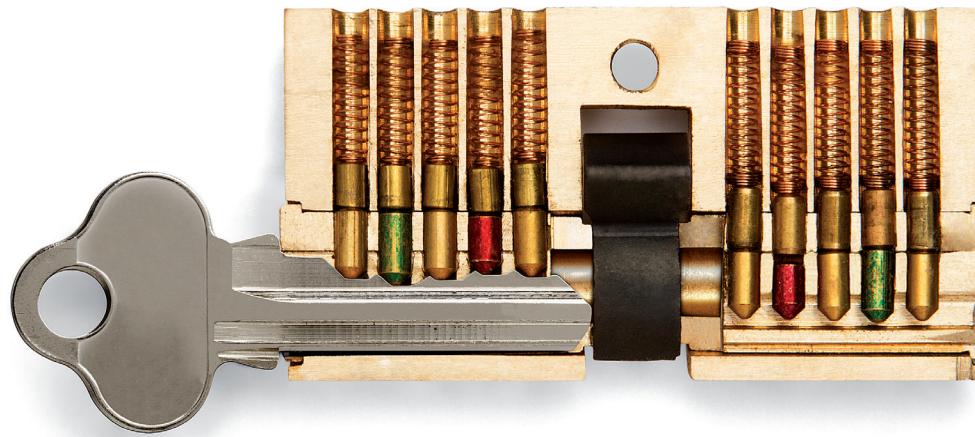




# Unlocking growth

## How open data creates new opportunities for the UK





# Executive summary

The relationship between government, business and citizen is undergoing a fundamental change. In these times of continuing austerity, government leaders understand that opening up access to data can lead to greater public sector efficiency, transparency and accountability. But this is just the beginning. The United Kingdom is now pushing forward with its Growth Agenda, promising a future in which open data will deliver powerful, value-adding insights that benefit citizens, businesses, public bodies and wider communities alike.

The digital revolution and the explosive growth of the UK's social media culture, in particular, have long been promising to transform the traditional mechanisms of government and commerce. But when times are tough, and governments around the world are already struggling to cope with unprecedented levels of fiscal stress, it would be all too easy to commit resources to other, seemingly more urgent priorities. Moreover, without the highest levels of executive sponsorship and enthusiasm to drive through the cultural changes required, the potential economic and societal benefits of open data will be lost.

Now, though, through its vision for open data, and the creation of the Open Data Institute, the Data Strategy Board and the Public Data Group, the UK Government has fully embraced the idea that public data should be made more widely available. And not just as a government-only initiative, but as part of a more collaborative enterprise that engages everyone in the public and private sectors, and citizens, too. These bold initiatives, and the associated funding commitments made as part of the Autumn Statement 2011, demonstrate the strength of belief the Government has in data, and the central role it must play in the Growth Agenda. Together, they are making the relationship between all the parties more open than ever before.

Of course, opening up access to public data – no matter what its origin or volume – does not by itself generate the magnitude of benefit needed to support growth or transform commerce. But it is a necessary first step towards deriving the insights that can be acted upon by public bodies, businesses and citizens. The power of these 'big insights' will show, ultimately, that the vision for open data, including those data held outside the public sector, has the potential to capture the imaginations of citizens and entrepreneurs and reinvigorate a stuttering economy.

## **More open government: Make raw public data easy to access and manipulate**

In an effort to increase transparency and accountability, governments previously have focused mainly on improving how they report financial information and, where feasible, programme outcomes to the public. The decision to release raw transaction data represents a fundamentally new form of openness: it offers the potential to improve public services and create new commercial services; it also raises a number of key practical and commercial considerations, particularly in terms of addressing ownership, accountability and privacy.

Most efforts to make government more transparent have not kept pace with advances in technology and emerging social media norms. Governments have released information in hardcopy or in online formats that make the information difficult to access, integrate and assimilate. This is changing out of necessity, however, as the current Government continues with its plans to publish large repositories of public data online. Before the Autumn Statement 2011, for example, data.gov.uk – the Government's main repository of public data – brought together over 5,400 datasets from a number of central government departments, executive agencies and local authorities. Much of the data available is in the raw form used to develop policy, but it is now available to individuals and businesses to conduct their own analyses and build their own applications.

### **More innovative government: Let the users design**

Tapping the creativity of citizens and the private sector allows the Government to offer services that citizens want without further straining public resources. The Government can make vast stores of data available, at relatively low cost, and let others design innovative applications using public data. For example, data.gov.uk also contains links to a large number of applications that use different combinations of public data in a creative manner to generate new insights: whether to reduce crime rates, improve school test scores or promote aspects of art and culture, users are designing tools that support a wealth of new data-driven public services.

One further benefit to letting users design applications is that businesses and citizen groups do not feel the constraints that traditionally have made it hard for different government departments or their agencies to collaborate.

Although the Government will always need to manage multiple information channels and services, it can now draw on talent and creativity from outside their boundaries to promote better knowledge-sharing, understanding and performance.

### **More responsive government: Tune into social networks to gain insight into the effectiveness of policies and programmes**

Data generated through social media interactions provide a previously untapped source of feedback for governments on everything from service quality to programme changes, often in real-time. Governments are learning how quickly citizen-organised social media campaigns can provide focused input and meaningful data on proposed policy changes.

Consider, for example, the reaction to new legislation proposed by the Ontario Government to set stronger conditions for young drivers. When the proposed legislation was announced, a group entitled "Young Drivers against New Ontario Laws" was created on Facebook. Two hundred people joined the group within hours. By the group's second day, it had 14,500 members. By day four, that number had grown to 95,000. The group eventually attained more than 140,000 members. The Ontario Government was not expecting the strength and speed of this online movement and, ultimately, amended the most restrictive provisions in the proposed legislation.

For public bodies in the UK to take advantage of the rich data that resides online, they need to mimic the social marketers that have come before them, proactively searching for structured and unstructured data on how citizens are interacting with public services.

### **Smarter government: Make data analytics a core competency**

The Government's leaders must position their departments for success in an increasingly data-driven world. To increase the utility of public and other online data, the Government must develop the analytic capabilities to share and manipulate the structured data they collect, along with the increasing volume of unstructured data available online.

Across England and Wales, for example, police forces are using mapping technologies to understand and track crime trends in local areas. Studies have shown that public perception of where crime occurs often does not match reality. By combining geographic data, electoral roll data, land use information, crime incident reports, crime initiatives and other sources of information, police officers create maps that provide much better intelligence than their own experience could provide on its own. The police can use the maps to gather information on a single offence, multiple offences of a similar type or as groups of offences that have become a major local crime problem. Much of this data is now available to the public through police.co.uk, which, as well providing data on crime statistics for individual streets, also provides contacts to local policing teams and ways for citizens to get more involved in local policing issues.

Some areas of the public sector – security, defence, justice and revenue – are well ahead of their peers in learning to get the greatest possible value from the data they possess. But if opening up public data is to have a truly transformative effect on government and growth, data analytics will need to become a core competency.

### **Challenges moving forward**

The Government's efforts to open up data and stimulate growth face a number of significant challenges. Accountability, for example, is not the same as liability, and the Government must ensure that adequate consideration has been given to potential liabilities arising from any use of the data it has published for open use. Privacy issues, too, pose a significant and serious challenge – particularly if the anonymity of citizens in one data set can be threatened by inferences made after publishing other data. But the impetus to shift control of data from service provider to citizen is strongest in one area of the Government's open data initiative that citizens consider very private indeed – their personal health. Here, many citizens are demanding and could, in many cases, receive access to personalised health information, provided that their privacy is not breached.

Citizens soon will start to expect similar access to personal information in other areas. As the Government wrestles with how to provide secure, personalised data to citizens in a variety of areas, lessons learned in the healthcare sector will help them move forward.

Citizens well versed in social media expect data to be open, accessible and freely modifiable. They are highly sensitive to privacy concerns, but they recognise the need to balance privacy considerations with the benefits of collaboration.

Opening up the stores of data currently sitting in government-owned and controlled silos will create the potential to improve public outcomes in nearly limitless ways. Government leaders have an opportunity to combine the resourcefulness of online citizens and entrepreneurs with the power of factual data to more effectively achieve their mission.

In an information-driven age, the ability of the Government and all the stakeholders to seize this opportunity may, ultimately, spell the difference between success and failure of the Growth Agenda.

# Introduction

Since the days of the Magna Carta, the state has been collecting data on its citizens. Over much of that time, the primary users of publicly collected data have been limited to governmental entities and elite cadres of academics and researchers interested in government policy making. In more modern times and for a wider audience, the Government produced statistical reports in prepackaged formats and charged users fees for standard reports and special data extracts. The repackaging of public information became a source of revenue for many government organisations.

**B**y the late 20<sup>th</sup> century, the Government had begun to use the Internet as a ‘single window’ for public information and services. Information was prepackaged and tightly controlled, without much thought given to the best format for broad public consumption or to the ways data might be repurposed by its consumers.

Fast forward to today, and government leaders are beginning to embrace the fundamental principles of openness and collaboration that characterise the open source movement and underlie the concept of Web 2.0.

The Coalition Government has placed transparency at the heart of its agenda. In May 2010, the Prime Minister David Cameron outlined a number of specific commitments with the intention that the UK would become a global leader in government transparency and open data. Writing in July 2011, the Prime Minister noted progress on opening up core central government data and set out new commitments that seek to “make it easier than ever before for the public to make informed choices between providers and hold government to account for the performance of key public services.” More recently, following a public consultation on open data, the Cabinet Office has launched a series of initiatives including the Open Data Institute, the Data Strategy Board and the Public Data Group. These initiatives, together with the associated funding commitments made by the Chancellor in the Autumn Statement 2011, create more opportunities for developers, businesses and individuals to access public data and develop innovative products and services. The opening up of public data is regarded as an important contributor to the Growth Agenda.

Rather than view the changing relationship between government and its stakeholders as a threat or an inconvenience, public leaders increasingly see it as an opportunity to engage citizens, non-governmental agencies, businesses and other governmental entities in the design of new services and the resolution of old problems.



Public data are an increasingly important asset, which increases in value when it is shared broadly and made available in an accessible format. This fundamental tenet is taking root in government organisations across the globe (see figure 1). Some approaches are more mature than others in this area and the landscape is changing rapidly.

Early open government initiatives largely focused on four areas:

1. Cataloging sources of data;
2. Aggregating raw data into a single platform;
3. Encouraging users to develop non-traditional applications with government data; and
4. Mashing it up in ways that make it more meaningful to its consumers.

**Figure 1. The global unlocking of public data**



Source: Deloitte Research

Taken together, these initiatives have helped to lay the groundwork for more open government. Going forward, the key will be to use the lessons learned from these early initiatives to inform the next wave of the transformation, which must emphasize the ways in which openness enhances mission performance.

The UK's open data initiatives offer a powerful opportunity to make the Government smarter and more open, innovative and responsive. However, without closely tying open government principles to an organisation's mission, it will be difficult to garner the support needed from senior leaders to drive the cultural change required to make government more open and collaborative, particularly in light of the fiscal strain under which many public bodies are suffering.



This report examines the growing role of public data in transforming how governments set policy and serve citizens. Drawing on efforts by governments and citizen groups to increase the utility of public data, the report illustrates the evolution of government from a data publisher to a development platform for generating maximum public value. It demonstrates how opening up data can realise the following four benefits:

- **Open government:** by making raw data easy to access and reuse, which increases transparency and accountability and enhances citizen choice
- **Innovative government:** by encouraging the public to design its own applications and to harvest value from public data
- **Responsive government:** by encouraging public debate and tuning into social networks to gain insight into the effectiveness of policies and programmes
- **Smarter government:** by making data analytics a core competency to improve quality, productivity and performance

We also explore the capabilities that public bodies need to cultivate to adapt to an increasingly data-driven world, as well as overcoming the challenges in unlocking growth.

We start with a look at how government organisations are beginning to embrace a fundamentally new principle of openness.

# More open government

Make raw public data easy to access  
and reuse

In their pursuit of increased ‘transparency and accountability’ over the past decade, previous governments have been focused mainly on improved public reporting of financial information and, where feasible, programme outcomes. The decision to release raw transaction data represents a fundamentally new form of openness that will place the government under unprecedented levels of scrutiny and accountability, while offering considerable potential to improve public services.

**A**s advances in technology give governments the ability to store and transfer massive amounts of information, the pressure to open up large stores of data to the public is increasing. In the U.S., for example, the nonprofit group OMB Watch has spent years calling for more open government. National chapters of Transparency International, a Berlin-based nonprofit dedicated to fighting corruption worldwide, work to increase accountability and transparency in the countries where they operate. Much of the information being sought has existed within governments for years. In many cases, governments have provided portions of these data in hardcopy, microfiche or PDF form, typically as part of their programme reporting and information services or in response to freedom of information requests.

For the most part, governments' approaches to transparency have not kept pace with advances in technology and social media. Requirements that data and information be made public have typically meant only that they be accessible somewhere in hardcopy. In other cases, governments have put data online but dispersed the information across numerous departmental websites. Moreover, the data are often in formats that are not directly compatible with each other or that make the data difficult to analyse and manipulate. All of this makes it difficult for interested citizens or agencies to extract useful knowledge from the raw data. It also makes it hard for citizens to find sources for the data they want or even to find out that such data are available.

To appreciate how access to public data promotes good government, consider the Parliamentary expenses scandal of 2009. The controversy started with a series of attempts, by journalists and others under the *Freedom of Information Act*, to force Parliament to release details of expense reimbursements to its members. After a long legal struggle and a ruling by the High Court in May 2008, the House of Commons agreed to publish a full list of the expense claims in July 2009, withholding only certain items that were considered too sensitive for publication.

However, before that list saw daylight, the *Daily Telegraph* obtained a leaked copy and began publishing the information in instalments. The public was outraged by what it read. Although the law allowed MPs to claim expenses related to second homes in order to conduct business in Westminster, many claims on the lists were subsequently questioned. In response to the leak, the House of Commons published the list of expense claims a month early in June 2009.

The question arises whether if MPs' expense reimbursements had been placed in the public domain in the first place, the scandal would have been avoided. Politicians who know that their constituents are watching their activities are much more likely to be careful about how they spend public funds.

In response to the scandal, since December 2010, the Independent Parliamentary Standards Authority has routinely and pro-actively published MPs' expense claims, and made this accessible to the public through a fully searchable, dedicated website.



# Four benefits of embracing ‘the new open’

## 1

### Better inform the public

Many citizen-led organisations, primarily nonprofits, are designing applications that individuals can use to access and manipulate government data. In the UK, MySociety provides citizens with improved access to existing information and creates new tools and websites that seek to promote and enhance civic engagement.

The organisation has launched a number of high profile websites including: FixMyTransport.com, TheyWorkForYou.com, FixMyStreet.com, WhatDoTheyKnow.com, WriteToThem.com and HearFromYourMP.com.

At TheyWorkForYou.com, for instance, a visitor can learn what their MP, MSP or MLA is doing in Parliament, including their voting record, questions asked and expenses.

## 2

### Enhance accountability

Besides making raw data available to the public, governments are also creating applications that extract data from one or more sources and present it to the public in a form that a non-expert can understand. Government-designed applications offer a valuable complement to applications that citizens and non-governmental entities create with public data. They are more valuable when they offer the user a choice – either to view data through the filters and lenses the government provides or to download raw data and incorporate it into other applications.

One important category of government-designed applications focuses on accountability. Drawing from data on government spending and programme performance, these applications let constituents see how the government is using taxpayers' money and how well it is living up to its promises.

Often, these sites let users choose the kind of data they want to see and the filters they want to apply. One of the most ambitious examples of government accountability is the Transparency initiative available at the No.10 website. Here visitors can find information on how individual departments are performing against their published business plans, details of all expenditure over £25,000, salaries and roles of senior civil servants and a list of ministerial meetings with outside organisations, hospitality, gifts and overseas travel.

## 3

### Strengthen communities

Public data sources can also be used to provide information on many different aspects of community or other jurisdictions – demographics, criminal activity, house prices, transport links, natural features, public health and a great deal more. One example is the London Datastore which contains a flash-based tool to compare different London boroughs across a number of themes including demographics, employment, skills and earnings, housing, environment, transport, deprivation, health and governance.

## 4

### Facilitate markets

Governments collect vast volumes of information on businesses and nonprofit organisations that they track or regulate in some fashion. These data can help constituents make decisions about where to obtain products and services. Providing open access to performance data – outcomes at hospitals, results of health inspections at restaurants, airlines' on-time performance, school achievement scores – and the like – also spurs service providers to perform better and compete harder.

NHS Choices provides users of health care services in England with information on different providers. The website gives users relevant information that can help them in choosing the right healthcare provider. Users can access data on key performance metrics, read about other users' experiences and leave their own feedback.

# From legacy to leading

As the Prime Minister's recent statements on transparency confirm, governments around the world are beginning to redefine 'transparency' to embrace a new form of openness that involves releasing vast stores of public data

for citizens to explore. On the journey from legacy to leading practices, they are learning about the changes to strategy, culture and access that are needed to succeed.

**Table 1. More open government**

	<b>Legacy</b>	<b>Learning</b>	<b>Leading</b>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>Compliance with legal obligations (such as freedom of information laws, other government reporting requirements)</li> <li>Standard structured performance reporting (such as annual reports that outline expenses and results)</li> </ul>	<ul style="list-style-type: none"> <li>Pockets of organisations sharing select data</li> <li>Fragmented approach without a systemwide or centralized strategy</li> <li>Primarily concerned with providing more data through internally designed applications intended to improve service</li> </ul>	<ul style="list-style-type: none"> <li>Agency-wide strategy and policy of providing open access to data</li> <li>Actively promoting (in media and online) government openness</li> <li>Encouraging citizen participation and engagement</li> </ul>
<b>Culture</b>	<ul style="list-style-type: none"> <li>Data is made accessible as required or in response to unavoidable public pressure (for example, from political scandals over travel expenses)</li> <li>Default position on data is that they are not shared unless they need to be</li> </ul>	<ul style="list-style-type: none"> <li>Cautious approach to data sharing – still concerned with avoiding full accountability and potential embarrassment</li> <li>Officials keep coming up with reasons NOT to share data, rather than reasons to share them</li> </ul>	<ul style="list-style-type: none"> <li>Belief that unless there is a specific and legitimate reason for not doing so, data should be made available to the public</li> <li>Culture of improved transparency and accountability driving more effective policies</li> </ul>
<b>Access</b>	<ul style="list-style-type: none"> <li>Data are owned by government</li> <li>Data provided on static websites</li> <li>Updated infrequently (for example, annually)</li> <li>Read-only formats from which data cannot be parsed</li> </ul>	<ul style="list-style-type: none"> <li>Data are owned by government</li> <li>Structured data provided selectively through interactive online applications (such as maps combining geographic data with land zoning information)</li> <li>Data sets updated more frequently (monthly, weekly or sometimes in real-time)</li> <li>Absence of raw, machine-readable data</li> </ul>	<ul style="list-style-type: none"> <li>Data are viewed as a public good</li> <li>Centralised, organised access to government data</li> <li>Data updated very frequently, often in real-time</li> <li>Some applications are designed, but the primary focus is on providing access to raw, useful data that citizens can use to design applications</li> </ul>

# Lessons in execution

Even though we are early in the evolution of open data, some lessons are beginning to emerge:

- **Data should be easily accessible online.** In today's world, open access to data means that they should be easy to find. Governments that have been most successful in this movement are creating Web-based portals to provide access to all of their data. Leaving data spread over hundreds or even thousands of websites makes it very difficult for users to unlock the value that exists in combining previously disconnected data stores.

- **Data need to be offered in accessible formats.**

One of the biggest challenges that citizens face is that data is often provided in legacy formats that are difficult to work with. Providing access to data via a 'data mashup' is better and can be very useful, but not as useful as also giving the user the option of obtaining the data in their raw form. If the Government provides access to new information through an interactive map, for example, users should also be able to parse the raw data or gain access to it via a published Application Programming Interface, or API, so that they can reuse it in a new application, such train or bus information on a smart phone.

- **Collaboration between government departments is important.**

Citizens want to combine data from different departments, and their agencies and programmes. Public leaders should expect their data to be combined with data from other sources and used in unique and novel ways and should approach the prospect in a spirit of collaboration and creativity.

- **Governments should be open about being open.**

Departments or their agencies should not quietly put data online. Rather, they should tell the public what they are doing and why, while seeking their participation and engagement. Data that sit in a file are not worth much. Information becomes powerful only as its consumers start to derive 'big insights' and apply them in ways that create value.



# More innovative government

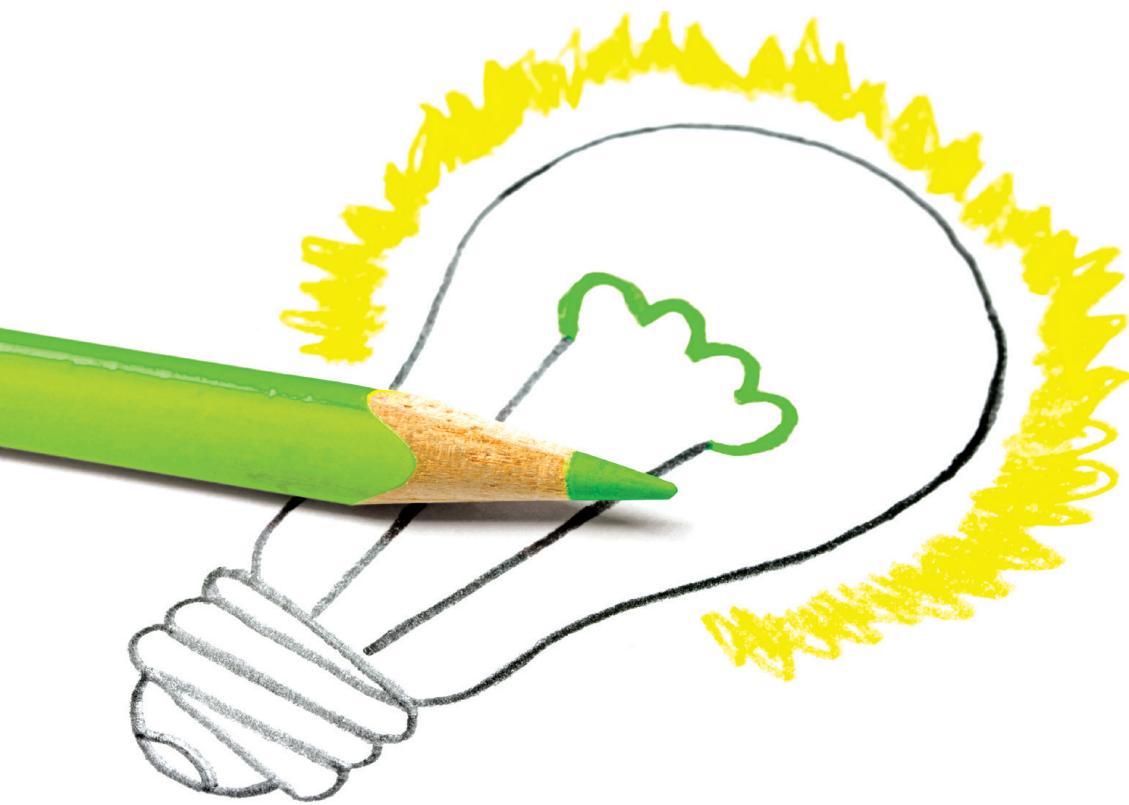
## Let the users design

Recent competitions such as Show Us a Better Way are proving that citizens are willing and able to design new applications for public data. Leading governments are encouraging citizens to invent new ways of applying public data to today's challenges and citizens are responding. Whether to reduce crime rates, improve school scores or promote culture, citizens are designing tools for providing new data-driven public services. While governments will always need to manage multiple information channels and services, they can now draw on talent and creativity from outside their boundaries to promote better knowledge, understanding and performance.

**W**ith more than nine million articles in 10 languages, Wikipedia stands out as a compelling example of what can happen when online users are encouraged to design, create and update content on the Web collaboratively. The many other sites that have flooded into the social networking marketplace provide popular examples of spaces where content design is left almost entirely up to the user: YouTube, Facebook and Twitter are just a few examples.

This form of user-driven application development, also known as crowd sourcing, user innovation or open sourcing, provides governments with an unprecedented opportunity to engage citizens in unlocking the power of public data.

Governments no longer need to be the sole arbitrator in deciding what data are important to users or how they should be presented. Now, governments can make vast stores of data available, at relatively low cost, and let users design innovative applications.



# Four ways to drive innovation by letting users design

1

## **Tap the creativity of citizens**

Tapping the creativity of citizens provides a tremendous opportunity for governments to offer services that citizens want without straining their resources. Why use internal resources to develop a transit trip planner, a tool for reporting potholes, a map that indicates available parking spots or a host of other useful applications, when volunteers stand ready to develop such services for free? Not only do citizens develop applications that governments might have created themselves, if they had the time and money, but citizens often dream up uses for public data that government agencies have never contemplated. Such innovation enables new commercial opportunities, too, so that not only does the Government save money but the private sector grows as well.

An example of raw data being made available to citizens to allow them to create their own applications is Transport for London. It is increasingly working with the developer community to make travel information available to passengers and developers alike with a view to harnessing their creativity to create better travel tools for the public. Already there is a range of apps that allow transport users to plan journeys across different transport networks in London.

In August 2011, it was announced that TfL would be making data available to developers to allow them to use accurate up-to-the-minute information on public transport in London. By giving developers access to an API for the Extensible Markup Language (XML) data feed allows them to create new innovative applications that are no longer reliant on scrapping websites.

2

## **Break down government silos**

Many governments are constrained by a culture of information control that makes it difficult to push the boundaries. One benefit to letting citizens design is that citizens, unlike governments, do not feel the constraints that traditionally have made it hard for different public sector bodies to collaborate. If several transportation agencies wanted to build a trip-planning tool that covered a wide geographical region and multiple transportation modes, before anyone wrote a line of code they would spend months wrestling with questions of data ownership, process governance, resource allocation, liability and a host of other issues. However, if the organisations opened the necessary data to the masses, an independent third party could develop the cross-cutting application much more quickly.

See UK is a visualisation tool allowing users to compare neighbourhood data in the UK. It is a collaborative project between Seme4 Ltd and members of the EnAKTing project at the University of Southampton that charts data from data.gov.uk onto geographic maps allowing users to compare their region with similar regions and highlight the 'best' and 'worst' areas. As well as giving access to the raw data, users are able to normalise the data by population or area, allowing them to compare regions by, for example, crime density by population or area, rather than just seeing that their particular region has a low level of crime without any reference point.

# 3

## Generate healthy competition

The private sector has been leveraging the power of citizens to analyse data for several years. Goldcorp, a Toronto-based mining company, ran one of the best known crowd sourcing competitions by opening the company's proprietary data to the public and offering prize money for the best estimates and methods for finding gold deposits in their mines. The contestants identified over 100 targets, more than 80 per cent of which yielded substantial quantities of gold. Competitions to encourage citizens to produce value from data continue to flourish across the private sector. Now, governments have begun to follow suit.

In 2008, as part of its Power of Information initiative, the previous Government announced the Show Us a Better Way competition to hear ideas for new products that could improve the way public information is communicated. A prize of £20,000 was offered to develop the best ideas and a large amount of previously unavailable data was made public to promote innovative thinking. The winning ideas covered a wide range of areas including a tool to allow users to identify, by their postcode, local recycling capabilities; a tool to assist parents in school admissions using Local Authority data on previous years; and a tool to locate post boxes in rural and residential areas.

# 4

## Change the culture

Governments that make their data available for unlimited use by citizens also benefit by triggering a change in their own data culture. As Greg Elin, chief data architect at the Sunlight Foundation, told *The Atlantic*, a government that develops an API for public use must record and store data differently than it did in the past. "Data sharing is no longer an afterthought," he said. "You begin with the notion that you're going to share information and you're going to make it easy for people."<sup>1</sup> When government officials start treating their data as a public resource, opportunities to empower and collaborate with citizen developers multiply.

# From legacy to leading

Governments are starting to wake up to the idea that when citizens use public data to develop applications that citizens want, they enhance democracy, encourage innovation and growth, and make it possible to provide a broader, richer range of services at minimal cost. Leading governments are actively encouraging citizen-developers to get involved, conducting outreach campaigns and,

sometimes, contests to stimulate interest. They provide as much useful data as possible in open formats, sometimes also providing tools to simplify the task of incorporating the data in applications. They enlist the help of citizens in deciding what data to provide and in what formats.

**Table 2. More innovative government**

	<b>Legacy</b>	<b>Learning</b>	<b>Leading</b>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>No coherent strategy</li> <li>There is a general lack of awareness of user-designers' potential to add value to the agency's services</li> </ul>	<ul style="list-style-type: none"> <li>Government is beginning to realise that users can add value</li> <li>Government makes selected data accessible in order to encourage user design</li> </ul>	<ul style="list-style-type: none"> <li>Government recognises the power of user-designed applications and develops strategies for capturing their potential (such as mashup competitions)</li> <li>Departments make an effort to provide as much useful data as possible</li> </ul>
<b>Culture</b>	<ul style="list-style-type: none"> <li>Top-down approach to providing services to the public</li> <li>Ideas for service provision are internally generated and implemented</li> <li>Response to public input is reactionary (that is, service changes as a result of public backlash)</li> </ul>	<ul style="list-style-type: none"> <li>User design is viewed as something that can add value and improve service, but is still seen as peripheral to the agency's objectives</li> <li>What users create can add value as an accessory</li> </ul>	<ul style="list-style-type: none"> <li>User design is seen as something that can fundamentally improve service and solve problems</li> <li>User design is allowed to shape how information is provided to the public</li> </ul>
<b>Access</b>	<ul style="list-style-type: none"> <li>Data is owned by government and used internally to design services</li> <li>The public does not have access to information that would allow user-designed services to add the most value (for example, transit route data are unavailable to those who would like to design mashups)</li> </ul>	<ul style="list-style-type: none"> <li>Data is owned by the government and is selectively provided to users</li> <li>Government primarily determines what is provided, with users often desiring more than what is available</li> </ul>	<ul style="list-style-type: none"> <li>Data is still technically owned by government but extensive efforts are made to provide as much of it as possible to users</li> <li>Governments and users jointly determine what data is available – users make requests for data; government agencies actively listen to these requests and try to provide what is desired</li> </ul>

# Lessons in execution

The power of users in designing social media applications is now well established. Applying this power as a means to transform government from an information provider to a true development platform is a vast new frontier. In charting the way forward, governments should consider the following four important lessons:

- **Encourage users to create applications.**

The objective is to promote user-driven applications for newly released data stores. Although contests can be useful, users don't always need competitions to contribute. Most citizen applications have been developed independently of government competitions. Users develop these tools because they want to. The most important variable is access.

- **Incorporate or adapt user-designed applications into publicly-hosted sites.**

Applications that may have been developed for specific audiences, such as iPhone users, are often adaptable to broader audiences. An example would be anyone using a mobile phone or Web browser. Government departments should be on the lookout for citizen-driven applications that appeal to a wider audience.

- **Seek and maintain a dialogue with apps developers.**

The most useful applications of public data may be created when governments connect with users to understand what they are trying to see in the data. Governments will have knowledge of where data sets reside and what further sources could be unlocked to achieve greater value. Leading governments are creating advisory groups to assist with unlocking data stores. These groups bring leading social media participants together with community, business and government leaders to help guide decision making and action.

- **Create methods and channels for listening and responding to user demands for data.**

Formalising the channels for data interaction will help accelerate the process and create an avenue for further collaboration.

# More responsive government

Tune into social networks to gain insight into the effectiveness of policies and programmes

Companies whose products and services perfectly match the needs of their customers do not reach that level of excellence simply by responding to customer complaints. Nor do those companies develop their products and services in isolation from the people they serve. Top companies anticipate customer needs and proactively solicit customer input to refine their product and service offerings. To do this more cost effectively, companies increasingly are turning to social media. Using the online channels that their customers visit regularly, companies directly engage with their customers and also monitor what people are saying about their brands. Moreover, companies make use of the service advantages that accompany social media, allowing them to share granular-level service advice in an extremely rapid fashion to hundreds or thousands of people. By solving a single customer's problem and broadcasting the solution over the Web, companies are able to resolve similar issues that other customers maybe facing, thus reducing the volume of related calls coming into their call center. They have also learned that social media sites can provide rich, publicly-available data on what people are thinking about their products and services.

**P**rocter & Gamble, for example, has been exploring the most effective ways to connect with customers via social media. The idea is to seek out consumers in the Web 2.0 universe rather than passively waiting for them to find information about P&G's products. "If they're not on our brand sites, that's okay," said Susan Ross, a P&G brand manager. "We will be able to follow them wherever they are and be part of their conversation."<sup>2</sup> After developing an experimental 'social media lab', which it called a "virtual R&D programme, designed to actively explore and gain insights on how to build relationships with P&G's customers in the age of social media"<sup>3</sup>, P&G has now launched a fully-fledged 'e-store' that works in tandem with social media campaigns on Facebook.

Products are starting to emerge that allow companies to monitor conversations across numerous social media sites to learn what people are saying about those companies and their products. Visible Technologies, for example, assists organisations in managing their online reputation by providing an aggregated view of the online social landscape in real-time.

In some ways, government departments responsible for delivering programmes and services are very much like companies trying to maintain close relationships with customers. They, too, need to understand their customers' needs and learn what citizens think about their 'products' – their policies and services.

Data generated through social media interactions provide a previously untapped source of user feedback for governments, often in real-time. Citizens today spend a significant amount of time on social media sites.

An international survey conducted by Nielsen found that two-thirds of internet users visit at least one social networking or blogging site as part of their internet activity, making 'member communities' the fourth most popular activity on the Internet.<sup>4</sup>

While 'one-window' approaches to providing information on public services were sufficient in the early days of e-government, today's leaders need to do more than passively wait for public enquiries or complaints. They need to tune into social networks as a growing source of citizen data on everything from service quality to programmatic changes.



# Five ways to increase responsiveness by tuning into social networks

1

## Take the pulse

The Internet is a rich source of data about what citizens think about government activities and an important place for citizen-activists. New tools are emerging to make it easier to observe and participate in citizen discussions on any given topic.

As well as taking the pulse of the community, social media tools also allow for more active citizenry. Lothian and Borders Police's "Made From Crime" initiative will allow users to report concerns online through popular social network sites such as Facebook or through a Bluetooth link directly to the Crimestoppers website. Following the riots in the summer of 2011, the Metropolitan Police used Flickr to seek the public's assistance in identifying looters.

2

## Obtain real-time feedback on policy

Governments are learning how quickly citizen-organised social media campaigns can provide focused input and meaningful data on proposed policy changes.

In November 2008, the Ontario government introduced new legislation to set stronger conditions on young drivers. The legislation proposed that a teenage driver could have only one teen passenger; a young person who received one speeding ticket could potentially lose his or her license; and young people would not be allowed to drive with any level of alcohol in their blood. When the proposed legislation was announced, a group entitled "Young Drivers Against New Ontario Laws" was created on Facebook. Two hundred people joined the group within hours. By the group's second day, it had 14,500 members. By day four, that number had grown to 95,000. The group eventually attained more than 140,000 members. The Ontario government was not expecting the strength and speed of this online movement and, ultimately, amended the most restrictive provisions in the proposed legislation.

To communicate effectively with citizens, governments must pay more systematic attention to what their constituents are saying. To be sure, actively listening to, communicating with and engaging with citizens in social media channels, where appropriate, should not be confused with Orwellian fears of government spying on citizens. Government outreach through social media channels should be conducted in a forthright manner with the expressed objective of soliciting citizen feedback on programmes and services.

3

## Crowdsource ideas

While many governments take advantage of already well-established social networking tools, some have created their own forums for citizen collaboration.

The Government has recently launched a new e-petitions website that allows citizens to create or support a petition about anything the government is responsible for. If an e-petition receives 100,000 or more signatures, it will be eligible for debate in the House of Commons. This is not the first example of e-petitions in the UK. Since February 2004, the Scottish Parliament has used an e-petition system to give citizens the opportunities to influence policymakers. Each petition goes to a dedicated Committee which assesses its merits and, if necessary, by taking evidence from the petitioners themselves.

At a local level, Wolverhampton's Local Strategic Partnership established an e-panel in 2005 as a way to provide citizens an opportunity to express their views on Wolverhampton, its council and local services. Officers from a range of delivery agencies such as the NHS and the police took part in answering online questions online to generate greater citizen engagement in local issues.

## 4

### Identify service delivery problems

Less concentrated data on citizens' views and experiences with government services also can be accessed on the Web. A simple Google search can yield first-hand accounts of citizen experiences with everything from counter services to child welfare.

Formed in 2000, the ntl:hell website was one of the earliest forums dedicated to highlight the actions of a single company. Running for five years, the website became an influential force offering over 25,000 members the opportunity to express dissatisfaction with their Internet Service Provider (ISP), leading to the CEO of NTL to meet with the site's owners to discuss improvements. As the Welsh Consumer Council noted, "in what has become a public relations risk, company representatives who type '[company name] sucks' into a web search engine will often find just such a grassroots campaign has been started against them."

Similarly, Mumsnet, an online forum for parenting issues, has initiated a number of national campaigns in response to use concerns such as the "let girls be girls" campaign which was supported by a number of retailers.

Citizen groups have also emerged as aggregators and enablers of citizen input on government services. The tools they provide make it easy for citizens to express their opinions to government officials, report local problems and, in some cases, monitor the government's response.

## 5

### Communicate faster and better

Twitter is proving especially helpful for sharing information with the public as a government agency responds to an emergency. The Los Angeles Fire Department (LAFD) uses the service to update the public on structural fires and other emergencies. In 2007, as a wildfire threatened the city's Griffith Park, residents nearby sent tweets to the LAFD, advising firefighters about wind direction and hot spots.<sup>5</sup>

# From legacy to leading

Social networks can provide governments with citizen data on a limitless range of programmes and services. Citizens want to be heard and are willing to spend the time to present their views through many different social networking channels. In some cases their input is well organised and targeted. In others, it is found in the online chatter that surrounds many government programmes. For government departments to make use of the rich data

that resides online, they must do more than react to Web-based movements. They need to mimic the social marketers that have come before them, proactively searching for structured and unstructured data on how citizens are interacting with public services. Moving from legacy to leading practices will require trial and error, along with a willingness to reach out to online communities.

**Table 3. More responsive government**

	<b>Legacy</b>	<b>Learning</b>	<b>Leading</b>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>No coherent strategy</li> <li>Government awareness of online discussions is reactionary, primarily arising in response to major protests</li> </ul>	<ul style="list-style-type: none"> <li>Attempt to 'get on the Web' but lack a clear vision and strategy</li> <li>Unsure of how to leverage online resources to encourage participation</li> </ul>	<ul style="list-style-type: none"> <li>Government organisations proactively use Facebook, Twitter, MySpace and other websites to solicit feedback</li> <li>Targeted attempts to get on the Web where it is most likely to be required and successful</li> </ul>
<b>Culture</b>	<ul style="list-style-type: none"> <li>The culture is outdated, failing to understand the power of online organisation and discussion</li> <li>Opportunities to provide input or discuss policies and services are provided only through traditional routes (such as committee hearings)</li> </ul>	<ul style="list-style-type: none"> <li>Most of the government's efforts involve more actively providing information online (through Facebook, for example) rather than using community websites to generate discussion and solicit feedback</li> </ul>	<ul style="list-style-type: none"> <li>Online participation and collaboration in government is viewed as essential</li> <li>Proactively engaging with the public substantially increases the government's ability to improve customer service</li> </ul>
<b>Access</b>	<ul style="list-style-type: none"> <li>Limited data are provided to the public with little or no consultation</li> </ul>	<ul style="list-style-type: none"> <li>Some mechanisms (such as online suggestion boxes) for listening to citizen demands for new data</li> </ul>	<ul style="list-style-type: none"> <li>The government actively solicits feedback from online groups, using blogs, Facebook, Twitter and other Web 2.0 community sites to determine what data the public desires</li> </ul>

## Lessons in execution

The Web gives citizens a powerful tool for expressing their views on government policies and services. Government agencies have responded to the more focused and organised online campaigns. But leading governments are now looking for ways to move beyond reactive practices. As they learn to be more proactive in tapping into data from social networks, public leaders should explore the following:

- **Systematically monitor what citizens are saying about your policies and services.** This requires designing roles and investing in tools to monitor online feedback on programmes and services. While many governments are increasing their presence on the Web and soliciting user feedback through it, the leaders are reaching out to harvest the data on public services that exist in social networks. In the process, they are turning up the volume on social media channels.

- **Participate in social networks.** Through Facebook, Twitter and other social media sites, governments are reaching out to the online community to participate in discussions and encourage public input.

- **Refine your social media marketing strategy.** Many agencies are only beginning to understand what drives users to their sites. By adopting leading practices in social media marketing, governments can more effectively attract target audiences. In the process, they acquire valuable data on how programs are working and input to shape future changes.



**G**overnment leaders recognise that, in addition to leveraging community resources to analyse public data, they must also get better at analysing vast stores of public data – in addition to online sources. Much of the power of public data are trapped deep inside the transactional systems of government – those systems used for processing drivers' licenses, administering prescription drugs, collecting taxes and controlling borders, for example. Since governments have not traditionally shared data, even within their own walls, they may have missed many of the insights that can come from understanding the data relationships among social, demographic, economic, health, education and criminal justice issues. And it is these insights, rather than the data themselves, which are needed to improve the performance of the Government – through increased efficiency or the transformation of the public services they provide to citizens.

To increase the utility of government online data, governments themselves must develop the analytics capabilities to share and manipulate the structured data they typically collect, along with the increasing volume of unstructured data available online. Even the most open government cannot make all of its data available to the public – national security, sub judice, commercial confidentiality and privacy concerns place limits on what can be released. Sometimes, the insights that governments need to obtain from transactional data are different from the kinds of knowledge that citizen groups seek. Also, vast quantities of data are currently locked up within government units, making it difficult for managers to analyse the interplay among programmes. Some departments – such as the Home Office, the Ministry of Defence, the Ministry of Justice and the Treasury – are well ahead of their peers in learning to get the greatest possible value from the data they possess. But if opening up public data is to have a truly transformative effect on how government works, data analytics will need to become a core competency of most departments.<sup>6</sup>

In the private sector, recent books, such as *Moneyball*, *Competing on Analytics*, *Nudge*, *Super Crunchers* and *Predictably Irrational* have elevated the subjects of analytics and the limits of intuition. Organisations are

learning that practices based on data and evidence-based decisions consistently prove more effective than practices based on conventional wisdom or 'intuition.'

As organisations continue to collect greater and greater amounts of data, and software tools become more powerful, the ability to mine and model data becomes ever more important for generating useful and actionable insights and competing in an increasingly analytical world.

Leading firms have overcome the tendency to make crucial decisions with incomplete information. Instead, they are using analytics tools to mine the exabytes of data they collect, teasing out trends to help them to predict customer behavior. With this capability, managers can quickly call up answers to questions, such as, "Which customers are most likely to defect to a competitor?" and plan accordingly.

Governments also manage vast storehouses of data. Just like corporations, they must learn to mine their data stores, in addition to online data, as a means to transform decision making and action.

From insurance companies and baseball teams to doctors and administrators working in public hospitals, agencies are learning that data and the evidence-based decisions the data enable, lead to better outcomes.

However, the obsession that many organisations – and analytics providers, especially – have with such 'big data' misses the point of analytics competency. Big data is a means to an end and no more. In the future, governments and businesses will succeed or fail on the power of the 'big insights' that they are able to derive from whatever data they have access to – whether 'big' or 'small'.

Leading governments are, therefore, investing in building a core competency in all aspects of data analytics. This involves looking at their strategy, technology, processes and controls and people, as well as the availability of data – which is often provided by more than one department – with the ultimate aim of strengthening and improving the quality of insights, and then making sure that they are acted upon. This is the only way of ensuring that analytics competency is linked directly to better outcomes.

# Three ways data analytics can foster smarter government

## 1

### Make sense of disparate information

The Illinois Department of Transportation (IDOT) has built a business intelligence platform that gives employees throughout the agency direct access to data that before had been trapped in many separate information silos. Now, dashboards allow employees to draw data from multiple IT systems in order to perform analyses and monitor performance. For example, a fatalities dashboard allows IDOT to analyse the various causes connected to fatal accidents, such as speed, alcohol, weather and improper use of lanes. One analysis revealed that a significant number of crashes were caused by factors that IDOT wasn't tracking, spurring the department and the state police to look into other causes they needed to track.<sup>7</sup>

## 3

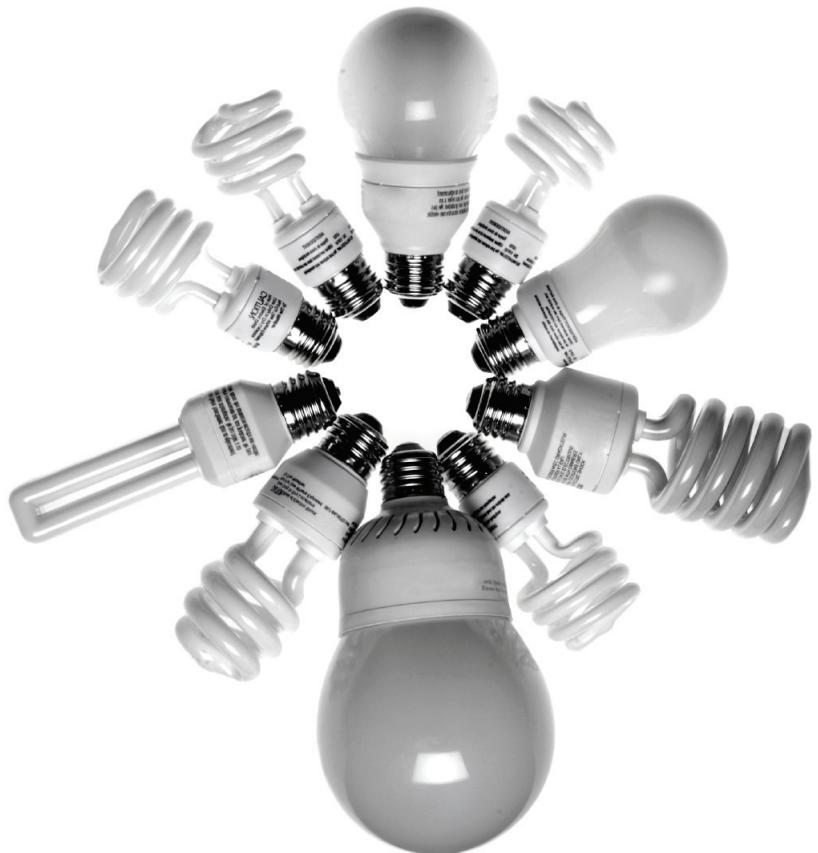
### Combat fraud

The Government currently pays out around £190 billion in benefits, tax credits and child benefit administered by the Department for Work and Pensions (DWP) and HM Revenue and Customs (HMRC). The most recent estimates put annual revenue losses due to fraud and error in the welfare system at £5.2 billion. HMRC is now taking a 'private sector approach', involving customer segmentation to get a better understanding of those interacting with the system and data analytics to better understand where losses are greatest. As a result of using a range of risk-based tools, data matching and data mining, HMRC have increased intervention coverage from 123,000 interventions to one million last year, increasing yield from £253m to £770m.<sup>8</sup>

## 2

### Increase effectiveness

Police forces in England and Wales are using mapping technologies to understand and track crime trends in neighbourhoods. Studies have shown that police perception of where crime occurs often does not match reality. By combining geographic data, electoral roll data, land use information, crime incident reports, crime initiatives and other sources of information, police officers create maps that provide much better intelligence than their own experience could provide. Police can use the maps to gain information on a single offence, multiple offences of a similar type or a series of offences that have become a major local crime problem. Law enforcement organisations across England and Wales now use crime maps as part of their daily activities. Every police force also has made these maps available to the public on their websites.



# From legacy to leading

Data analytics is a rapidly maturing discipline that, while commonplace in areas like public safety and revenue management, is only beginning to be explored in other policy domains. Leading government departments are recognising that evidence-based policy making and service

design requires an ability to mine public data to gain insight into performance. Moving from legacy to leading will require governments to invest in building the capabilities needed to unlock the valuable ‘big insights’ within their data stores.

**Table 4. Smarter government**

	<b>Legacy</b>	<b>Learning</b>	<b>Leading</b>
<b>Strategy</b>	<ul style="list-style-type: none"><li>• Data are collected on key performance indicators and are reported infrequently (such as in an annual report or at committee meetings) to show program outputs</li><li>• Data are not considered strategically to improve performance</li></ul>	<ul style="list-style-type: none"><li>• Governments recognise the need to manage their data more effectively but do so primarily to make processing responsibilities more efficient (that is, putting health records online to improve efficiency for doctors, pharmacists, and other practitioners who require the records)</li><li>• Data are not considered strategically to improve performance</li></ul>	<ul style="list-style-type: none"><li>• A large data warehouse containing multiple data sets is created</li><li>• Data are systematically analysed to inform policy</li></ul>
<b>Culture</b>	<ul style="list-style-type: none"><li>• Decisions are made without systematic use of data</li><li>• The intuition of programme managers is often relied upon for decisions</li></ul>	<ul style="list-style-type: none"><li>• It is recognised that data can be processed more effectively to improve efficiency, but the systematic use of data to drive decisions is missing</li><li>• Policies remain based on conventional wisdom, at times absent of any concrete evidence</li></ul>	<ul style="list-style-type: none"><li>• Decisions are made and evaluated based on evidence – conventional wisdom is no longer allowed to decide important policy questions</li></ul>
<b>Access</b>	<ul style="list-style-type: none"><li>• Data are made available to select analysts – however, the data are updated infrequently (for example, only annually), which makes it very difficult to assess projects and make decisions in real-time</li><li>• No data warehouse has been created</li></ul>	<ul style="list-style-type: none"><li>• Governments provide access to required stakeholders under exceptional circumstances</li><li>• Business intelligence tools are being piloted</li></ul>	<ul style="list-style-type: none"><li>• Data are frequently updated (often in real-time) allowing for effective decision making</li><li>• Data warehouses combine data from multiple stores to assess cross-program issues</li><li>• Data are shared across boundaries under appropriate controls</li></ul>

# Lessons in execution

Although aspects of data analytics in government have existed for many years, most public sector bodies have not viewed this as a core competency or central to their role. However, as citizens begin to demand greater access to public data and as evidenced-based policy making takes hold, governments are starting to see the value of developing these capabilities. Much can be learned from revenue agencies, health authorities, crime units and the private sector.

- **Focus analytics on your core mission.** The vastness of the public data that exist can lead agencies to lose focus on the purpose of data analytics. Efforts to develop analytical capabilities need to be driven by your department's core mission. Where the data are providing insights that challenge accepted norms, it is important to be ready to adjust strategies and tactics.
- **Approach data analytics as a new core competency for deriving 'big insights', not just as a new tool set.** Too often, organisations believe that the powerful tools that exist to analyse 'big data' are the answer. This is far from the case. It is the insights, made possible by competencies in strategy, processes and controls, data management, people and technology, which drive change and opportunity.

• **Enlist key partners inside and outside your organisation.** The pioneers in data analytics quickly learned that the relationships they needed to understand also require data outside their own domain. Even within departments, the culture of localised data ownership needs to be overcome to extract maximum data value. And departments need to establish effective connections with the private sector, as well – under appropriately focused commercial relationships – to bring to bear the considerable analytics experience and expertise found there.

• **Make use of the online community.** As well as taking advantage of open source analytics tools, and the growing community of developers working on them, the online community can also be encouraged to mashup data in innovative ways. Your focus should be on programme performance and manipulating data sets that contain personal and commercially confidential information. However, citizen-led data analytics should be brought into policy analysis, where feasible, given the resources and imagination that exist outside government.



# Challenges moving forward

On the surface, the idea of making data available to the public seems straightforward. After all, most of the data derive from citizen interactions with the Government. Exposing them is merely reporting back to citizens the facts on their interactions, at the lowest level of measurement. Why wouldn't governments be expected to provide transaction-level data to citizens as long as personal information is protected? And why wouldn't governments and citizens want to mine data within and across departments to find patterns that could improve outcomes?

**Sharing public data isn't quite that simple; at least, not yet.**

The IT systems used in government evolved at a time when public bodies held onto most of the information they collected without making it public. To pave the way for meaningful change, governments need to rethink IT architectures, update long-standing laws and policies and turn old concepts of data ownership inside out. Public access needs to be a core principle that is designed into technology solutions.

But the challenge is not only one of technology. In fact, the tools for extracting, analysing and presenting vast amounts of data have never been more accessible. Even though governments are always challenged to realign their efforts with new priorities, the obstacles to sharing public data are not a question of resource availability. The online community represents a vast, largely untapped resource pool for governments to draw upon. And internally, much of the time that governments spend controlling and protecting data that will inevitably be released could be devoted to getting routine data into the open.

One of the greatest challenges will be in changing the philosophy that underlies the leadership and culture of government departments. The inevitable shift toward more open data access has significant implications for the way government leaders view their relationships with citizens and with each other. The future of effective government lies in its ability to connect with citizens at the lowest level (that is, the data level). Complete and timely release of performance data is becoming an objective measure against which government transparency is being judged.

To transform themselves by making the most of public data, governments will need to overcome a number of significant challenges. As daunting as these challenges may be, most leaders agree that they must be overcome.

## Rethinking data ownership across the enterprise

For most public agencies trying to open themselves to stakeholder participation, the biggest challenge is the need to rethink data ownership. Traditionally, data have been owned by programme managers within units or subunits of government who have been tasked with controlling and limiting access.

This narrow definition of data ownership is now outdated. In fact, data should be viewed as enterprise assets, to be exploited by governments as a whole and by their stakeholders. But changes in ownership bring questions of accountability and liability, and the Government must ensure that adequate consideration has been given to potential liabilities and warranties arising from use of the open data elsewhere in government, in business or by individual citizens. This, of course, means that governments may need to rewrite current practices, policies and even legislation to enable the power of data sharing and analytics.

## Viewing data as a public asset

Rethinking data ownership extends well beyond even the bigger boundaries of the 'whole of government' enterprise. Increasingly, governments and citizens are starting to view public data as a public asset, to be shared broadly rather than limited to a select few.

In the Autumn Statement 2011, the UK Government launched a suite of initiatives for transparency and open data. Their strategy seeks to establish a culture of openness and a presumed right of citizens to access public data. Ultimately, though, the Government's initiatives may lead to a future in which citizens challenge all organisations, not just those in the public sector, to release their personal data and other data that they feel will enable better services, greater transparency and broader economic and societal benefits. The days of organisations clinging onto proprietary data in the hope of retaining a competitive advantage will be gone.

### **Making data personal**

A common argument against sharing public data is a concern about disclosure of personal information. Clearly, privacy issues pose a significant and serious challenge – particularly if the anonymity of citizens in one data set can be threatened by inferences made after publishing data in others. But the impetus to shift control of data from service provider to citizen is strongest in the area that citizens consider very private indeed – their personal health. Here, citizens are demanding access to personalised health information and, in many cases, they are receiving it.

Traditionally, patients and their families have depended on doctors to store and share their personal health data. But there is a growing demand to change this situation.

In a survey of health care consumers, which Deloitte conducted in 2009, more than 65 per cent of respondents said they would like to be able to access the personal health records of family members whose care they are helping to manage. More than 60 per cent said they were interested in having their doctor's office, hospital and government provide a personal health record or online medical record.<sup>9</sup>

Today, governments around the world are investing heavily in systems that allow healthcare professionals to share data on the patients they treat and give patients electronic access to their own healthcare data. Giving access to this kind of information allows consumers to participate more fully and more knowledgeably in healthcare decisions.

### **Developing public servants into social media knowledge workers**

As the social media craze has spread, many governments have struggled to define the role of public servants in this environment. Forward-looking government leaders have embraced the movement and encouraged managers to get themselves and their programmes involved by establishing a presence on sites such as Facebook and Twitter, using YouTube to distribute videos and otherwise taking advantage of the opportunities social media affords to connect and engage with citizens.

Other government executives have focused on early missteps, in which government workers breached security or privacy regulations while posting on public forums. In reaction, they have forbidden employees to sign onto social networking sites while on the job or to participate in online forums.

To open up government, public leaders must start to view public servants as social media knowledge workers. They must not only allow managers and staff to use social networks for sharing public data and harvesting insights into how programmes are performing – they must require it. At the same time, they must deal with legitimate concerns about what kind of communication is appropriate on a public network.

The armed forces provide a good illustration of the dilemma that government organisations face with regard to social media. The British Army uses social media to raise awareness and engage with potential recruits. Through Facebook and Twitter, potential candidates have the opportunity to talk to serving soldiers. Soldiers are trained in how to avoid causing security breaches when discussing army matters online.

The movement to include social media participation in the job description of some government employees is triggering important changes in government leadership. It is helping to nurture a new philosophy of data ownership and promote openness across agencies.

# Lessons in execution

Stakeholders who are well-versed in social media expect data to be open, accessible and freely modifiable. They are highly sensitive to privacy concerns, but they recognise the need to balance protective processes with collaborative ones. They also recognise that governments can only do so much on their own with the vast repositories of information they currently store and protect. For the most part, data accumulated over decades in silos that government controls and owns just sit there. Governments simply do not have the money or staff to extract value from most of these data.

By shifting the focus outward, making data available to the public, governments can close the gap between government and citizens. Citizens who are comfortable with online collaborative tools aren't only demanding greater access to information, they're volunteering to help. Government-stakeholder partnerships of this kind can transform how services are delivered and how citizens influence the longer-term evolution of government.

Governments won't move away from traditional views of data management and ownership overnight. Transitions of this scale and scope must not be viewed as point-in-time changes. Rather, they represent strategic evolutions. Understanding how the maturity model works is key to deriving optimal collaborative value from this transition.

- **Make raw public data easy to access and reuse.**

Nothing can change until the very notion of data ownership shifts away from the existing hierarchical and internal model to one that is collaborative and distributed. Of course, this is often the most challenging step, as it requires fundamental change to the culture of government. Still, as governments look for ways to meet growing stakeholder expectations in an increasingly resource-constrained landscape, they will have little choice but to loosen their grips on information formerly viewed as strictly internal and proprietary.

- **Let the users design.** Governments cannot do it all and they will fall even further behind if they cling to the notion that they alone must drive new initiatives. By bypassing traditional requirements-gathering processes and placing more of the initial setup work into the hands of citizens, governments can benefit from the much broader capabilities of an external audience and position themselves to more effectively integrate their diverse and broad-based needs into deliverables.

- **Tune into social networks to gain insight into the effectiveness of policies and programmes.** If the rapid evolution of social media tools is changing the way citizens communicate, it will also radically change how governments assess the state of their external environment. Traditional scanning methods, such as surveys, are expensive and unresponsive compared with social media tools, which can deliver real-time insight into trends and expectations far more cost effectively. In many cases, governments can use ear-to-the-ground scanning as an initial step before taking on more expansive data-sharing initiatives.

- **Make data analytics a core competency.** Evidence-based decision making is a foundational element of effective government and evidence is generally based in data. In their efforts to extract the greatest value from public data, leading governments are building their capabilities in data analytics and, critically, using their findings to drive action. Citizens are also feeding governments fact-based information that drives better performance. As the momentum builds in the public and private sectors alike, governments will increasingly be required to justify their decisions with data. Moreover, they will be able to be more responsive when data show that adjustments to programs and services are warranted.

## An important note before embarking on your first – or next – open government initiative

As with any major initiative, there will undoubtedly be unintended consequences that arise as a result of the unlocking of government. Government managers have legitimate concerns about protecting citizen confidentiality, managing security risks and opening up their work to criticism by a public that is sometimes more – and sometimes less – informed about the issues.

While unintended consequences are a fact of life, they shouldn't thwart open government efforts. Rather, government managers must take unintended consequences seriously and actively seek to identify, mitigate and manage the potential risks associated with the unlocking of government data.

Getting a diverse group (which includes critics) involved in planning and war-gaming efforts; probing for weaknesses in an initiative before it's launched; and experimenting with small pilot projects to understand what works and what doesn't can help you identify potential issues. To increase the likelihood of your initiative's success, it is important to get – and stay – ahead of the risks.

# Closing thoughts

We are only starting to understand the ways in which governments can use data to unlock growth. But we know that the potential for using mashups, crowdsourcing, analytics and other techniques to transform data into meaningful knowledge – for average citizens, civil servants, politicians, business owners and other stakeholders – is tremendous.

For the most part, the data accumulated over decades in those government-owned and controlled silos are static. Governments can only do so much with their vast repositories of information. Most have neither the mandate nor the means to extract value that can be mined from multiple public and private data stores. But unlocking these stores will create the potential to improve public outcomes in nearly limitless ways.

Government leaders have before them an opportunity to combine the resourcefulness of online citizens and entrepreneurs with the power of factual data to achieve their mission and stimulate growth and innovation in the private sector. In an information-driven age, the ability of the Government to seize this opportunity may ultimately determine whether their Growth Agenda succeeds or fails.

## Endnotes

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# Notes

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