, crop reports, and information on product recalls.

Sitting at the nexus of key stakeholders—citizens, businesses, and nongovernmental organizations (NGOs)—government is ideally positioned to extract value from open data and to help others do the same. We believe government can spur value creation at all levels of society by concurrently fulfilling four important open-data roles (exhibit):

- Provider. Across all levels of government in all regions of the world, millions of individual data records are collected, stored, and analyzed. From tax returns and unemployment claims to hospital reimbursements and energy use, much of this information can be made available electronically and readily shared, enabling third parties to create innovative products and services. In the United States, for instance, on data.gov, the federal government's online portal for open data, more than 85,000 data sets are now available, along with user guides, event postings, and examples of applications across industries, from agriculture to manufacturing. In the United Kingdom, the website findthebest.com uses government data in its UK Car Fuel Economy and

[1] Additional information about the methodology and approach to size the economic impact of open data can be found in the McKinsey report released in October 2013, *Open data: Unlocking innovation and performance with liquid information.* This report is a joint effort of the McKinsey Global Institute, the McKinsey Center for Government, and McKinsey's Business Technology Office. It provides analysis of the seven domains, including important levers for unlocking open data's value, examples of how value is being realized today, discussion of how major stakeholders might become involved in open-data initiatives, and considerations of both the barriers and enablers to unlock economic value.

Exhibit   Government can serve as an open-data provider, catalyst, user, and policy maker to create value and mitigate risks.

Provider
- Capture information electronically
- Release data publicly and regularly
- Identify ways to improve data quality

Catalyst
- Build an open-data culture
- Convene stakeholders
- Champion the movement

User
- Apply sophisticated analytics to improve decision making, offerings, and accountability
- Invest in people, tools, and systems

Policy maker
- Make rules for internal and external use
- Establish standards for data quality and format

Emission Data App, which helps car buyers compare features such as fuel economy based on their type of commute. By making these data available to enterprising companies and individuals, government is spurring private-sector innovation and increasing transparency—two of the most important goals of any open-data initiative. The 2013 G8 Open Data Charter establishes an expectation that all government data be published openly by default, while recognizing that there are legitimate reasons why some data cannot be released.

- **Catalyst.** Government can serve as a catalyst for the use of open data by creating a thriving ecosystem of data users, coders, and application developers. To attract an ecosystem of developers, it can advertise open-data availability through press releases or other marketing materials, or even engage in individual outreach efforts. One approach involves organizing events such as "hackathons" and "datapaloozas," often with prize money and publicity. These events—held in dozens of countries, including Australia, Canada, Nigeria, Singapore, the United Kingdom, and the United States—help promote the use of data in the development of innovative products and services. They also allow governments to share newly released or digitized data, draw on the expertise of participants, and provide guidance about privacy and safety. Other marketing platforms to champion open data include interagency meetings, roundtables with NGOs and businesses, and public-awareness campaigns.

- **User.** While open-data programs are frequently designed to unlock the innovative capacity of those outside government to use previously hidden data, these programs often enable government agencies to overcome their own internal barriers to using data from other parts of government. There are two key actions that government agencies can take to use open data. First, to optimize the use of public data within their own agencies, government leaders can *invest in talent, tools, and systems*. This includes hiring and training staff at all levels—even those not in technical roles—about

how to use data to make better decisions, including designing experiments, as well as the benefits of providing data to third parties. Second, governments can *apply advanced analytics* to improve internal decision making, promote the creation of new services, and increase accountability. For example, city officials in Edmonton, Canada, analyze real-time open data accessed through application-programming interfaces to assess the city's performance on a variety of metrics ranging from on-time performance of public transit to utilization of public spaces and 311 call-response times. Staff can simply and easily visualize more than 400 data sets, empowering them to make better-informed decisions on how to improve performance and allocate limited resources. Governments around the world are taking similar steps to integrate data as the new standard for how their agencies operate.

- Policy maker. Public-sector leaders are often called on to protect individuals and organizations from the risks of open data while also advancing open data's potential value. Risks include those that fall largely on individuals, such as privacy, security, and personal safety, and those related primarily to organizations, such as confidentiality, liability, and intellectual property. Leaders can draw on their legislative authority and enforcement powers to enhance safety, security, equity, and justice for all members of society. They can also participate in setting technical standards that can significantly increase and scale the benefits of open data.

The use of open data is a relatively recent phenomenon but, as with many technological advances, it is growing in relevance and prevalence—in other words, it is becoming the "new normal." Yet while the benefits of open data are significant, the success of open-data programs is not guaranteed. For government to serve as an open-data provider, catalyst, user, and policy maker in an effective and sustainable way, it needs to have the right people, tools, and systems in place. We are encouraged that governments around the world have taken steps to develop responsible and robust open-data programs, and we hope government leaders and stakeholders across the spectrum of business, citizens and consumers, the media, and NGOs increasingly engage in the conversation, invest in the work, and promote open data in a way that helps unlock economic and societal benefits. ▢

This article is an excerpt from "How government can promote open data and help unleash over $3 trillion in economic value." To see more from our series on innovation in government, including the full version of this article, visit McKinsey's *Government designed for new times* collection, on mckinsey.com.

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