

Making Open Data Real: A Public Consultation - Microsoft Response

Making Open Data Real: A Public Consultation

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Thank you for providing the opportunity to Microsoft to respond to the **Making Open Data Real: A Public Consultation** – herein after called the consultation document. Our responses focus on where technology can play a part in enabling Open Data solutions to become real.

Questions for consultation (page 6 of the consultation document)

The Government would welcome views on the following:

1. Do the definitions of the key terms go far enough or too far?

Yes, as per the definitions on page 5.

Open Data can be provided in formats which should be easily consumable by citizens and commercial organisations using various open, interoperable formats.

2. Where a decision is being taken about whether to make a dataset open, what tests should be applied?

We suggest the following principles are applied to the datasets:

1. Accurate
2. Organised
3. Timely
4. Verifiable
5. Easily accessible
6. Economical
7. Useful
8. Privacy

Careful consideration should be given to these principles; the quality of the data, risk of errors and the possibility of erroneous conclusions. An Open Data “quality of data indicator” should form part of the tests and delivery of the dataset(s) to the public/private sector.

Datasets should be freely available on any computing platform and formats to provide citizens and businesses the choice of tools to consume the data – World Wide Web, data.gov.uk, London Data Store, Microsoft Office OpenXML, Open Data Protocol, Microsoft Windows Azure public cloud, PC's/Mobile platform and other formats.

Regarding the cost of provision and level of back-office solutions automation to find, compile, review, and publish the data.

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- Microsoft and our UK partner ecosystem provide solutions for eDRMS and collaboration to automate and hence reduce costs.
- Further, assuming the business process/policy/security is in place, direct publication of data to the internet (web sites, Windows Azure Datamarket) is possible from Microsoft platforms via our open, published API's in government Information System(s) - please see later.

Lastly, privacy of individuals and/or legal jurisdictions needs to be considered.

3. If the costs to publish or release data are not judged to represent value for money, to what extent should the requestor be required to pay for public services data, and under what circumstances?

It is HMG decision to provide government data free or for a fee is a business decision with many factors least of all some of the skills needed to collect the appropriate, quality data.

Microsoft supports Open data publication and provides data hosting options for government on our worldwide public cloud as follows:

- Free storage of freely licensed UK Government Open data on Microsoft Windows Azure Datamarket public cloud subject to terms and conditions. We have examples already in Datamarket from the FCO Travel Advisory information and London Data Store datasets which can be freely viewed with an Internet Web browser in various display forms or download for further analysis such as with Microsoft Excel application.
- Microsoft Windows Azure Datamarket also provides the option for datasets to be published and sold worldwide for a fee with the publisher receiving a proportion of the fee. Government departments needing to sell datasets to recoup costs (FOI or continuous, accurate data collection) can take advantage of this service.
- Microsoft Windows Azure Datamarket can is here: <https://datamarket.azure.com/>

4. How do we get the right balance in relation to the range of organisations (providers of public services) our policy proposals apply to? What threshold would be appropriate to determine the range of public services in scope and what key criteria should inform this?

Microsoft technology platform solutions can work with government departments and public service providers to publish open datasets.

5. What would be appropriate mechanisms to encourage or ensure publication of data by public service providers?

Commercial agreement details need to be clear and respected as to what is private vs. public.

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The IT technical mechanisms are supported by Microsoft – please see the next answer

An Enhanced Right to Data - Questions for consultation (Page 25 of the consultation document)

The Government would welcome views on the following:

- 1. How would we establish a stronger presumption in favour of publication than that which currently exists?**

From a technology perspective, given the government business process/policy is in place to publish the data, Microsoft technology provides the openly published API's and mechanisms to publish Open Data directly. The government department / private service provider / ICT department / ISV or solution provider using Microsoft products in their Line of Business applications/solutions can use these API's to publish the data directly to the web, data.gov.uk and public cloud via Windows Azure Datamarket. This data can be structured – records type of data or unstructured, documents in various open, interoperable standards e.g. XML, OpenXML, CSV and other data or document formats.

Microsoft has developed offerings to support the UK Government in meeting its objectives around increased transparency, open data and re-use. For example, we now offer up to 50 GB of free data storage on Windows Azure Datamarket for all public sector organisations in the UK who are offering freely licensed open data e.g. the storage is free if the data is free. This free and simple to use service supports the Government's push but also has the added benefit of in future enabling public sector organisations to decide to charge for some or all of the data if it so wishes thereby giving increased flexibility.

End-users can use Microsoft client tools, Windows/MS Office to access, analyze data and save data to be published on document management platforms (structured and unstructured data) for publication, for example using Microsoft SharePoint.

Microsoft can also provide technology solutions via its partners that enable the finding of unstructured and structured information in the process of compiling the data to then publish. Microsoft SharePoint can provide the collaborative environment when government reports are generated from multiple-sources of data and the eDRMS enabling faster finding of data in other Enterprise systems, databases, network drives etc.

Microsoft provides products and technologies via 30,000 UK partners (application developers, ISV's, SME's, large and small SI's) supporting open, interoperable standards for application development and personal productivity tools to access, consume, analyze and enable added-value creation of information / reports / databases and output the data in industry standard, open, interoperable data formats.

- 2. Is providing an independent body, such as the Information Commissioner, with enhanced powers and scope the most effective option for safeguarding a right to access and a right to data?**

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An independent Information commissioner body is needed to safeguard the publication of data in flexible, open electronic data formats. Consumers and SME's will use the easiest tools they know from web browsers to more in-depth analytical tools like spreadsheets to find, view, analyze open data for their purposes.

Secondly, we propose that Open Data on its publication needs an "indicator of quality and accuracy" to avoid erroneous conclusions in value-added information packages and in particular where these added-value information services may carry legal liability.

The independent body should provide a clear process to allow correction/complaints related to erroneous data which may cause false derived outcomes or privacy issues.

Microsoft enables our partners, SME's, consumers in the creation of added-value information from raw data using our products.

3. Are existing safeguards to protect personal data and privacy measures adequate to regulate the Open Data agenda?

There appears to be no redress mechanism should open data be released which infringes personal privacy. Safeguards and processes should be in place to prevent personal data disclosure and complaint procedure to correct the situation. Please see (2) above in this section.

4. What might the resource implications of an enhanced right to data be for those bodies within its scope? How do we ensure that any additional burden is proportionate to this aim?

Microsoft provides technology platforms to customers and partners (SI's and SME's) to deliver and operationalize business solutions.

Line of Business processes and costs are best answered by government departments and their solution providers.

At the technology level, Microsoft provides open, interoperable products and API's to access structured, unstructured data and to automate business processes for data creation, review and publication. Web, .Net, data management standards based API's are available from our server products to publish data in various forms including XML or using our client products like MS Office with its support of OpenXML and various other document standards.

As mentioned above, finding structured and unstructured data and compiling publication can also be enabled and automated with Microsoft SharePoint by our partner solutions. These solutions can reduce the delivery time and cost.

Microsoft Server based standards based API's like SQL exist to enable direct reporting by applications to the web. Further, Microsoft has defined a free cross platform Open Data Protocol (OData) using web based XML standards with partners such as SAP, IBM and others to enable publication of structured data directly. The Microsoft products already support OData are SharePoint2010, CRM2011, SQL Server 2008R2, MS

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Excel2010, Windows Azure public cloud Datamarket, Mobile Smartphone platforms (iPhone, Windows Phone 7, Android). For more details, please see www.odata.org

The **US Department of Labor** has recently directly published access of its open data using the Open Data Protocol on the web, please see <http://developer.dol.gov/>

Please also see Forbes magazine article on SAP Open strategy including OData. <http://www.forbes.com/sites/danwoods/2011/10/04/the-technology-of-saps-open-strategy/>

4. How will we ensure that Open Data standards are embedded in new ICT contracts?

Provide Open Data in multiple, open data formats so different, diverse SME's and users can quickly add value and innovate.

Microsoft plays its part in providing technologies in its products to access and produce electronic data using open published and interoperable API's/data formats as above.

These technology platforms are delivered to worldwide to a variety of markets including commercial, government IT departments by our partners (SI's and SME's).

Microsoft technologies supports this area given that clear business/government policy is provided to departments and their service providers (SI's or SME's/ISV's) on when/how operational systems should publish the data as suggested above.

It is important when creating ICT contracts that industry and international standards bodies' definitions for Open standards and interoperability are not confused with OSS. The following whitepaper explains the benefits of open standards

- <http://www.microsoft.com/downloads/details.aspx?FamilyID=98E425D7-C3E6-4D6D-881D-581752A32424&displaylang=e&displaylang=en>

Examples:

Microsoft Open Specification Developer Center contains a list of developer / published API resources used by Microsoft products

- <http://msdn.microsoft.com/en-us/openspecifications/cc721659>
- Multi-platform Open Data Protocol, please see: www.odata.org

Microsoft Office Open XML

- is a XML-based file format developed by Microsoft for representing word processing documents, spreadsheets, charts and presentations. Office Open XML specification is standardized by ECMA as ECMA-376) and by ISO and IEC as ISO/IEC 29500.
- Developers resources are available at <http://openxmldeveloper.org/>
- An introduction to OpenXML for developers can be found here at <http://msdn.microsoft.com/en-us/library/aa338205.aspx>

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Setting Open Standards - Questions for consultation (Page 28 of the consultation document)

The Government would welcome views on the following:

1. What is the best way to achieve compliance on high and common standards to allow usability and interoperability?

Enable choice to the consumers and private sector to easily access, analyze, and transform the data delivered in already large scale use multiple data formats, web browsers and applications.

Open data should be provided in open, interoperable, widely used standard formats in the public and private sector as outlined above and not just a single standard, to enable fast, multi-platform innovation.

SME's are used to handle different open data formats and standards; add their value on data transformations and time to market to deliver new information services.

Open standards can be provided on a variety of computing platforms and products from Microsoft, other suppliers and open source systems. It is important to be clear on definitions since open standards is not the same as OSS.

Definition of Open Standard. An open standard is a publicly available technical "specification" (*i.e.*, a set of technical instructions and requirements) that is developed or approved/affirmed and maintained by a consensus-based process in a voluntary, market-driven standards-setting organization that is open to all interested and qualified participants, and for which any patent rights necessary to implement the specification are made available by those developing the specification to all implementers on reasonable and non-discriminatory ("RAND") terms (either with or without payment of a reasonable royalty or fee).

- **Open Standard is Defined Similarly by Leading Standards and Industry Organisations.**

- **ANSI** ("American National Standards Institute") (<http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/Critical%20Issues%20Papers/Open-Stds.pdf>) (May 2005).

- **BSA** ("Business Software Alliance") (<http://www.riso.ee/et/files/BSA%20Statement%20on%20Technology%20Standards%20-%20Feb05.pdf>) (Feb. 2005).

- **EICTA** ("European Industry Association for Information Systems, Communication Technologies and Consumer Electronics") (<http://www.riso.ee/et/files/IDA%20European%20Interoperability%20-%20EICTA%20comments%20on%20EIF%20-%20Jan%202005.pdf>) (Jan. 2005).

- **GSC-13** ("Global Standards Collaboration") (<http://www.itu.int/ITU-T/gsc/gsc13/index.html#finalres>) (July 2008) (Current GSC participants include ARIB

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(Japan), ATIS (USA), CA (Australia), CCSA (China), ETSI (Europe), ISACC (Canada), ITU (International), TIA (USA), TTA (Korea), and TTC (Japan).

- **IETF** ("Internet Engineering Task Force") (<http://tools.ietf.org/html/rfc2026#section-7.1.1>, section 7)
- **ITU** ("International Telecommunication Union") (<http://www.itu.int/ITU-T/othergroups/ipr-adhoc/openstandards.html>) (Nov. 2005).

Notably, the above definitions -- some from major standards organisations that have adopted thousands of open standards which have been implemented in countless products throughout the world -- all recognize the inclusion of a RAND licensing option (either compensation-free or with a reasonable royalty) as a key component to a standard's classification as an "open standard."

- **Key Benefits of Open Standards.**
 - Important drivers of effective interoperability and widespread product adoption (although there are other complementary means of achieving interoperability, including through product design; intellectual property licensing; and collaboration with partners, customers, and even competitors).
 - Product, development model, and business model independent, thereby creating greater innovation and consumer choice through competing and complementary implementations.
 - **Well-known and Widely Implemented Open Standards.** TCP/IP, HTML, HTTP, 802.11, Open XML, ODF, MPEG, XML, SNMP, and SMTP creating greater innovation and consumer choice through competing and complementary implementations.

Citizens will expect to choose various ways to consume Open Data that they are interested using familiar, easy to use, rich UI tools – Web browsers, PC's, Mobile devices, MS Office applications, other suppliers, etc.

Probably the most popular, #1 Open Data service in the UK uses XML/HTTP/SQL standards. It is from Transport for London (TfL), also in the London Data Store.

- TfL wanted to harness the data-rich London Underground TrackerNet system, which provides real-time information about train movements and lines and makes it available to partners, other organisations, and the application developer community
- **Microsoft hosts TracknerNet on the Windows Azure public cloud** for TFL the London Underground real-time trains/lines information serving **2.3m hits/day from citizens using ISV mobile apps** on iPhone/iPad, Windows Phone, Android clearly shows this can be achieved today! Developers use the TFL API on top of SQL Azure to freely access the data, and provide their added-value apps in the marketplace to consumers. This illustrates the public interest in transport and real-time data delivering a service to the travelling public.

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Microsoft Windows Azure Datamarket for datasets provides end user access via a browser, Excel and for developers using the cross-platform, interoperable free licensed Open Data Protocol. This is supported by leading software providers like SAP and IBM and other Microsoft products like SharePoint2010, CRM2011, SQL Server2008R2, Excel2010, Mobile Smartphone platforms (iPhone/iPad/Mac, Windows Phone 7, Android). (Please see: <http://www.odata.org/>)

All of the Microsoft technology and products technical published information, API's, standards and interoperability supported can be found here: <http://msdn.microsoft.com/en-gb/>

2. Is there a role for government to establish consistent standards for collecting user experience across public services?

This is an opportunity to provide guidance for what type and how much data to be collected. Microsoft products enable collection of data in open, interoperable data based on the chosen business processes.

3. Should we consider a scheme for accreditation of information intermediaries, and if so how might that best work?

If added value information services are provided using poor quality open data with no warnings; business or citizens may make conclusions/decisions with negative impacts (legal, financial, etc.).

Where open data has been used to create added-value information with possible legal implications and liabilities, accreditation should be considered in conjunction with existing schemes provided in a number of existing UK information services markets.

As mentioned earlier a redress procedure should be in place to citizens / private sector for open data published in error through the government chain of publication.

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Corporate and personal responsibility – Questions for consultation (Page 30 of the consultation document)

The Government would welcome views on the following:

1. How would we ensure that public service providers in their day to day decision-making honour a commitment to Open Data, while respecting privacy and security considerations.

The Health Caldicott Guardian model, principles and role for patient information privacy protection of individual's data has worked well in health. The senior independence of the role is key such that the interest of an individual privacy is reviewed appropriately separate from other pressures on the data in question. This independent role should be used in government or service provider organisations regarding Open Data governance.

The person in an organization responsible for Open Data publication should not be the same person fulfilling the Caldicott role for privacy related personal data which may contain identifiable personal data.

2. What could personal responsibility at Board-level do to ensure the right to data is being met include? Should the same person be responsible for ensuring that personal data is properly protected and that privacy issues are met?

No, Open Data and privacy roles should be separate. Please see (1) above

3. Would we need to have a sanctions framework to enforce a right to data?

The Fol framework exists, we do not have further comment

As mentioned earlier any new framework for Open Data needs:

- A data quality health warning
- Provide a process of redress for erroneous data from the public or private sector

4. What other sectors would benefit from having a dedicated Sector Transparency Board?

Microsoft does not provide domain information business services; rather specialist SME's can use Microsoft technology to deliver their solutions.

From a technology perspective, greater IT industry representation could directly provide views in government transparency boards.

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Meaningful Open Data - Questions for consultation (Page 31 of the consultation document)

The Government would welcome views on the following:

1. How should public services make use of data inventories? What is the optimal way to develop and operate this?

Open data will not have a meaning to the public or private sector if it contains major errors impacting citizen and business decisions or outcomes. Trust and liability issues can arise.

Which datasets to publish is a government policy and business decision.

Crowdsourcing generated open data should also be encouraged where it provides value or improved efficiency to HMG public services and citizens.

Microsoft products and technologies support open, interoperable interfaces and data standards for publication, viewing and data analysis.

2. How should data be prioritised for inclusion in an inventory? How is value to be established?

A possible way to prioritize data in an inventory would be:

- Legal requirements
- Quality
- Privacy
- Frequency / popularity / volume of access of use after publishing reviewed annually
- Key data of public interest
- Value provided to HMG or community
 - e.g. enabling greener environment, reducing costs – please see the LoveCleanStreets at Lewisham crowd sourcing case study below from Microsoft SME partner BBITS.

Transport as has been described earlier where real-time data can be used such as TfL TrackerNet; this transport real-time class of data has proved very popular.

Health - The Microsoft Health Solutions Group develop a range of innovative offerings in the health sector. One of these is HealthVault. HealthVault introduces choice and puts people in control of their own health information, enabling them to store it in a central location and make it easy for them to update and share. HealthVault lets people consolidate their health information into one safe account to help them stay informed and active in managing their health. More information on HealthVault can be found at <http://www.healthvault.co.uk/>. Our research shows that currently only 13% of UK citizens actively manage their health, which is half of other European countries such as German. If we could increase the UK to the same as the rest of Europe (26%) we believe that this would deliver savings of £6bn to the NHS directly as well as additional benefits to the wider economy through less absenteeism etc. The take-up of electronic health records such as HealthVault would greatly increase if personal health information, such as the Summary Care Record, was made available and able to be integrated

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directly into a personal health record such as HealthVault. The ability for this information to feed into HealthVault would also stimulate the partner ecosystem to deliver applications, helping support UK SME's and drive economic growth.

3. In what areas would you expect government to collect and publish data routinely?

Transport

- real-time data – roads, gritted / non-gritted local and national road network

Health

- covered above

City Infrastructure

- Transport, environment, energy

Geographic

- Geographic UK data
- Weather
- Property

Economic/Finance

- The publishing of this data, analysis from such SME's as Spikes Cavell provide comparative spend analysis
- In addition, publishing of this data can sometimes reveal major anomalies such as the following Canadian example of Charity Tax payments which revealed fraud.
 - [Case Study: How Open data saved Canada \\$3.2 Billion](#)

4. What data is collected „unnecessarily“ ? How should these datasets be identified? Should collection be stopped?

Frequency of the public/businesses accessing and using the data from its repositories in data.gov.uk or source departments reviewed annually.

5. Should the data that government releases always be of high quality? How do we define quality? To what extent should public service providers „polish“ the data they publish, if at all?

When Open Data is published it should carry a “quality health indicator” – for example: preliminary, draft, final. The publisher of the data should make this judgment. The data quality should be reviewed for

- accuracy, completeness, consistency, uniqueness, privacy, and timeliness.

If trust is lost on the quality and validity of the datasets they will likely not be used.

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Government sets example - Questions for consultation (Page 33 of the consultation document)

The Government would welcome views on the following:

1. How should government approach the release of existing data for policy and research purposes: should this be held in a central portal or held on departmental portals?

Hosting should be flexible and cost effective as long as the data can uniquely be referenced

The Microsoft Windows Azure Datamarket offer for freely licensed government data below is a cost effective option for government departments and readily provides data analytical tools and mash-ups with other data – such as United Nations as part of a research programme.

2. What factors should inform prioritisation of datasets for publication, at national, local or sector level?

A possible way to prioritize data in an inventory would be:

- Legal requirements
- Quality
- Privacy
- Frequency / popularity / volume of access of use after publishing reviewed annually
- Key data of public interest
- Value provided to HMG or community.
- Data formats are open and interoperable

Where these open datasets are provided and added value digital services generated, consideration should also be given for members of society that can't afford to readily join the digital age to access digital information.

Microsoft and a group of partners have collaborated and delivered a program to make PC's & Windows software to be more affordable to this section of the community. A refurbished powerful PC with MS Windows 7 as follows:

- £95 available to people receiving certain benefits and to charities
- £165 available to anyone in the UK
- More details from: www.getonlineathome.org

3. Which is more important: for government to prioritise publishing a broader set of data, or existing data at a more detailed level?

This should be driven by the volume of demand and frequency of access with respect to the value delivered.

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Innovation with Open Data - Questions for consultation (Page 36 of the consultation document)

The Government would welcome views on the following:

1. **Is there a role for government to stimulate innovation in the use of Open Data? If so, what is the best way to achieve this?**

Publish data in open, interoperable accessible formats most widely used by consumers and the private sector to enable fast innovation with interesting datasets or services.

Government should provide open data and interoperable API's to government data as a platform. Access and application innovation should be left to the private sector – SME's, ISV's, solution providers. The datasets of most interest by the public will be self-evident based on its usage and value outcomes.

We shall provide examples below of how Government as a Platform has enabled SME's out of our 30,000 UK partners using the Microsoft platforms to deliver world leading open data solutions.

A number of UK and one EU Open Data Solution case studies examples on Microsoft Windows Azure cloud computing platform follows:

- TFL Tracknet case study on Open Data London Underground Trains real-time data case study; **probably one of the most popular Open Data services in the UK with 2.3m+ hits/day from citizens with Smartphones/Tablets.**
 - TFL open data is part of the London Data Store, <http://data.london.gov.uk>
 - Major savings being made by TFL - please see the video case study (top right of the case study web page in link above)
 - As you will see from the case study this is an example of a Hybrid cloud solution pattern = Windows Azure + Private Cloud on-premises TFL datacenter directly publishing the data to the cloud and public
 - The power of the Azure cloud has provided the scalability for the mobile Smartphone/pad developers to release apps on iPhone/iPad, Windows Phone, Android accessing the trains/lines real-time data using TFL API from Azure SQL database for free
- FCO case study - Foreign Travel Information on Azure Datamarket Mobile App, and integration with gapyear.com web site. The data is available free on Datamarket.
- Love clean streets – Lewisham and partner BBITS. [BBITS an SME](#), developed the solution on Microsoft Azure and integrates with on-premise case management systems.
 - Savings and international interest summarized in [ITV London Tonight 2 min program](#). [Lewisham case study](#)
 - In Lewisham, 53% drop in fly tipping and reduced costs
 - Savings and revenue of £150,000 annually
- Spikes Cavell case study. They have developed a service to analyze financial public sector data, including open data solution <http://whatis.spotlightonspend.org.uk/default.aspx>
 - Spikes Cavell is expanding overseas to the USA and Microsoft is assisting in co-marketing to USA Public Sector agencies.

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- [London Data Store](#) – 3 boroughs datasets examples on Windows Azure Datamarket. This is part of our free offer to UK government that publishes free license open data. If government depts. want to charge for datasets, Datamarket can also do that and provide a revenue stream back to HMG.
- [Eye on Earth](#) – EU Environment Agency sponsored web site on Microsoft Windows Azure for air and water quality across Europe including the UK

However, we do not see public information as purely commercial opportunity and are developing offerings to support the UK Government in meeting its objectives around increased transparency, open data and re-use. For example, we now offer up to 50 GB of free data storage on Windows Azure Datamarket for all public sector organisations in the UK who are offering freely licensed open data e.g. the storage is free if the data is free. This free and simple to use service supports the Government's push but also has the added benefit of in future enabling public sector organisations to decide to charge for some or all of the data if it so wishes thereby giving increased flexibility.

We strongly believe that the opening up of public information will mainly benefit small and medium enterprises. Through this opening up of public data a range of SME organisations will be created, and existing SMEs will grow, delivering value based on this public information. Having this public data enables social enterprises to start up anywhere in the country, reinforcing local economies and also enabling a new generation of small businesses to be created. It will also support the Government's austerity measures in getting SMEs and third sector organisations to develop applications that in the past would have needed to be funded by Government departments or organisations.

Lastly, Microsoft extends the offer to the Open Data data.gov.uk and Transparency board to provide a multi-platform, interoperable solution for Open Data.

- Microsoft Canada has worked with Open source and open data Canadian Government agencies to provide interoperability. Please see here: <http://www.webnotwar.ca/drupal-ogdi-open-data-goodness>
- Microsoft UK extends the invitation to Her Majesty Government Open Data stakeholders in the Cabinet Office/Transparency Board to work on open, interoperable, multi-platform Open Government Data Initiative solution.

Case Studies on Open Data Innovation (UK and North America)

Transport for London TrackerNet, <http://www.microsoft.com/casestudies/Windows-Azure/Transport-for-London/London-Transport-Manages-2.3-Million-Website-Hits-a-Day-with-New-Data-Feed/4000010237>

Foreign & Commonwealth Office, <http://www.theenvisioners.com/index.php/2011/03/15/bringing-government-as-platform-to-life-introducing-travel-advisor/>

Love Clean Streets, <http://www.bbits.co.uk/Love-clean-streets> & <http://www.microsoft.com/casestudies/Bing-Maps-For-Enterprise/London-Borough-of->

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[Lewisham/Council-Uses-Cloud-Technology-to-Reduce-Costs-and-Increase-Savings-by-150-00-a-Year/4000011112](#) &
http://www.youtube.com/watch?v=C1O5_IUxKS4

Spikes Cavell, <http://www.microsoft.com/casestudies/Windows-Azure/Spikes-Cavell/Government-Spending-Analytics-Provider-Uses-Cloud-to-Scale-Solution-Expand-Overseas/4000010842>

London Data Store, <https://datamarket.azure.com/browse/Data?Publisher=9cda511a-3811-4b92-8596-a79c6500fb86>

Eye of Earth – Pan-EU Environment, <http://www.microsoft.com/casestudies/Windows-Azure/European-Environment-Agency-EEA/Environment-Agency-s-Pioneering-Online-Tools-Bring-Revolutionary-Data-to-Citizens/4000006197>

North America

Miami 311, <http://www.microsoft.com/casestudies/Windows-Azure/City-of-Miami/City-Government-Improves-Service-Offerings-Cuts-Costs-with-Cloud-Services-Solution/4000006568>

VanGuide, <http://www.microsoft.com/casestudies/Bing-Maps/Nitobi/Nitobi-harnesses-the-power-of-open-government-data-with-VanGuide/4000008428>

& <http://vanguide.cloudapp.net/>

SocialRally and TownHall,

http://www.microsoft.com/casestudies/Case_Study_Detail.aspx?casestudyid=4000008226

& <http://www.microsofttownhall.com/>

Florida Census,

http://www.microsoft.com/casestudies/Case_Study_Detail.aspx?CaseStudyID=4000007975

Other Open Data Developer Resources

Open Government Data Initiative

The Open Government Data Initiative (OGDI) is an initiative led by Microsoft. OGDI uses the [Windows Azure Platform](#) to make it easier to publish and use a wide variety of public data from government agencies. OGDI is also a free, open source 'starter kit' with [code](#) that can be used to publish data on the Internet in a Web-friendly format with easy-to-use, open API's. OGDI-based web API's can be accessed from a variety of client technologies such as Silverlight, Flash, JavaScript, PHP, Python, Ruby, mapping web sites, etc.

➤ <http://ogdisdk.cloudapp.net/>

Open Data App Framework, <http://odaf.codeplex.com/>

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Working Definition of Public Data – (Page 56 of the consultation document)

As mentioned earlier, there are a number of open, interoperable standards widely used internationally and in the UK by users and private sector.

HMG should leverage these electronic, open, interoperable machine readable standards in addition to the world wide web consortium standards to provide the best scope for speed and innovation with open data.