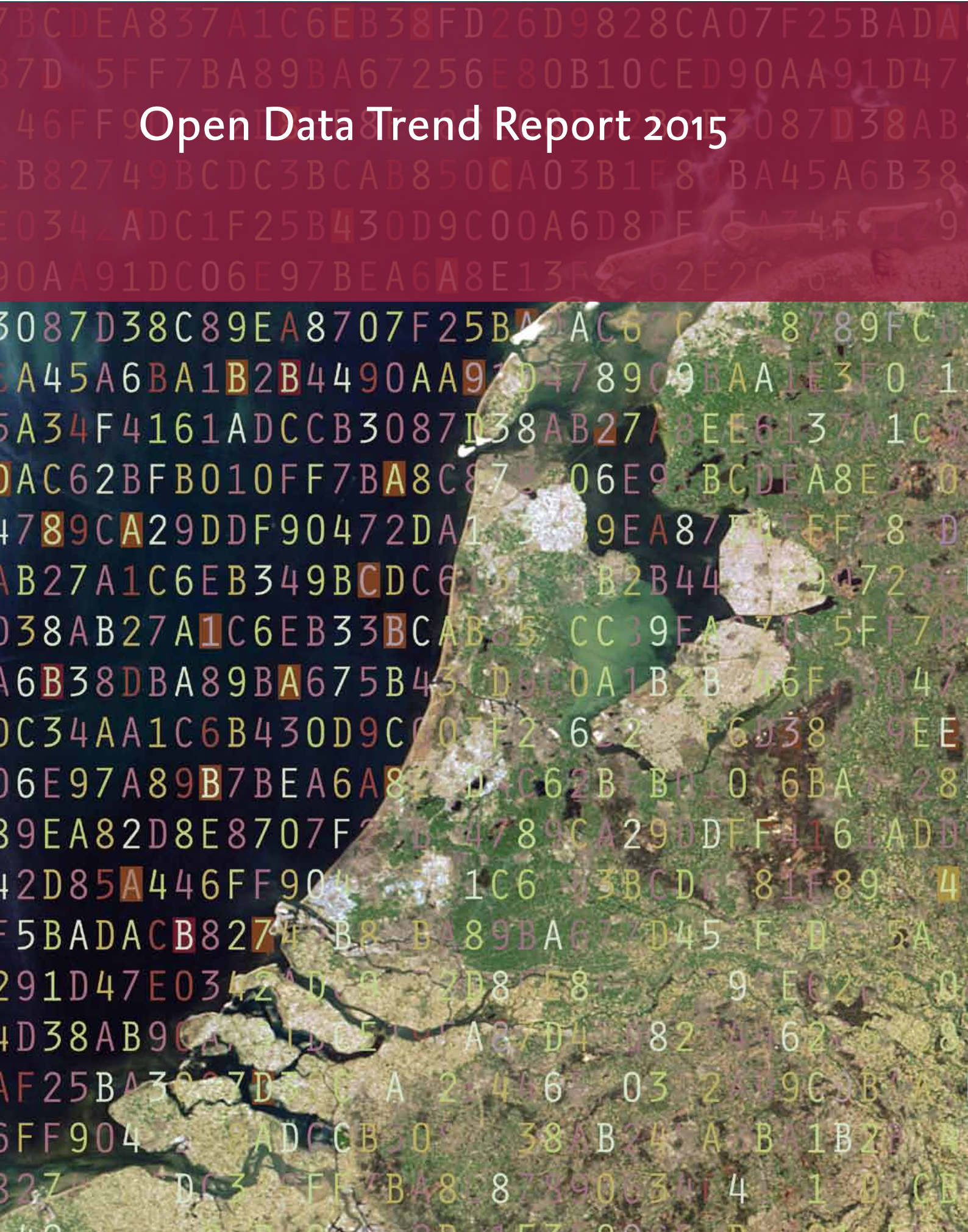




Open Data Trend Report 2015



Open Data Trend Report 2015

The original report *Tendrapport open data 2015* was adopted on 30 March 2015 and presented to the Dutch House of Representatives on 31 March 2015.

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Report in brief

Steady progress

Open data have become more common in the Dutch central government in the past year. Open data are data that are freely accessible and can be re-used without restriction. Several ministries have taken initiatives to provide open data and involve users more. The Ministry of Infrastructure and the Environment, for example, has released a great deal of data on vehicles and parking places. The Minister for Foreign Trade and Development Cooperation has released data on international development aid down to project level. DBC-Onderhoud and Vektis have published health care data. The Ministry of Finance is releasing ever-more data on the grants it awards and on its agencies, and has plans to publish more detailed information on its own expenditure.

Available open data are fragmented and one-sided

On the whole, the Netherlands scores relatively well on the various international benchmarks and features in the top ten in most of them. If we look at the number of datasets, however, the Netherlands lags behind the two leading countries: the United Kingdom and the United States. Furthermore, the data that are published relate mainly to 'knowledge data', such as mapping data and public transport times. Only limited data on what the government does and can be held to account to the public ('action data') are published. The Minister for Foreign Trade and Development is a positive exception.

In practice, the datasets that have been published are not as open as they appear. The Minister of Health, Welfare and Sport (vws), for example, claims that data of the Netherlands Institute for Social Research are published as open data by the Royal Netherlands Academy of Arts and Sciences but prior permission is required before they can be used.

The practice of open data in the Netherlands is therefore still lacking. Although the government stated in its Open Government Action Plan that the government is 'open unless', the ministries still decide for themselves how they deal with open data. They take their own decisions on what data they release, how it will be released and how open it will be. Owing to the different choices, data.overheid.nl does not yet serve as a central source of open data published by the government.

Points for attention

The government should consider the following points for the further development of the Dutch open data policy.

1. Set ambitions and milestones in a concrete action plan

Use the findings of the government-wide data analysis currently being carried out by the Ministry of the Interior and Kingdom Relations to make concrete agreements among the ministries and with the House of Representatives on the publication of specific datasets. Also set a date for publication.

2. Make publication of open data mandatory

Making publication of open data mandatory would ensure greater availability of open data. The examples of the United Kingdom and the United States show that compulsory publication can increase the availability of open data almost immediately.

3. Develop a National Information Infrastructure

The government should use the government-wide data inventory to ascertain what data are of the greatest social importance and what data should in any event be open. The UK National Information Infrastructure can serve as an example.

4. Put open data to work, for example in the decentralisation of social services

Use open data to inform the current decentralisation of social services and the reform of long-term health care and to feed the National Information Infrastructure. Open data can be a means for all stakeholders (clients, care providers, public authorities) to start a dialogue on the impact of decentralisation, the quality of care and the macro cost of care. A common language (open data) would make it easier to discuss problems and solutions. The Minister of the Interior and Kingdom Relations should take the lead in this.

Open data could thus help the public authorities make better informed choices on policy and costs. It would also enable the public to follow the use of public funds.

I The importance of open data

1

Not all government bodies are subject to the Public Access to Information Act. Organisations that are not, such as the High Councils of State, have their own freedom of information rules.

2

There are four absolute grounds on which the government can refuse to release data. These relate to the unity of the Crown, state security, commercial and manufacturing data provided to the government in confidence and specific personal data within the meaning of section 16 of the Personal Data Protection Act. There are also seven relative grounds for refusal. These relate to the Netherlands' international relations, the economic or financial interests of the state, the detection and prosecution of crime, the inspection, control and supervision conducted by administrative bodies, respect for personal privacy, the importance to an addressee of being the first to learn of the information, and the prevention of giving an unreasonable advantage or disadvantage to the natural persons, legal persons or third parties concerned. See section 10 of the Public Access to Information Act.

3

Advisory Council on International Affairs (2014), *The internet: a global free space with limited state control*, Advisory Report no. 92.

4

See his TED lecture of 2009 at http://www.ted.com/talks/tim_berniers_lee_on_the_next_web

1.1 Access to government information

Fundamental democratic right

Access to government information is a fundamental democratic right. In the Netherlands, such access is provided by article 110 of the Constitution and elaborated upon in Public Access to Information Act (WOB) 1980.¹ This law requires the government to share public information with the public. A lot of the information already is public, but not all of it. There are exemptions for, for example, privacy-sensitive data, commercially-sensitive data and data relating to state security.² The government's obligation to provide access to its information is largely passive: it will share information if a citizen requests it. But the government could also publish information actively, on its own accord.

Society is changing

Society has changed a great deal since the Access to Information Act came into force in 1980. Information is no longer kept statically on paper but in dynamic computer systems, where data are often processed and linked to other data. In the meantime, virtually everyone is connected through a series of devices to the internet and are so able to exchange information in an instant.

In a recent advisory report, the Advisory Council on International Affairs outlined the consequences of the development of the internet for, among other things, internet freedom.³ It found that the internet had contributed to a society in which we can exchange and produce information (big data) with each other ever-more easily. This offers many opportunities for transparency (open data) and economic growth, but it also raises new privacy issues. Many of these data are saved on servers owned by large (usually American) companies and it is not known how the privacy of Dutch citizens and businesses will be protected. The Advisory Council concluded that the existing constitutional frameworks for communication and privacy were no longer appropriate.

A 21st century government can respond to these changes by giving the public direct access to government information, without their needing to request it. In other words, the government could publish open data actively. By itself, though, this is not enough: not only must government information be permanently available to the public in digital format, so must the underlying data. In the words of one of the inventors of the internet, Sir Tim Berners-Lee: 'give us the raw data now'.⁴ Raw data should be provided instead of, for example, data-based websites or apps because they are a valuable 'raw material' for the public, businesses and the government itself. This chapter explains this by a means of a series of examples of studies.

Open data reveal new perspectives

A lot of government information is compiled from data. The weather forecast, for example, is compiled from weather data provided by the meteorological office, the national budget from financial data provided by the ministries and unemployment figures from statistics provided by Statistics Netherlands. The government collects

these data to implement its policies. Making the datasets digitally accessible and re-usable in the form of open data offers new perspectives to members of the public, businesses and the government itself.




1.2 When are data open?

The government ‘makes’ and uses data when it performs its public tasks. A lot of the data are public, i.e. the public can access them under the Public Access to Information Act or other laws.⁵ Sensitive data that are not accessible to the public can be anonymised or aggregated and then shared with the public.

Public is not the same as open. To define data as open, they must be both accessible and re-usable. Open is therefore a broader term than public. The different elements of the definition are shown below.

Figure 1.1 **Open data are accessible and re-usable**

Accessible

Public task	
Public	
Without restriction	

Re-usable

Machine readable	
Free of copyright	

Accessible and re-usable

Access to government data is the result of data collection for a public service (the data exist) and exists when data are public (I have a right to access them) and made available on the internet without restriction (I can access them), such as compulsory registration.

Re-usability is the right to re-use, reproduce, process and combine the data with other data without restriction. The data must therefore be free of copyright and machine readable. The first provides a right of re-use (I may re-use the data) and the second provides a means to do so (I can re-use the data). A PDF file is an example of a non-machine readable format because the user must copy the data by hand in order to process them. A CSV file,⁶ by contrast, is machine readable and the data can be processed directly.

⁵ The Public Access to Information Act is concerned with documents. The term ‘document’ is open to wide interpretation: it covers both paper and digital documents and the electronic and other information they contain. The public therefore have access to the data held by the government.

⁶ CSV stands for comma separated values. CSV files consist of rows and columns, with the columns being separated by commas.

Below, we consider the potential of open data for the public, businesses and the government itself.

1.3 Open data for the public

A more transparent and accessible government

Active release of datasets would make the government more transparent and accessible. Instead of having to request data themselves, if they even know of their existence, the public would have permanent digital access to them and a better understanding of what the government knows and does.

Knowledge data

Data on the weather, public transport times, registered companies, election results and the like can be categorised as ‘knowledge data’. They are often interesting in themselves but are even more intriguing when they are analysed, combined and interpreted by academics, entrepreneurs or journalists to form new insights and applications. Academics from Freiburg University in Germany and the German company GeOps have developed TRAVIC (tracker.geops.ch). A map on this website allows visitors to follow trains, buses, metros and trams in countries and cities that have opened up their public transport data. A growing branch of journalism – data journalism – consists of journalistic reports using and concerning data.

Action data

‘Action data’ provide an insight into what the government does, how much public money it collects and spends, and to what effect. Open spending is concerned with open data on public finances (see chapter 3). In Albania, for example, the public can follow government expenditure down to transaction level: <http://spending.data.al/en/treasury/list/year/2014>. Brazil is the pioneer in budget monitoring: citizens there are taught to understand the often technical budgetary and accountability data published by their municipalities. Knowledge in combination with transparency can strengthen democracy: citizens can use their knowledge to critically follow and influence local decision-making. This Brazilian approach has been successfully applied in Amsterdam East (www.budgetmonitoring.nl).

Citizens who collect their own data

Citizens can also collect their own data on the government and how it works. This is an example of crowdsourcing where the public at large are the data source. On verbeterdebuurt.nl, for example, citizens can improve the quality of their neighbourhoods by reporting broken lampposts, uncollected rubbish, traffic blackspots, etc. Complaints are passed on to the municipality. A map shows the location of the report and the municipality’s response. The Ugandan government is using open data provided by citizens to stop the spread of a bacteria that causes banana wilt.⁷ Via a mobile platform supported by Unicef (ureport.org), citizens can use their mobile phones to report crop failures and receive advice on how best to protect their bananas. In India, citizens can use Ipaidabribe.com to report bribery. The website processes the reports to reveal the scale and cost of corruption in each province and city.

7

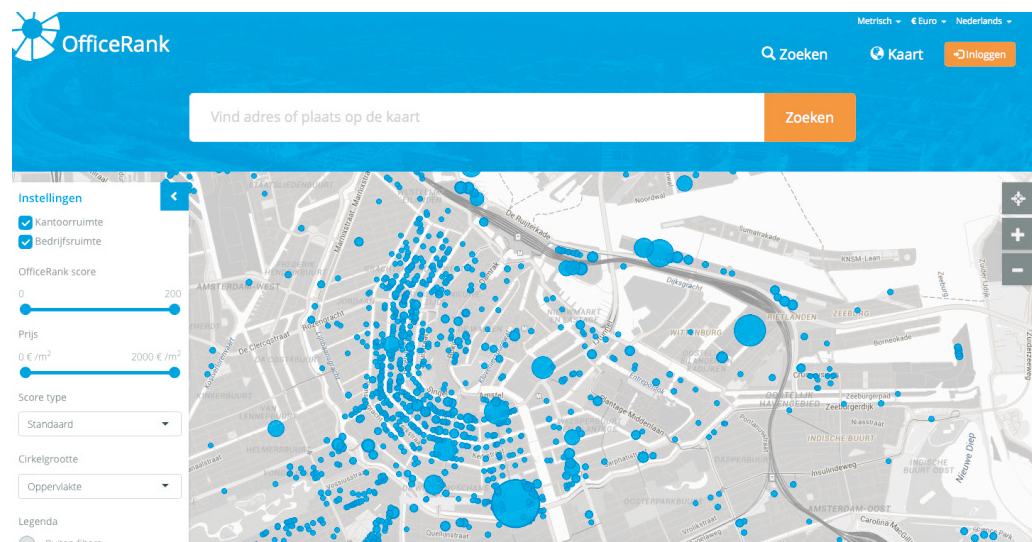
<http://www.theguardian.com/global-development-professionals-network/2015/feb/11/open-data-how-mobile-phones-saved-bananas-from-bacterial-wilt-in-uganda>; see also *Supporting sustainable development with open data* (ODI, 2015).

In one of our own audits, we asked pupils, teachers and parents to give their opinion on the quality of school buildings (checkjeschoolgebouw.nl). The Groningen Earth Movement combines a variety of data sources on the Gas Quakes Portal (opengis.eu/gasbevingen), so that people can see the relationship between gas extraction and earthquakes in the province.

1.4 Open data for business

New applications, new markets

Innovative entrepreneurs can turn open data into new applications. A good example in the Netherlands is OfficeRank.nl, a website that provides information on the quality and cost of real estate. The site has been compiled using data from a variety of sources, including the land registry.



To support such initiatives, the government announced in its Digital Agenda that it would provide more government data as a ‘raw material’ for innovative services.^{8,9}

Open data create a market that can eventually lead to economic growth, new jobs and extra tax revenues. Three recent cases from the European POPSIS study¹⁰ show what is possible if the government strongly reduces the price of certain datasets or even gives them away free of charge.

Lower costs: economic growth

In 1999 the Royal Netherlands Meteorological Institute decided to cut the cost of the weather data it sold to businesses by 80%. In 2002 the Danish Enterprise and Construction Authority began to compile a central database of land ownership data that had previously been dispersed over decentralised databases managed by Danish municipalities. The data were thus 96% cheaper. The Norwegian Meteorological Institute made its weather data completely free of charge in 2007. The economic growth generated by commercial users of the data following the reduction in prices was monitored until 2010.

8

Ministry of Economic Affairs, Agriculture and Innovation (2011), *Digitale Agenda.nl. ICT voor innovatie en economische groei* (Digital Agenda.nl. ICT for innovation and economic growth).

9

The Open Data Knowledge Centre of Delft University is a concrete result of this. It limits itself, however, to open geo-data.

10

POPSIS stands for Pricing Of Public Sector Information Study.

The table below shows that the price cuts were accompanied by an increase in jobs (between 100% and 713%) and turnover (between 100% and 900%) at the businesses that used the data.

Table 1.1 **Cheaper data lead to growth at the commercial users of those data**

Organisation	Type of data	Price of data	Commercial users	
			FTEs	Turnover
Netherlands Meteorological Institute	Weather data	- 80%	+ 200%	+ 300%
Danish Enterprise and Construction Authority	Geo-data	- 96%	+ 713%	+ 900%
Norwegian meteorological Institute	Weather data	- 100%	+ 100%	+ 100% ¹¹

Source: POPSIS 2011¹²

Facilitating a substantial market by reducing costs

The three government bodies in the Netherlands, Denmark and Norway saw a substantial market arise around their datasets after they reduced their prices. The cost to the government of facilitating those markets was relatively low, particularly in relation to the economic gains shown above.

Table 1.2 **Cost of facilitating commercial users (in 2010)**

Organisation	Facilitation cost	FTEs for facilitation	Turnover at commercial users
Netherlands Meteorological Institute	€ 250,000	1.5	€ 20,000,000
Danish Enterprise and Construction Authority	€ 200,000	0.5	€ 5,000,000
Norwegian meteorological Institute	€ 300,000	3	€ 20,000,000

Source: POPSIS 2011

1.5 Open data for government

An accessible, effective and efficient government

Open data also offer opportunities to government: open data can increase the accessibility and reach of the government, and that can improve the relationship between the government and the public. By opening up data on its expenditure and performance, the government will have a better understanding of its own funding flows and the quality of public services. This will in turn help parliament scrutinise the government. Open data on internal operational management will enable government bodies to compare themselves against each other and identify potential savings. The OECD, for example, has calculated that governments with open data can lower their costs by between 15% and 20%.¹³

Open data are not expensive

An often heard objection to opening up datasets is that it is expensive. The three examples given above, however, show that the costs are not high. They are actually very

¹¹

The percentage is probably higher because the turnover figures of commercial users in the first year of open data also included the turnover of the meteorological office.

¹²

European Commission (2011). *Pricing of Public Sector Information Study*.

¹³

OECD (2013), *Exploring Data-Driven Innovation as a New Source of Growth: Mapping the Policy Issues Raised by 'Big Data'*, OECD Digital Economy Papers, No. 222, OECD Publishing.

low in relation to the benefits. If we compare the cost of opening up data with an organisation's total costs, they are also relatively low. This is confirmed by a study conducted by The Green Land in 2014 and by the annual reports of the businesses it studied.

The Green Land studied the cost of opening up datasets at five government bodies (see table 1.3).

Table 1.3 Five organisations that opened up data

Organisation	Type of data	Initial year
Cultural Heritage Agency	Cultural heritage data	2010
Enschede municipality	23 datasets	2012
Rotterdam municipality	137 datasets	2011
Kadaster	Basic topographic records	2012
Netherlands Meteorological Institute	Real-time climate data and seismological data	2013

Source: The Green Land, 2014.¹⁴

An initial investment is often required before data can be opened up, for example to build the necessary ICT architecture. Annual costs are also incurred, for example to manage the datasets. The table below shows the initial and annual costs of opening up the datasets given above as a percentage of the organisations' total expenditure (in the initial year).

Table 1.4 Cost of opening up data

	Initial cost as a % of total costs	Annual costs as a % of total costs	Total expenditure of organisation in initial year (in millions of euros)
Cultural Heritage Agency	0 %	0%	39
Enschede municipality	0.002%	0%	741
Rotterdam municipality	0.001%	0.001%	4,428
Kadaster	0.031%	0.010%	239
Netherlands Meteorological Institute	0.087%	0.024%	58

Source: The Green Land, 2014; annual reports of the organisations concerned.

Both the annual and the initial costs of opening up data at the organisations concerned were only a fraction of their total costs: between 0% and 0.09%. The organisations opened up very large datasets (Cultural Heritage Agency, Kadaster and Netherlands Meteorological Institute) or multiple datasets (Enschede and Rotterdam municipalities). The Cultural Heritage Agency did not specify its costs. It considers open data to be part of its task of digitising cultural heritage and so does not disclose publication costs separately.

Greater reach of public services

Publishing open data literally makes the government and its services more accessible and increases the government's relevance to society. In 2012, Kadaster (the land

¹⁴

The Green Land (2014). *Wah kos'dah dan? Onderzoek naar de incrementele kosten van aan Open Data doen* (How much does it cost then? A study of the incremental cost of open data), for the Ministry of the Interior and Kingdom Relations.

registry) published its basic topographic records as open data. The basic topographic records (known as the BRT) are a collection of detailed digital maps of the Netherlands. Use of the BRT, by both private individuals and businesses, increased exponentially from the moment they became open. In 2014, the BRT were accessed 694 million times online; every click on a map was recorded. The underlying data, or data components, were downloaded 61,000 times in 2014.¹⁵

Between September 2012 and September 2013, the Road Transport Agency (RDW) held a trial to open up non-confidential vehicle information. After a year, the data had been re-used more than 2,000 times and between 25 million and 2.5 billion registration numbers had been requested.¹⁶ The RDW concluded that the trial had been a success.¹⁷

Dutch inspectorates are exploring what they can do with open data. The Netherlands Food and Consumer Product Safety Authority (NVWA) has taken its first steps. In 2014 it launched an app and a website (www.nvwa.nl/onderwerpen/inspectieresultaten/dossier/horeca-inspectiekaart) presenting its inspection results. To date only lunchrooms are covered but the NVWA intends to widen the scope in the future. Unfortunately, the underlying data have not been made open. The NVWA is planning to release these data in 2015. Media channels such as RTL Nieuws have already re-used the data on their own websites.

15

Bregt en Eertink. (2014). *Wat zijn de effecten van een open basisregistratie topografie na twee jaar?* (What are the effects of open basic topographic records after two years?), Wageningen University, additional information from Kadaster by email.

16

Each request covers between 1 and 100 registration numbers.

17

RDW (2013), *Proof of Concept Open Data Voertuigen door RDW* (Trial of the Open Data Concept for Vehicles by RDW).

18

IV₃ stands for third-party information (“informatie voor derden”). IV₃ reports are compulsory financial reports that municipalities must submit to Statistics Netherlands. The structure of the reports was revised in January 2015, in part with a view to the decentralisation of youth care, participation and social support services.

19

See www.prescribinganalytics.com.

Figure Lunchroom inspection results, via rtlnieuws.nl



Comparing and cutting costs

Governments that publish open expenditure data are able to compare the costs of different organisations provided the same definitions are used consistently. Dutch municipalities use the IV₃ standard¹⁸ to report their expenditure to Statistics Netherlands, and the ministries have adopted a government-wide standard cost category table. Comparing costs can lead to new insights and new opportunities to save costs. A team of doctors, hackers and staff of the UK Open Data Institute, for example, found that open data could save the UK government 200 million pounds if doctors prescribed generic statins, a commonly-used cholesterol-lowering drug, instead of proprietary medicines.¹⁹

Digital sustainability

Opening up data can lead to cost savings and, conversely, not publishing open data can entail unnecessary costs. A study by SEO Economic Research found that the cost to the government of responding to freedom of information requests was considerably higher in the Netherlands than in Anglo-Saxon countries. In a freedom of information request, a citizen asks the government for specific information. The government must then decide whether the information (or parts of it) can be provided.

Table 1.5 Cost of responding to freedom of information requests

	year	Cost per request in euros converted to 2013
United States	2009	407
United Kingdom	2005	507
Ireland	2009	527
Australia	2008-2009	620
Canada	2000-2001	1,304
Netherlands	2009-2010	4,800 ²⁰

Source: SEO, 2013.²¹

20

The SEO's study found a range of 3,851 to 5,838 euros. The figure shown here is the rounded average.

21

SEO Economic Research (2013), *Kosten en baten voor de overheid van wijzigingen van de Wet openbaarheid van bestuur* (Costs and benefits to the government of changes in the Public Access to Information Act).

22

This is distinct from the possible misuse of the Public Access to Information Act.

23

House of Representatives (2014), *Parlementair onderzoek naar ICT-projecten bij de overheid* (Parliamentary inquiry into government ICT projects), p. 29.

24

Enthoven (2014), *Open het systeem: over actieve openbaarheid en een informatie-register* (Open the system: on active publication and an information register), essay for the National Archive.

The relatively high cost of dealing with freedom of information requests under the Dutch Public Access to Information Act may be due in part to the government's relatively poor information management.²² The Elias Committee, a parliamentary committee set up to investigate major government ICT projects, wrote: 'The information the Committee received was regularly overdue, incomplete and in some cases incorrect. The ministries do not have their digital archives in order, in some cases they do not seem concerned about the statutory retention term and, to put it mildly, astonishingly have absolutely no documentation to hand on certain sensitive matters.'²³

Opening up data requires active publication by the government. The government cannot not wait until a citizen requests information (passive publication) before deciding whether data can be provided. Instead, it must take a decision on the openness or 'closedness' of data when collecting and compiling them. The process of collecting and compiling data in this manner is known as 'open by design' or 'privacy by design'. Opening up data could therefore be a first step towards a sustainable digital information supply within the government as a whole. Without open data, there is a risk of an 'information infarct', with vital government information being withheld and ultimately no longer being retrievable.²⁴

2 Open data in an international context

This chapter describes the development of open data in the United Kingdom and the United States. It also outlines practical aspects of open data that are better in the UK and US than in the Netherlands. To conclude we look at good practices in other countries. These examples can serve as inspiration for the Netherlands.

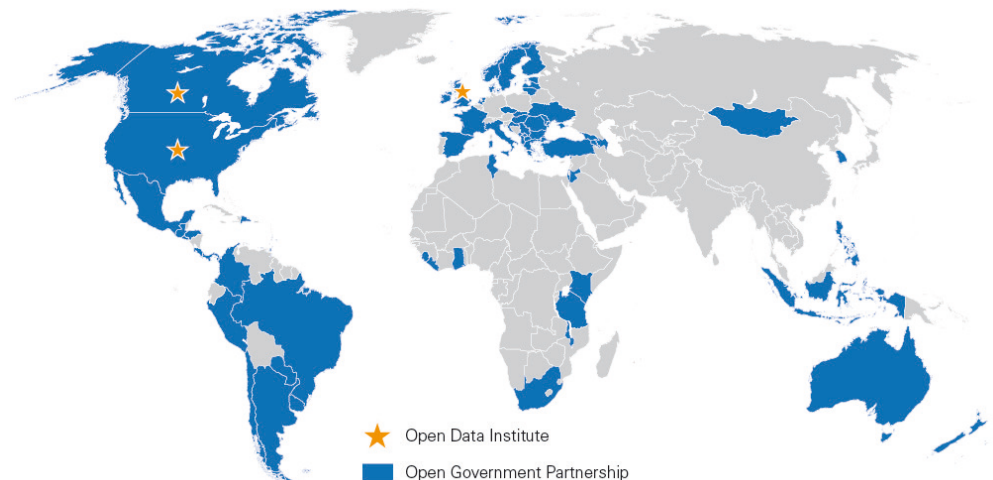
2.1 Provision of open data internationally

The leading countries internationally in the field of open data are the United Kingdom and the United States. These two countries are invariably at the top of international benchmarking studies. Many of the good examples given in this chapter are from them. The UK and the US provide a lot of open data, much of it is re-used and the governments are strong supporters of more and better open data.

Key transforming initiative

The development of open data cannot be seen separately from the move towards digital government. Here, too, the UK and the US are setting the pace. The UK and American governments see open data as a key transforming initiative.²⁵ For them, open data are clearly not a goal in themselves but a means to arrive at transparent and responsive public administration. Both countries have set up digital agencies to align public services to public expectations.²⁶ The UK and US also have high ambitions for open data. They are leading the world in the Open Government Partnership, a multinational initiative to encourage governments to be as open as possible. They have committed themselves in the G8 Open Data Charter²⁷ to the concept of ‘open by default’ and directly or indirectly support all manner of open data initiatives.

Figure 2.1 Member countries of the Open Government Partnership and countries with an Open Data Institute (2015)



²⁵ Open Data Institute (2015), *Open data in government: how to bring about change*.

²⁶ www.whitehouse.gov/digital/united-states-digital-service/story

²⁷ <https://www.gov.uk/government/publications/open-data-charter/g8-open-data-charter-and-technical-annex>

2.1.1 United Kingdom

The United Kingdom's leadership in open data is largely due to the Cameron/Clegg government. One of the first measures to be taken by the Prime Minister, David Cameron, (in May 2010) was to send a letter²⁸ to all ministries urging them to release certain core datasets within a couple of months.

'Given the importance of this agenda, the Deputy Prime Minister and I would be grateful if departments would take immediate action to meet this timetable for data transparency, and to ensure that any data published is made available in an open format so that it can be re-used by third parties. From July 2010, government departments and agencies should ensure that any information published includes the underlying data in an open standardised format.'

Within a year of the letter, data on for example public expenditure (both national and local), ICT contracts, public contracting procedures and detailed crime figures had been published in an open format. By February 2015, more than 20,000 datasets had been released on data.gov.uk.

To achieve Mr Cameron's ambitions, the UK government has invested in the infrastructure which is necessary for open data. It includes:

- a Transparency Board to oversee the implementation of the government's transparency agenda and the ministries' publication of open data;
- standardisation of data;
- the establishment of a National Information Infrastructure;
- an Open Data Institute to act as a catalyst for open data and to match supply to demand;
- the data.gov.uk website as a simple data portal to help users find relevant information quickly.

Very recently, the UK government decided to invest a further 120 million pounds in the digital government in 2015-2018.²⁹ The Open Data Institute will receive several million pounds of this investment every year.

2.1.2 United States

President Obama of the United States, like David Cameron, is playing a pivotal role in promoting accountability for and the transparency of public expenditure and the development of open data.

As a senator, Mr Obama was one of the initiators of the Federal Funding Accountability and Transparency Act of 2006 (FFATA) and of subsequent legislation in 2008.³⁰

Shortly after his inauguration as president, he enacted the American Recovery and Reinvestment Act of 2009 (ARRA), a package of incentive measures to combat the financial and economic crisis that provided an unprecedented level of accountability and transparency on the use of federal funds via the recovery.gov website. And in an executive order of 9 May 2013 President Obama announced that 'open' and 'machine readable' would be the new standards for government information:

'Openness in government strengthens our democracy, promotes the delivery of efficient and effective services to the public, and contributes to economic growth. As one vital benefit of open government, making information resources easy to find, accessible, and usable can fuel entrepreneurship, innovation, and scientific discovery

²⁸

<https://www.gov.uk/government/news/letter-to-government-departments-on-opening-up-data>

²⁹

<http://www.v3.co.uk/v3-uk/news/2395566/government-to-spend-gbp120m-on-uk-digital-economy-efforts>

³⁰

Strengthening Transparency and Accountability in Federal Spending Act of 2008.

that improves Americans' lives and contributes significantly to job creation.(...) [T]he default state of new and modernized Government information resources shall be open and machine readable. (...) In making this the new default state, executive departments and agencies shall ensure that they safeguard individual privacy, confidentiality, and national security.³¹

The availability of open data in the US has increased exponentially in recent years. Open data policies are being drawn up and introduced not only at federal level but also in the states and major cities.

However, federal open spending data, available at USAspending.gov since 2008, have been subject to persistent problems. The data quality (accuracy, completeness, reliability and timely availability) is open to improvement and efficiency and comparability are frustrated by the lack of data standards (for different types of transaction and different beneficiaries).³²

Companies can no longer be followed on recovery.gov

The absence of an open trade register in the United States (see figure 2.5) means that the companies that receive recovery funds can no longer be followed on www.recovery.gov. Companies that do business with the federal government must apply to Dun & Bradstreet for a DUNS number. They – and the government – have to pay to use these unique identification numbers. Because recovery.gov will be closed down in September 2015, the Recovery Board decided in autumn 2014 that it would not renew its multiyear contract with Dun & Bradstreet. As a result, in the final year it is more difficult to follow how more than 800 million dollars in recovery funding is being spent and a significant amount of transparency and accountability for this expenditure has been lost.^{33, 34}

The DATA Act (Digital Accountability and Transparency Act of 2014)³⁵ was introduced to resolve this and other problems. Building on the FFATA, the DATA Act will increase insight into federal expenditure by:

- releasing all direct expenditure by federal services as open data, with the expenditure being linked to policy programmes;
- setting data standards for financial data;
- simplifying and streamlining the reporting obligations in order to reduce the administrative burden and the number of errors;
- improving the data quality by making the services themselves responsible for the completeness and accuracy of the information released and through additional oversight by the inspectors general and the Government Accountability Office (GAO, the US supreme audit institution).

The DATA Act also requires the entire federal government to work with the framework developed for the Recovery Act. Valuable lessons in accountability and oversight have been learned from the unique experience with the use of Recovery funds. They will be used to increase the transparency of all government expenditure and to raise the prevention and detection of fraud, misuse and waste within the Recovery Operations Center to a higher level by analysing the open spending data and linking them to other datasets.

³¹
<http://www.whitehouse.gov/the-press-office/2013/05/09/executive-order-making-open-and-machine-readable-new-default-government>

³²
GAO-13-758 (2013);
GAO-14-219 (2014);
GAO-15-241T (2014).

³³
Washington Post (2014).
Data on \$800 billion in stimulus spending will disappear this year. Here is why.
<http://tinyurl.com/kd3dggp>

³⁴
Sunlight Foundation (2014),
Recovery.gov dumps DUNS, highlighting need for open entity IDs
<http://tinyurl.com/pmvnbu8>

³⁵
<https://www.congress.gov/bill/113th-congress/senate-bill/994/text>

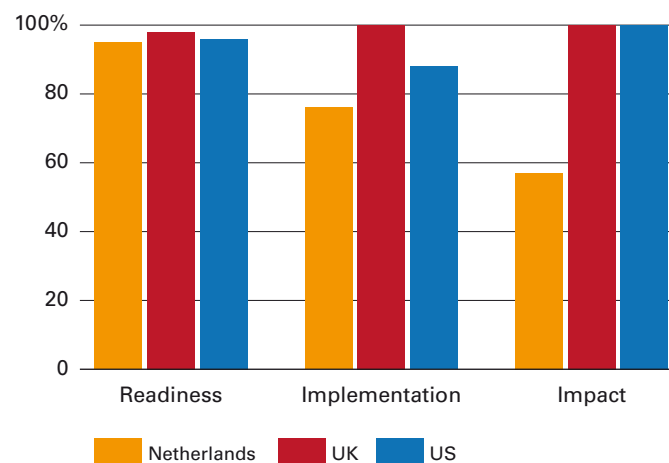
2.1.3 Country comparison

What can the Netherlands learn from the United Kingdom and the United States? Using data from the Open Data Barometer – a biennial international comparative study of open data practices – we compared three aspects of open data in the Netherlands with those in the other two countries:³⁶

- *Readiness*: preconditions on the part of the government, entrepreneurs, business, and citizens;
- *Implementation*: the extent to which open data are available;
- *Impact*: on society, business and government.

If we compare the UK and the US with the Netherlands (see figure below) we can see that the UK and the US score better on *implementation* and *impact*. There is little difference regarding the *readiness* for open data. This is not surprising because all three countries are highly developed democracies. All preconditions for the successful use of open data are already in place.

Figure 2.2 Differences in open data readiness, implementation and impact in the Netherlands, UK and US, in percentages

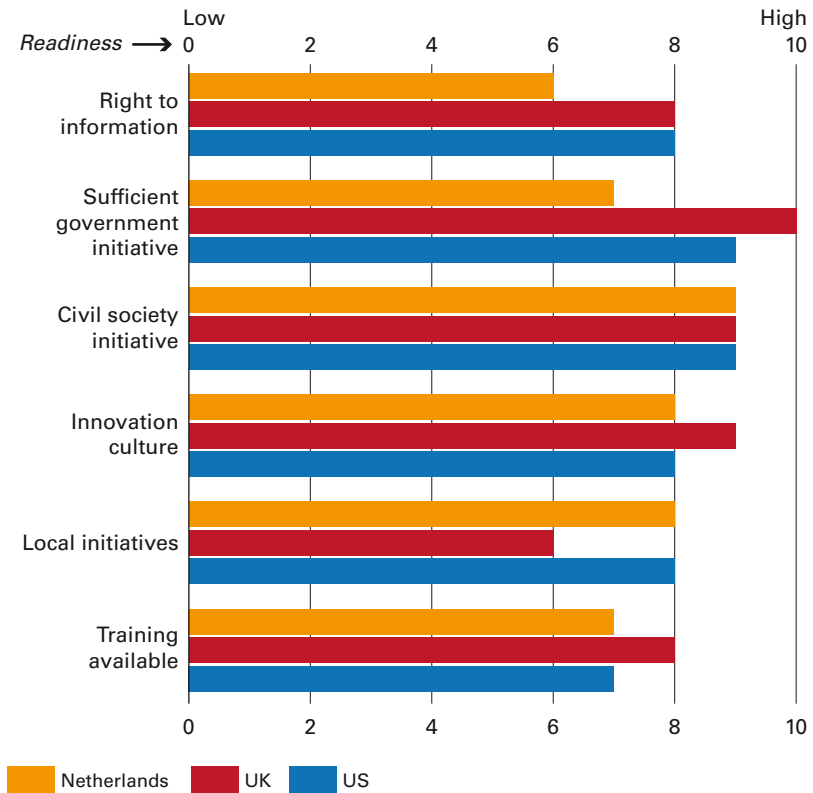


Source: Open Data Barometer, 2015.

Readiness

The information from the Open Data Barometer shows that the Netherlands scores less well on readiness only with regard to the right to information (Public Access to Information Act) and the extent to which the government supports open data initiatives (see figure below).

Figure 2.3 Differences in readiness for open datasets in the Netherlands, UK and US (scores from 0-10, with 10 being the highest degree of readiness)³⁷



Source: Open Data Barometer, 2015.

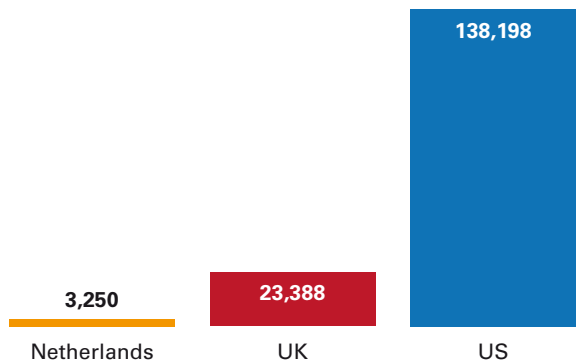
37

The questions were: right to information: To what extent does the country have a functioning right-to-information law?; Sufficient government initiative: To what extent is there a well-resourced open government data initiative in this country?; Civil society: To what extent are civil society and information technology professionals engaging with the government regarding open data?; Innovation culture: To what extent is government directly supporting a culture of innovation with open data through competitions, grants or other support?; Local initiatives: To what extent are city or regional governments running their own open data initiatives? Training available: To what extent is training available for individuals or businesses wishing to increase their skills or build businesses to use open data?

Implementation

Despite the relatively small differences in readiness for open data, the UK and the US publish far more open data than the Netherlands (see figure below). The number of open datasets in the United States is enormous.

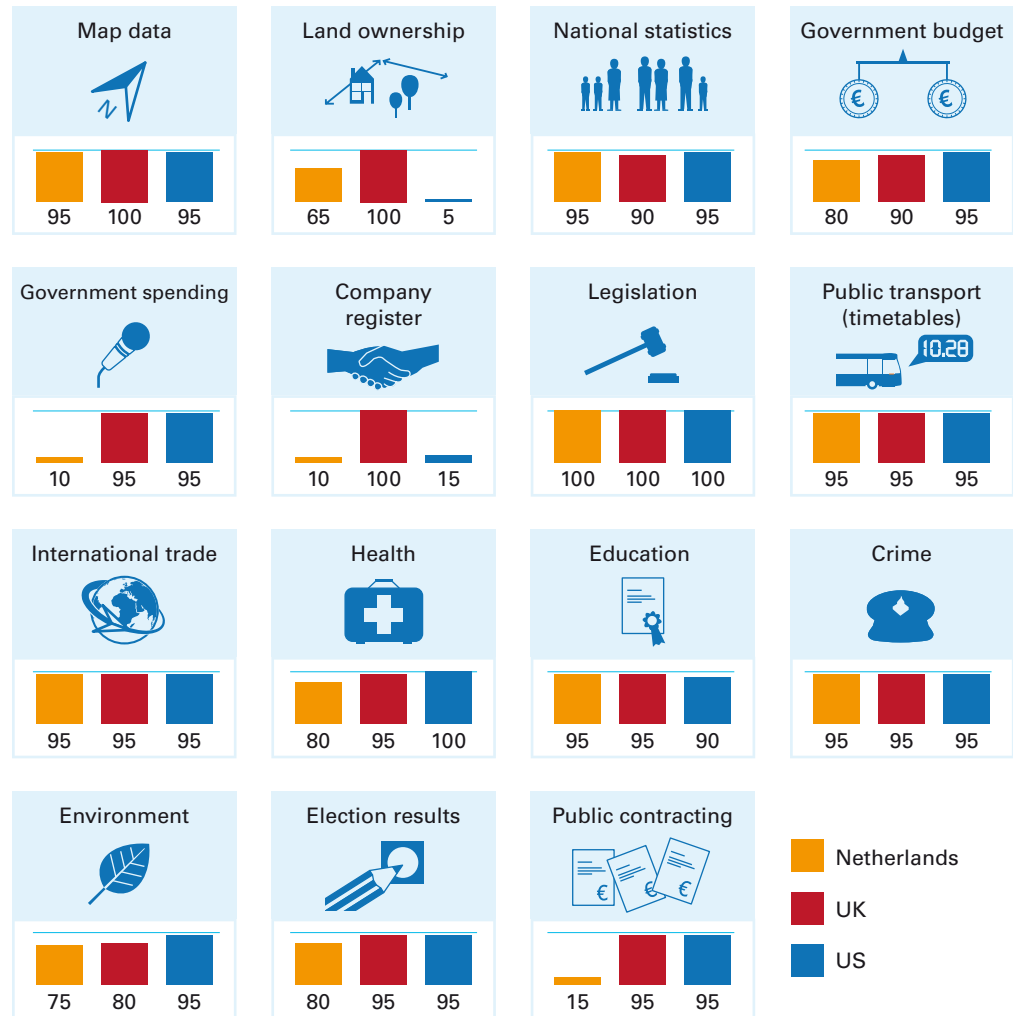
Figure 2.4 Number of open datasets available on national data portals in the Netherlands, United Kingdom and United States as at 15 February 2015



Source: data.overheid.nl, data.gov.uk, data.gov.

The type of data the countries release differs on a number of points. The Open Data Barometer, scores the implementation of open data by policy field from 0 to 100. The Netherlands currently publishes little open data on government spending (see section 3.2). Public contracting data, too, are not open. The Dutch trade register is not open either. The latter is also the case in the US. The UK has open data in all policy fields.

Figure 2.5 Availability of open data are available by policy field by country (scores 0-100)

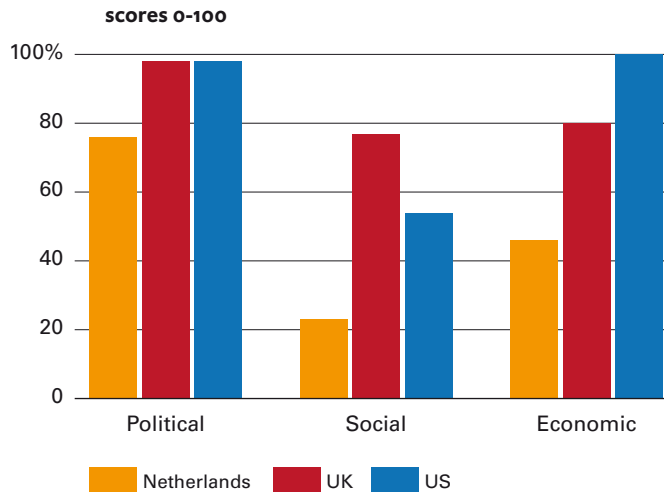


Source: Open Data Barometer, 2014.³⁸

Impact

The impact of open data can be broken down into political, social and economic dimensions. The Open Data Barometer gave them a score between 0 and 100. Political impact, for example, relates to how open data contribute to government efficiency and better public accountability. Social impact is concerned with how open data involve citizens in policy making. Economic impact, finally, is concerned with the extent to which entrepreneurs set up new businesses using open data. In the US, various examples of the re-use of open data can be found on data.gov/impact. LinkedIn, for example, uses open data based on labour market and educational statistics. The Netherlands lags behind the UK and the US chiefly on the social and economic dimensions. This means that the Netherlands makes less use of open data to involve citizens in making and scrutinising government policy and businesses generate little added value with and by means of open data.

Figure 2.6 Differences in the impact of open data in the Netherlands, UK and US,



Source: Open Data Barometer, 2015.

2.2 Good examples

Transparency and open data improve the provision of public services, especially if a lot of public money is involved and the services are important. Various open data initiatives have been taken worldwide that can serve as a good example for the Netherlands. Below, we consider:

- Open spending/public contracting
- Trade register
- Police
- Health care
- Inspections.

2.2.1 Open spending/public contracting

Open spending is concerned with the provision of open data on public finances. This includes data on planned and actual revenues and expenditures, grants and public contracting. Open spending offers the public an opportunity to check where public authorities spend their tax money. For a meaningful insight into public finances, this information should be available down to the level of transactions.³⁹

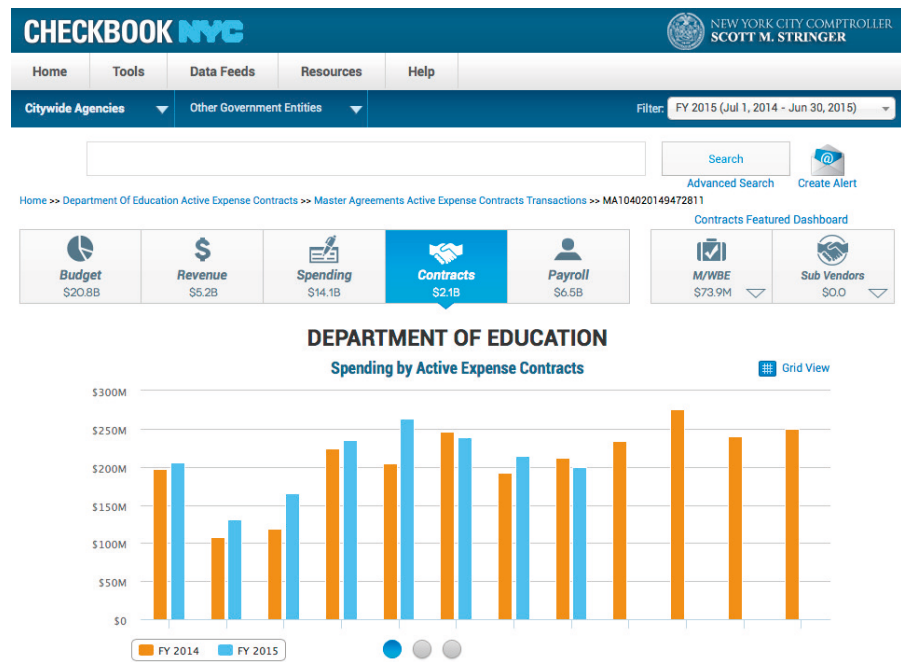
Several countries worldwide already provide these data. Two of them are the UK (data.gov.uk/data/openspending-report/index) and Albania (spending.data.al/en/treasury/list/year/2014).⁴⁰ Recovery.gov in the US is an example of open geo-spending: the public can compare crisis-related expenditure by state and learn about projects near to them. Owing to the lack of an open trade register in the US, however, www.recovery.gov can no longer be used to identify which companies receive recovery funding (see section 2.1.2).

39

In the previous Open Data Trend Report, we wrote: 'The importance of open spending is not confined to central government in a narrow sense. The availability of regularly updated open data offers many opportunities in areas from which central government is withdrawing and leaving implementation to other public sector bodies or semi-public organisations, such as health care, education and social services. This levels the playing field for all parties – ministers, the House of Representatives, the public and actors in the field. Given its responsibility for the system, it goes without saying that unlocking spending data is a task for central government.'

40

The UK government releases open data only on transactions worth GBP 25,000 or more. Local governments have a lower threshold of GBP 500.



One of the most comprehensive examples of open spending is provided by New York City. Residents can use checkbooknyc.com to follow where the city spends its money in great detail and almost in real-time. The website even lists the names of subcontractors and the financial details of their contracts. It almost goes without saying that the data are available as open data so that the public can re-use them.

Top 5 Sub Contracts Number of Stand Alone Sub Contracts: 1,288

CONTRACT ID	SUB CONTRACT PURPOSE	CONTRACTING AGENCY	SUB VENDOR	PRIME VENDOR	CURRENT AMOUNT	ORIGINAL AMOUNT	SPENT TO DATE
CT185020141418737	ELECTRICAL WORK	DEPARTMENT OF DESIGN AND CO...	SOLAR ELECTRIC SYSTEMS INC	PRISMATIC DEVELOPMENT C...	\$15.90M	\$15.90M	\$181.15K
CT183620121438177	TOWING SERVICES IN B...	DEPARTMENT OF FINANCE	KEN BEN INDUSTRIES LTD.	IPT LLC	\$15.00M	\$15.00M	\$2.17M
CT182620141415967	ELECTRICAL WORK @ 5 LOCA...	DEPARTMENT OF ENVIRONMENTAL...	KLEINBERG ELECTRIC INC	WDF INC	\$14.77M	\$14.77M	\$0.00
CT183620121438177	TOWING SERVICES IN B...	DEPARTMENT OF FINANCE	FIVE JS AUTOMOTIVE LTD	IPT LLC	\$12.00M	\$12.00M	\$1.54M
CT183620121438177	TOWING SERVICES ON S...	DEPARTMENT OF FINANCE	APPLE TOWING	IPT LLC	\$8.00M	\$8.00M	\$114.63K

Italy very recently presented an example of open spending. In March 2015, it made a digital accounting system, SIOPE (Sistema Informativo delle Operazioni degli Enti Pubblici), compulsory for local authorities.⁴¹ Soldipubblici.gov.it, an initiative of the Italian national bank and others, publishes the monthly expenditure of local authorities by category (similar to the IV3 system used in the Netherlands). The data can be downloaded as a csv file to compare the spending of local governments.

Public contracting

In the European Union, data on public contracting and public contracts are published on <http://ted.europa.eu> (a supplement to the EU's Official Journal). The OpenTED project (ted.openspending.org) collects the data and reclassifies them so that they are easier to re-use by, for example, journalists and researchers. They can be re-used commercially via the euroalert.nl website, which allows users to link detailed search profiles to the data and presents the signed contracts.

⁴¹

See <http://www.rgs.mef.gov.it/VERSIONE-1/e-GOVERNME1/SIOPE/index.html>.

OpenInterests.eu [Browse](#) [Institutions](#) [About](#)

Who has financial or political interests in the European institutions?




Photo: European Parliament

107105 Organisations · 18200 Individuals · 7358 Public bodies · 6211 Representatives · 962 Expert groups · 28 EU Institutions

OpenInterests catalogues actors involved in lobbying, expert groups, public expenditure and procurement so you can explore the interactions between them. [Read more...](#)

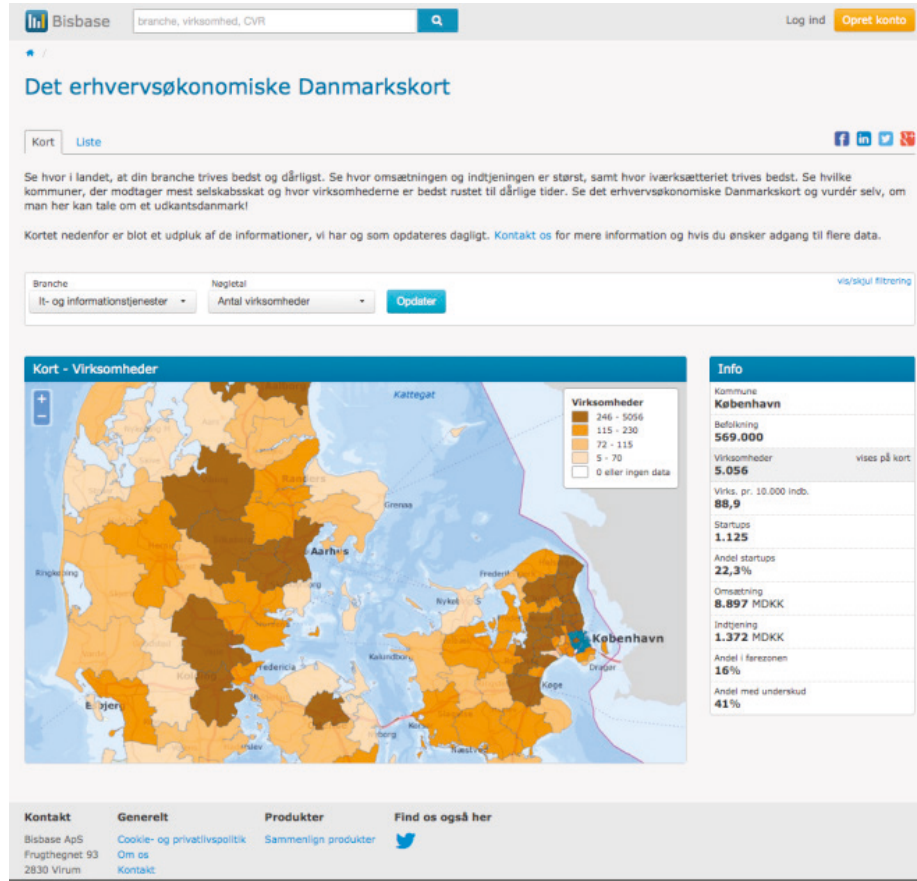
The data presented by TED (Tender Electronic Daily) in combination with lobby registers are used in openinterests.eu to gain an insight into the award of public contracts. Openinterests.eu can be used to search for people, institutions and businesses and the potential links between them.

2.2.2 Trade register

Countries such as the United Kingdom, Denmark, Norway, Sweden and Belgium offer a lot of their data on businesses as open data. In Denmark, the provision of business data is part of the roadmap for publication of the country's basic registers (datacvr.virk.dk/data).⁴² The thinking behind their publication is that it will lower transaction costs among public authorities and at the same time provide the public with an important means to innovate. The data are already being used by the winner of a Danish app award for industry and competition analysis: Bisbase (www.bisbase.dk).

⁴²

The Danish Government / Local Government Denmark (2012), Good basic data for everyone. A driver for growth and efficiency.



The Belgian website data.be combines data from the Crossroads Bank for Enterprises⁴³ with business documents and annual reports filed with the public authorities and courts. The website has information on 1.8 million businesses and contains 15 million documents. It was launched in 2011 and is now used by 10,000 people every day.

43 The Crossroads Bank manages the official databank of the Belgian government of all natural persons who carry on an economic activity and of legal persons that are or have been economically active in partnerships, non-profits, associations of owners, etc.

44 eXtensible Business Reporting Language.

45 Companies House won an international award for its free publication of accounts data in 2014 (<https://www.gov.uk/government/news/companies-house-free-accounts-data-wins-international-award>).

Every day and every month, Companies House in the United Kingdom (www.gov.uk/government/organisations/companies-house) publishes its documents filed as open data and in XBRL format, an open standard for financial data.^{44, 45} The open data from Companies House includes data on directors and, by means of OpenCorporates.com, can be used to reveal business networks, as shown below.

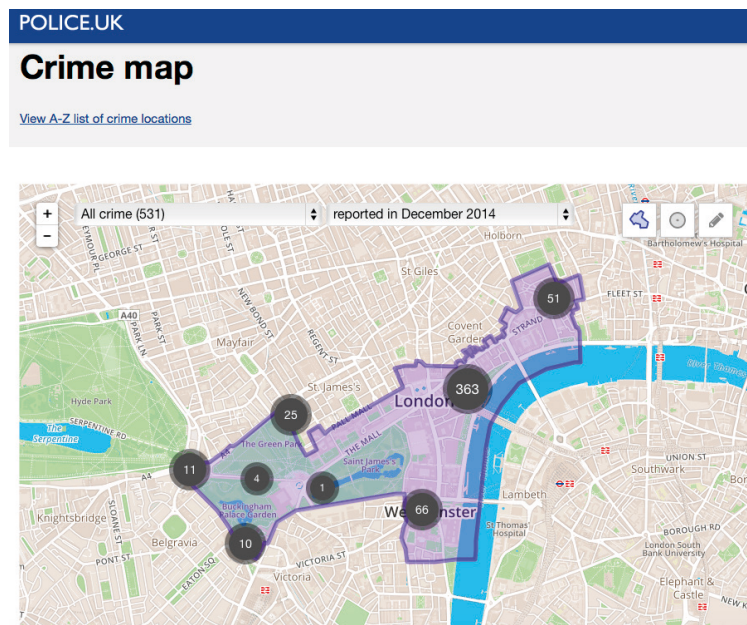


In combination with open spending data, it can be determined which businesses receive public money from the government.

2.2.3 Police

Data-driven work is already common practice in the police forces of the US, UK and certain other countries. A well-known example in the US is Compstat, a data-driven management model that began in New York City and has since been copied in many other places. A more recent example is hot spot policing, a geo-data driven form of law enforcement to intervene where most crime is committed.

The UK in particular publishes a lot of open data on, for example, crime and the performance of police force areas (police.uk, data.police.uk). The performance of police force areas is also available as open data and can be re-used and compared by means of the Crime and Policing Comparator.⁴⁶



2.2.4 Health care

To take well-considered decisions on the care they receive, care consumers must have access to reliable and up-to-date information on the quality and provision of care.

UK: National Health Service, Blue Book

The National Health Service (NHS) in the UK publishes a lot of open data on health care as part of its wide-ranging transparency policy. It does so in part to improve its own performance:

*'We aim to revolutionise transparency in the NHS and demonstrate that we are a world leader in making information available about the quality of care and services. (...) We believe that transparency is a key enabler in supporting people to participate in their own healthcare, empowering citizens and patients to take more control of their health and care when and where they want to.'*⁴⁷

⁴⁶

www.justiceinspectorates.gov.uk/hmic/data/; <https://www.justiceinspectorates.gov.uk/hmic/crime-and-policing-comparator/>

⁴⁷

<http://www.england.nhs.uk/ourwork/tsd/data-info/open-data/>

Another example from the UK is Blue Book Online (www.bluebook.scts.org). Heart surgeons use this website to inform the public of how many operations they carry out and their results. It is thought that the provision of this information saves a thousand lives every year.⁴⁸

Sweden: Väntetider i vården, Omvård

Municipalities and regions in Sweden publish detailed charts of the health care they provide, with an emphasis on waiting times. Publication of the data influences the policies adopted by local and national authorities to improve and guarantee access to care. Additional funding for regional and local governments is partly dependent on achieving pre-agreed targets on the publication of open data. The figures are benchmarked every month. The data are also re-used, for example on <http://omvard.se>. The public can use this site to check and discuss the quality of their local care providers. As well as waiting times, Omvård also provides open data on a series of specific subjects (diabetes, hips, hearts, brain haemorrhages, kidney dialysis, obstetrics and hospital infections).



2.2.5 Inspections

The Food and Drug Administration in the US and the Food Standards Agency in the UK publish the results of their inspections and product and food recall operations. Via the ratings.food.gov.uk website, the FSA provides information on, for example, food safety and the results of restaurant inspections. The public have been able to download the information as open data since 2010 (data.gov.uk/publisher/food-standards-agency).

48

www.england.nhs.uk/ourwork/tsd/data-info/open-data/examples

The doorda.com website re-uses the data and combines them with crime figures and other information. The Netherlands Food and Consumer Product Safety Authority (NVWA) launched a website and an app in 2014 with the results of its restaurant inspections (see chapter 1).

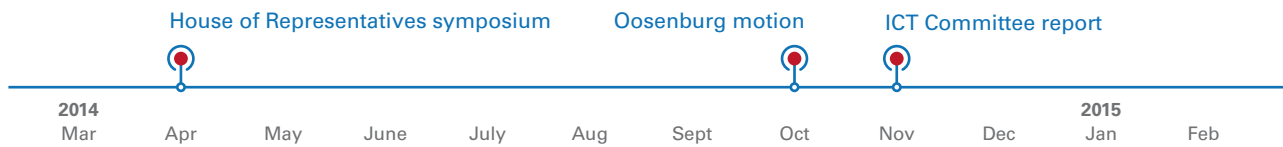
The screenshot displays the 'Food hygiene ratings' website interface. At the top, there is a navigation menu with links for Home, News & updates, Policy & advice, Business & industry, Enforcement & regulation, Science & research, and About Us. Below this is a search bar and a 'Share' button with social media icons. The main content area is titled 'Food hygiene ratings' and features a 'Search results' section. The search filters include Business name (The Lamb), Street, town or postcode (Ely), Business type (All), and Country or local authority (All). There are also options for Hygiene rating (England, Northern Ireland and Wales) and Hygiene status (Scotland only). The search results show one item: 'The Lamb Hotel' located at 2 Lynn Road Ely, Cambridgeshire, CB7 4EJ. The hotel has a 'VERY GOOD' rating of 5, indicated by a green star icon. The last inspection date is 09 August 2013. A map on the right shows the location of the hotel in Ely, Cambridgeshire.

3 Open data in the Netherlands

This chapter outlines relevant developments in open data since we published our first Open Data Trend Report on 27 March 2014. It then looks at how the provision of open data has evolved in the past year, both qualitatively and quantitatively.

3.1 Developments since March 2014

House of Representatives asks for more data

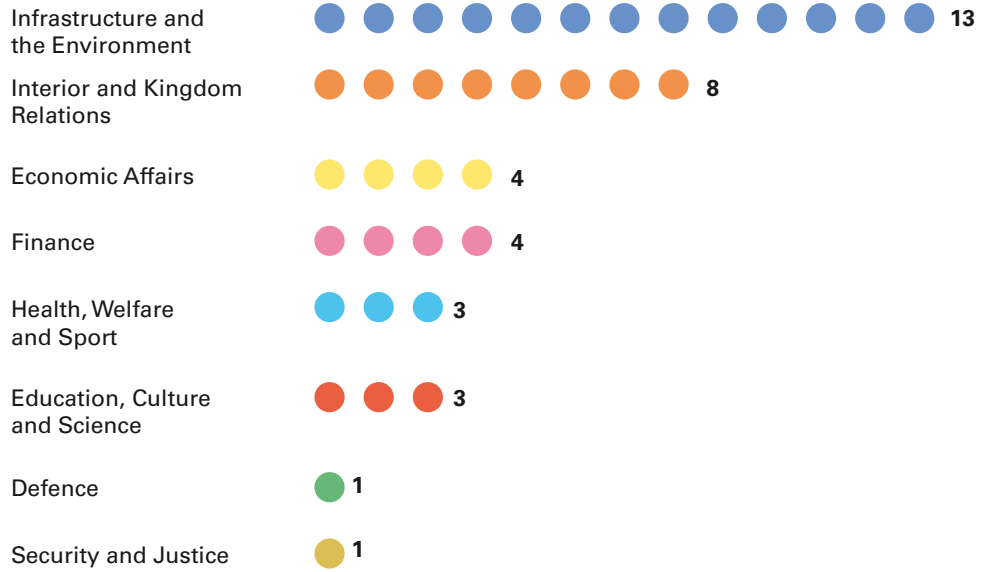


In May 2014, the House of Representatives' Public Expenditure committee organised a symposium on open data and open spending with speakers from New York City, the Ministry of Finance, the Ministry of the Interior and Kingdom Relations and the Court of Audit. In October 2014, the Oosenburg motion prompted the government to act on the undertakings given in the Open Government Action Plan by publishing research reports, implementation tests, public contracting information and grant information as quickly as possible. In November 2014, the temporary ICT Committee published a report on government ICT projects.

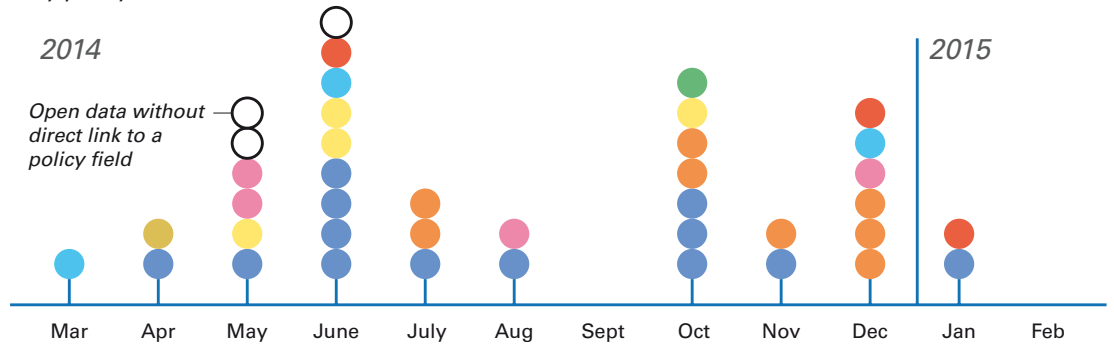
Several standing committees of the House of Representatives have considered the subject of open data. As the figure below shows, open data have been discussed chiefly by the standing Committees on Infrastructure and the Environment and on the Interior.

Figure 3.1 Debate of open data in the House of Representatives, March 2014 - February 2015

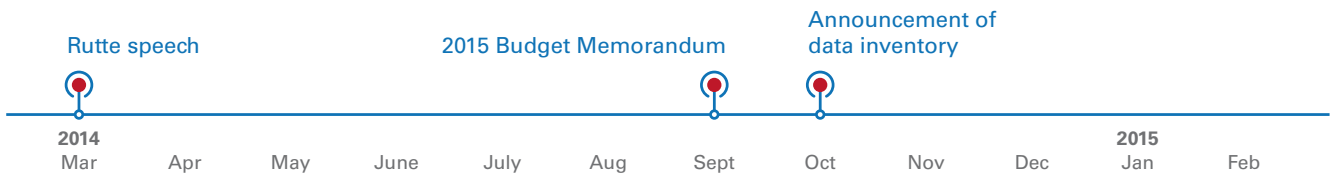
How often did the House of Representatives discuss open data?
(by policy field)



In which months did the House of Representatives debate open data?
(by policy field)



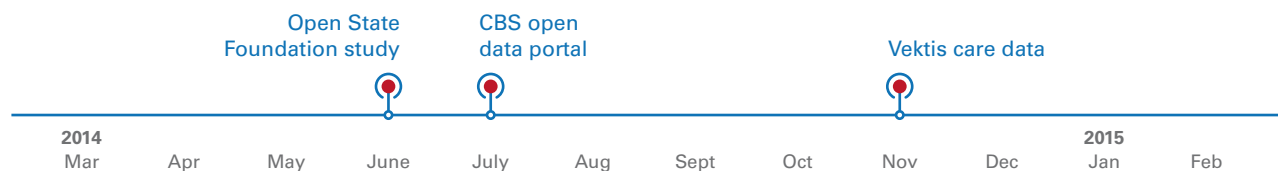
Government recognises the importance of open data



In a speech at the Innovation Convention in Brussels in March 2014, the Prime Minister, Mark Rutte, stressed that a firm political and administrative commitment to knowledge circulation and open data is essential. Earlier, in January 2014, the State Secretary for Education, Culture and Science, Sander Dekker, referred in a speech in Berlin to the importance of open access: unrestricted access to the results of scientific research.

In the 2015 Budget Memorandum⁴⁹ the government gave an undertaking to increase the provision of open data. A month later the Minister of the Interior and Kingdom Relations, Ronald Plasterk, announced that a government-wide inventory of datasets would be drawn up to gain a better understanding of what data the government holds and what could be opened up. The inventory should be completed in spring 2015.

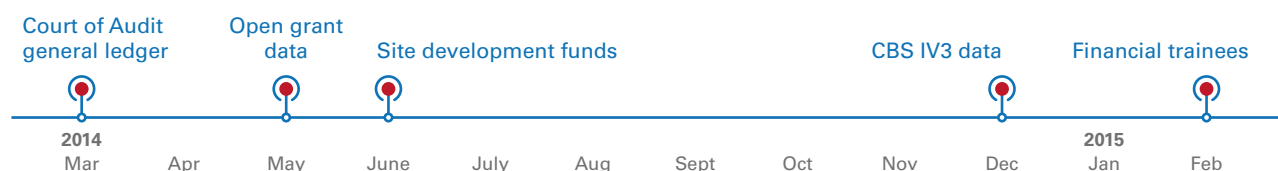
Provision of open data below expectations



A study by the Open State Foundation and the Weyeser Foundation in June 2014 concluded that the provision of open data in the Netherlands was below par. The greater part of the data published on data.overheid.nl came from the national geo-register and just 3% of the 5,714 datasets named on data.overheid.nl were actually accessible.⁵⁰ Statistics Netherlands (CBS) launched an open data portal following a trial period in July 2014.

The Open Data Knowledge Centre of Delft University is also critical about the provision of open data: 'Not much data are available as open data at present, and the data that are available must be significantly improved before users are optimally facilitated.'⁵¹ The Vektis care information centre and the Association of Netherlands Health Insurers together published a dataset in November 2014 that provided some insight into health care costs in the Netherlands in 2012.

Development of open spending



⁴⁹ House of Representatives of the States General (2014), Memorandum on the state of the State's finances, 34.000, no. 1.

⁵⁰ <http://openstate.eu/nl/2014/06/nauwelijks-nieuwe-datasets-op-data-overheid-nl/>

⁵¹ B. van Loenen and F. Welle Donker (2014), De stand in opendataland ('The state of open dataland'), Delft, Delft University.

In March 2014 the Court of Audit posted its accounts online, including all its income and expenditure down to transaction level. In May 2014 the ministries published data on the grants they award as open data. In June 2014, the Minister for Foreign Trade and Development Cooperation (BHOS) launched a website on which users can follow development aid down to project level. The underlying data are also accessible. In December the CBS announced it would publish IV3 data. IV3 is a standard in which local authorities must submit their financial reports to the CBS, disclosing their income and expenses in a number of standard cost categories. This data is used by the openspending.nl website (an initiative of the Open State Foundation). In turn, the inkoopvergelijker.nl website re-uses the data on openspending.nl. The local authorities can therefore compare their public contracting data with each other to find savings. In February 2015, the minister of Finance deployed financial trainees to find potential open data in government departments.

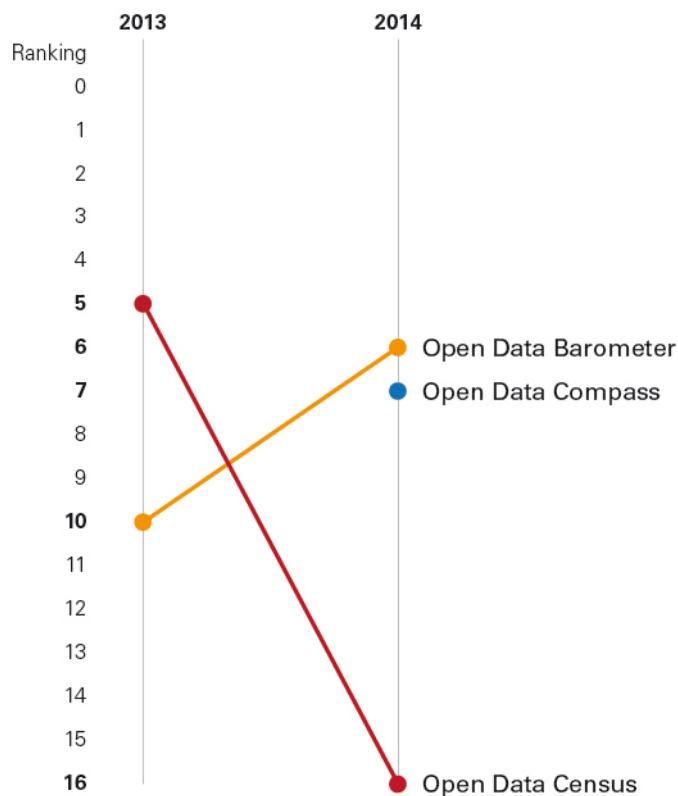
3.2 Provision of open data in the Netherlands

The previous section shows that a lot has changed in the past year to increase the volume of open data. But what are the results? To answer this question we look at how the Netherlands scores internationally and at changes in the number of datasets posted on the national data portal.

Netherlands scores well in international comparisons

As in the previous year, the Netherlands predominantly scores well in international comparisons of the provision of open data. Several instruments are used to compare international performance, the best known being those of the Open Data Barometer (opendatabarometer.org) and the Open Knowledge Foundation (census.okfn.org). According to the former, the Netherlands performed better in 2014 than in 2013. According to the latter, it performed worse. The Open Data Compass, another barometer, also found that the Netherlands was performing well (based on the scores for 2014).

Figure 3.2 Position of the Netherlands in open data barometers, 2013 and 2014



Source: www.opendatabarometer.org, national.census.okfn.org, <http://compass.arachnys.com>.

Barometers have limited breadth and depth

The barometers attempt to objectively compare open data practices in various countries. They consider the availability of crucial datasets in a number of policy fields. However, they have limited scope because they do not consider the extent to which a policy field is covered by the datasets (breadth) or how detailed the datasets are (depth). Furthermore, they leave a lot of room for interpretation when assessing the

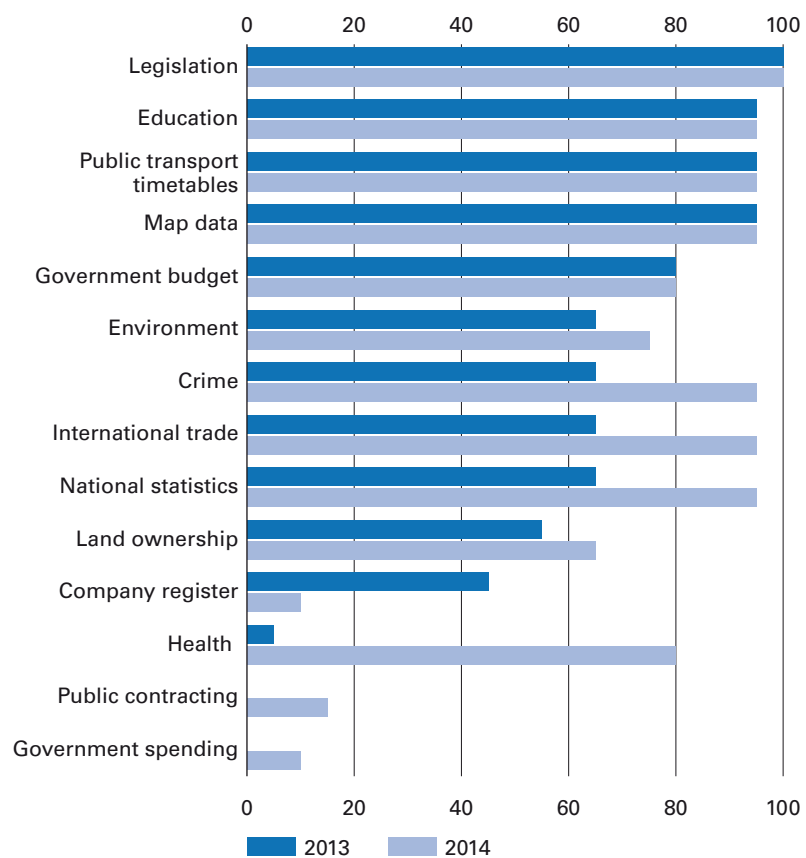
countries. We must therefore exercise some caution when interpreting the results of such barometers. Consequently, we'll review both the availability of open data on data.overheid.nl and the scores on the Open Data Barometer in the next section.

Open Data Barometer: chiefly an improvement in security, trade, national statistics and health sector performance scores

The figure below shows how the Open Data Barometer scored the Netherlands in 2013 and 2014 for its publication of open data in a number of important policy fields. The barometer gives scores of 0 to 100.

Figure 3.3 **Openness of data in various policy fields in 2013 and 2014**

(based on data from opendatabarometer.org)



The scores in the figure are taken from opendatabarometer.org and are based on ten questions. A maximum of ten points could be scored for each question. The questions were:⁵²

- Does the data exist?
- Is it available online from government in any form?
- Is the dataset provided in machine-readable formats?
- Are the machine-readable data available in bulk?
- Is the dataset available free of charge?
- Are the data openly licensed?
- Is the dataset up to date?
- Is the publication of the dataset sustainable?
- Was it easy to find information about this dataset?
- Are (linked) data URIs provided for key elements of the data?

⁵²
<http://opendatabarometer.org/report/about/method.html>

53

Strictly speaking, this dataset does not contain open data: users have to register and there are restrictions on the data's re-use.

54

By way of comparison, Liander aggregates at six positions without privacy issues by checking the number of addresses in a district and combining neighbouring districts where necessary.

55

The data go back to 2012. The most recent year is 2014. Because it can take so long before care transactions are completed, the data are not complete for any year.

56

The Open State Foundation has gone to court in an attempt to have the Association of Netherlands Health Insurers' care costs published as open data.

57

Netherlands Court of Audit (2014), *Basic Registers, seen from the perspective of citizens, anti-fraud measures and governance*.

58

As well as the Chamber of Commerce, the Road Transport Agency and Kadaster are also financially reliant to one degree or another on income from the sale of data. The Chamber of Commerce earns €45 million, the Road Transport Agency €6 million and Kadaster €25 million from data sales (House of Representatives, session 2014-2015, 34.123, no. 3).

59

With thanks to the Open State Foundation for technical assistance.

In comparison with 2013, the Netherlands scores particularly better in the fields of crime, international trade, national statistics and health sector performance. This is due in part to the zorginzicht.nl website, an initiative of the National Health Care Institute. This website provides some open data on health care. Other organisations also provide aggregated datasets on the health care policy field. Vektis, for example, publishes an 'open' dataset related to the Health insurance act.⁵³ It contains aggregated data on the health care costs of insured persons by postcode district (the first three digits of the postcode).⁵⁴ DBC-Onderhoud (the organisation responsible for the functioning of hospital diagnostic and treatment systems) provides data on hospital care and treatments via opendisdata.nl.⁵⁵ Open data are also published on long-term health care provision (monitorlangdurigezorg.nl). At the moment no detailed data are provided as open data on the quality and cost of the care offered by the hospitals.⁵⁶ The United States, by contrast, does provide such open data on health.data.gov.

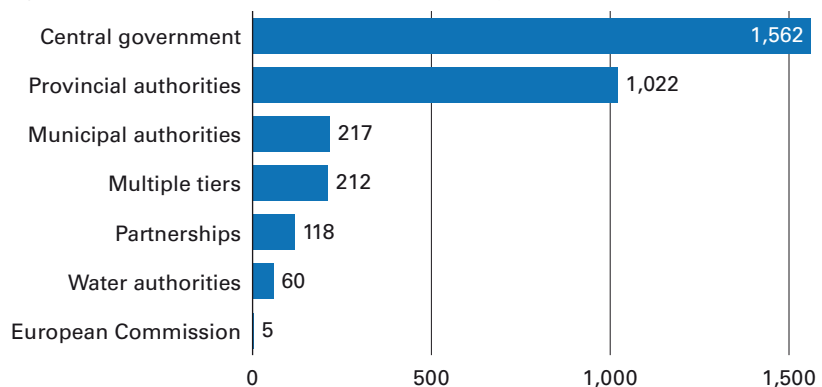
The Netherlands performed worse in 2014 in the open provision of company register data. This becomes apparent from the registries.opencorporates.com website. The Netherlands is in the lower regions of this ranking. The low scores are attributable to the fact that the Chamber of Commerce's income in part depends on the sale of data. In our report, *Basic Registers*, of 29 October 2014, we recommended that the government should make the information freely available as open data.⁵⁷⁻⁵⁸

Information on public contracting, an area where the Netherlands also is also lagging behind, is important because it makes the relationships between the government and private sector transparent. In the Netherlands, TenderNed publishes information on tenders, but only the last 25 items are linked to their associated websites. This information can not be considered open data.

Data on data.overheid.nl: predominantly geo-data from Rijkswaterstaat

To get a better picture of the volume and type of open data that is currently available, we looked at which data are published on data.overheid.nl.⁵⁹

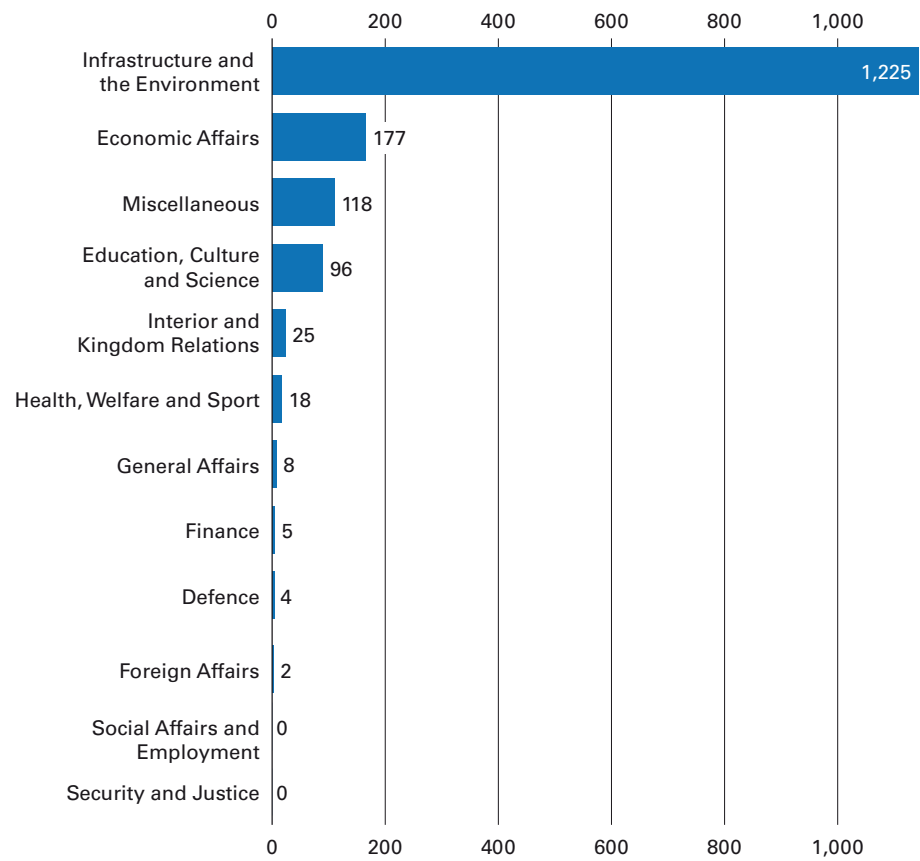
Figure 3.4 Number of available datasets by tier of government



Source: data.overheid.nl, February 2015.

In total nearly 3,200 datasets were available on data.overheid.nl in February 2015. Slightly more than half of those datasets are provided by central government. Provincial and municipal authorities together account for the majority of the other datasets.

Figure 3.5 **Datasets published by ministry, where available on data.overheid.nl**
(February 2015)



The figure above shows that the majority of the open data published by central government is produced by the Ministry of Infrastructure and the Environment. Rijkswaterstaat (the ministry's Directorate-General for Public Works and Water Management) is by far the most important source of open data. It has published 1,110 datasets, predominantly geo-datasets (see also figure 3.6). Last year, the Open State Foundation estimated that 93% of the open datasets published by the Dutch government are geo-data.⁶⁰ Outside the 'geo domain', few open data are available. The Ministry of Social Affairs and Employment and the Ministry of Security and Justice provide no open data at all on data.overheid.nl. Their main data outlet is Statistics Netherlands (CBS) but the CBS data portal (opendata.cbs.nl) has not yet been linked to the national open data portal. This will be rectified in the forthcoming upgrade of data.overheid.nl. Our own study found that all ministries⁶¹ used several websites in addition to the national open data portal to provide open data. The Ministry of Health, Welfare and Sport is an extreme case; it publishes open data on eight different websites.

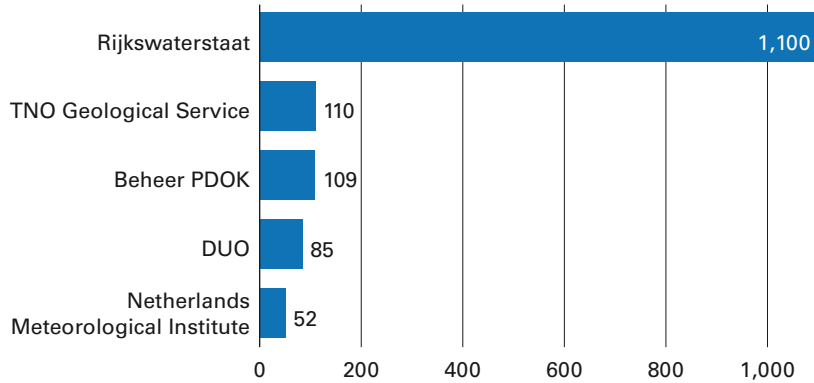
This multitude of open data sites has fragmented the landscape. Furthermore, the data.overheid.nl website does not yet function as the national open data portal because it is a reference portal rather than a repository. The actual data are hosted elsewhere. This is a problem for some organisations that want to disclose their data, but do not have the technical capabilities/facilities to host their data themselves. The Ministry of the Interior and Kingdom Relations is holding talks with the Ministry of Economic Affairs and the Ministry of Infrastructure and the Environment to find a solution to this.

⁶⁰ <http://openstate.eu/nl/2014/06/nauwelijks-nieuwe-datasets-op-data-overheid-nl/>

⁶¹ With the exception of the Ministry of General Affairs.

If we look at open data providers, we see that they are nearly all agencies or autonomous administrative authorities. More so than the ministries, they often have data-intensive processes and are generally more inclined to publish open data.

Figure 3.6 **Top five publishers on data.overheid.nl** (number of datasets, February 2015)



We also reviewed the House of Representatives' open data needs. The figure below shows that various committees have requested specific datasets but many of them are not yet available.

Figure 3.7 **Datasets requested by the House of Representatives, March 2014-February 2015**

● Available ⌚ Available soon ❌ Not available

Ministry of Infrastructure and the Environment

- National information on safe swimming locations
- Meteorological and seismic data
- ❌ Dutch Rail travel performance (by route)
- ❌ Dutch Rail travel information
- ❌ Dutch Rail prices
- ❌ European transporters travel information
- ❌ Dutch Rail data according to Public Transport Model Information Profile (MIPOV)
- ❌ Data on route sections where maximum speed is not attained + causes
- ❌ ProRail punctuality data
- ❌ ILT

Ministry of Finance

- Budget data (chiefly Health and Social Affairs)
- Grant register
- ⌚ Government expenditure at transaction level
- ❌ Accountability data

Ministry of Health, Welfare and Sport

- ❌ Care data (including prices)
- ❌ Data from SCO, NZa, CIBG, CAK, CIZ and Vektis
- ❌ Data on care providers (volume and tariffs)

Ministry of the Interior and Kingdom Relations

- ❌ Housing association data (financial)
- ❌ General government data (chiefly Health and Social Affairs)

Ministry of Education, Culture and Science

- ❌ Education funding flows
- ❌ Public broadcasting programme data

Ministry of Social Affairs and Employment

- ❌ Social security data
- ❌ Employment data

4 Action taken by the ministries to publish open data

This chapter describes the action taken by the ministries to publish open data. It first looks at the measures taken by each ministry in 2013 and 2014. It then considers six indicators of the action taken to publish open data by all ministries together. Finally, it considers the barriers preventing the ministries from publishing open data.

4.1 More action to publish open data

Ministries must take action to open up data. This is easier for ministries that regularly work with data than it is for ministries with data-poor processes.

We asked all ministries what action they had taken to publish open data. The score we awarded to each ministry was based on six indicators:^{62, 63}

- Support from the top of the ministry
- Conduct of a dataset inventory
- Presence of a data-catalogue
- Presence of an action plan for open data
- Specific procedures to open up data
- Specific person designated to publish open data.

Figure 4.1 shows the actions taken by each ministry. All ministries took more action to publish open data last year. The Ministry of Infrastructure and the Environment, the ministry that publishes the most open data, had taken more action than the other ministries for the second year in succession. The Ministry of Social Affairs and Employment and the Ministry of Health, Welfare and Sport reported the largest improvement in comparison with the previous year.

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We determine whether each indicator was present (equal to a score of 1), partially present/being introduced (equal to a score of 0.5) or not present at all (equal to a score of 0). The scores were then aggregated and expressed as a percentage.

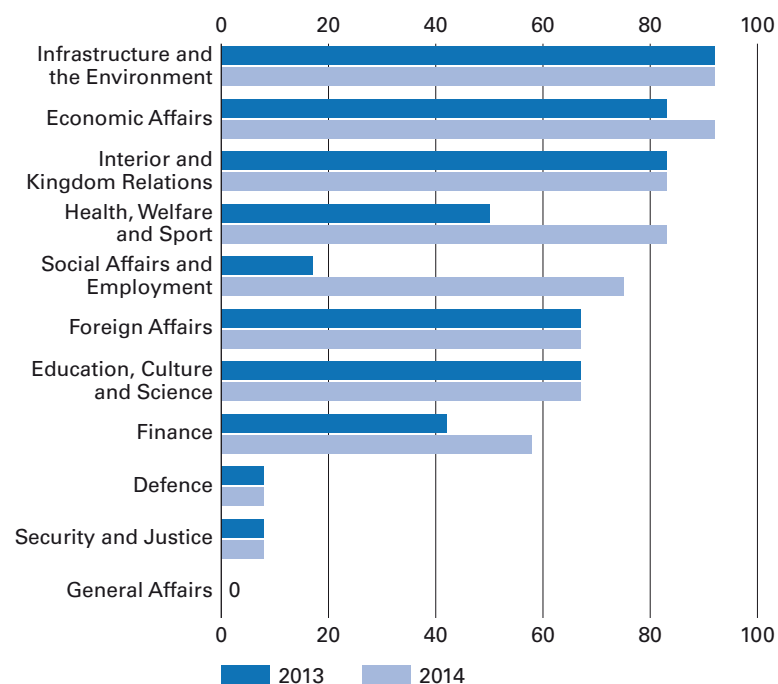
63

We based the indicators on the World Bank's Readiness Assessment Tool (<http://data.worldbank.org/about/open-government-data-toolkit/readiness-assessment-tool>).

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The Ministry of General Affairs did not respond to the questionnaire.

Figure 4.1 Action taken by ministries to publish open data, 2013 and 2014⁶⁴



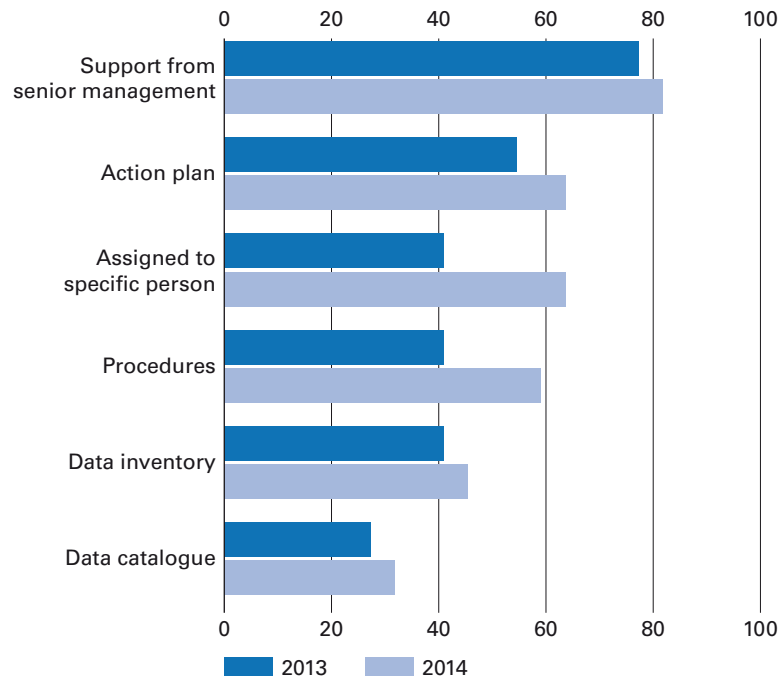
Some ministries have started special initiatives to stimulate publication of open data. The Ministry of Infrastructure and the Environment actively participated in the Ministry of Economic Affairs' ICT Breakthrough project. The project has been set up to remove barriers to the use of open data and encourage their re-use. It is being carried out in collaboration with market parties and knowledge institutions. Several meetings were organised and a congress was held on open data in 2014. The goal was to bring the private sector and the public sector together in order to identify and accelerate business cases in the field of open data. Another initiative to promote open data is being carried out by the Ministry of Foreign Affairs. It has organised a series of internal open data workshops with a view to increasing 'information awareness' among staff to facilitate the publication of open data.

4.2 Open data responsibilities increasingly assigned to specific person

We also analysed the progress made on six indicators for the ministries as a whole (see figure 4.2). The senior managers of nearly all ministries supported open data in both 2013 and 2014. Performance on the other five indicators improved in 2014 in comparison with 2013. The greatest improvement was seen on the 'specific procedures to open up data' and 'specific person assigned to publish open data' indicators. In 2014, for example, the Ministry of Social Affairs and Employment set up a working group on open data, including a responsible chairman. The Ministry of VWS improved its open data procedures by setting clear rules on the structure of datasets so that they can be published easily and consistently. It has also considered whether generic methods or tools should be developed to facilitate the publication of open data.

Most ministries again did not have a comprehensive data catalogue in 2014. The inventory being coordinated by the Ministry of the Interior and Kingdom Relations in early 2015 will probably improve this situation.

Figure 4.2 Action taken by all ministries to promote open data, by indicator



We also asked the ministries how many people and how much funding they had provided in 2014 to encourage the publication of open data. The answers diverged significantly. The Ministry of Defence and the Ministry of Security and Justice had spent no time or money on the publication of open data. But other ministries had+ the Ministry of Foreign Affairs, for example, had tasked several people specifically with publishing open data and had released a budget for open data activities. The Ministries of the Interior, Finance, Infrastructure and the Environment, and Health also stated that the publication of open data was part of their primary work process and that all members of staff had to take it into account.

4.3 Ministries encounter practical barriers to publishing open data

Prior to opening data, organisations can experience barriers to publishing their data. We have listed them in alphabetical order.⁶⁵

C	Confidential information
I	<ul style="list-style-type: none"> I can't imagine anyone being interested in the data I can't take responsibility for re-use possibilities I don't have the mandate to publish the data I don't see the point It starts with open data but who knows where it will end It will lead to court cases It's not our job It's commercially valuable
L	Let people submit a freedom of information request
N	<ul style="list-style-type: none"> No money No time

⁶⁵ This list is based on the findings of Ton Zijlstra and others (see Zijlstra's 2014 presentation at <http://www.slideshare.net/TonZijlstra/open-data-what-why-and-how>).

O	<ul style="list-style-type: none"> Only we understand (statistics, the weather, geo information, legislation) Only we understand the data Our data contradict another ministry's data (who is responsible for the data) Our IT provider says it's not possible Our IT provider wants too much money Our minister says no Our website can't handle the data
P	<ul style="list-style-type: none"> People will come to the wrong conclusions People will get angry People will get lost in the data People will misuse the data Potential privacy problems
T	<ul style="list-style-type: none"> The data are already online (but cannot be found or are in PDF format) The data are commercially sensitive The data are not available digitally The data are not complete The data are not in a practical format The data are not ours and the owner won't give us permission The data are not ours and we don't know whose they are The data are out of date The data can be found but can't be published as open data The data will be used against us The files are too big There are errors in the data Too expensive
W	<ul style="list-style-type: none"> We can neither confirm nor deny that we collect data We can't trust anyone else to combine the data with other data We don't have enough bandwidth We don't know where the data are We don't know whether publication is legal or not We don't think the quality is good enough We will publish the data but they will be 90% edited We won't be able to deal with the inevitable feedback We'll disrupt the market We've never done it before so we won't do it now When people download and re-use the data, the data are already outdated Will only lead to endless discussions What is the business case?

In practice these preconceptions either simply do not exist or can be resolved easily. However, organisations do encounter some barriers in practice. They relate for example to access to the data, the cost of the transition to open data and the data business model.⁶⁶

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See <http://www.epsiplatform.eu/content/sharepsi-output-open-your-comments> for a more detailed description of these barriers.

The ministries (with the exception of the Ministry of Infrastructure and the Environment and the Ministry of the Interior and Kingdom Relations) said they faced practical barriers to opening up the data. Figure 4.3 shows the most frequent barriers preventing them from publishing open data. To remove these barriers, we have included a number of possible solutions in figure 4.3 that are briefly explained below.

In general it can be said that the solutions begin by thinking differently about data. The cultural transformation that is necessary costs time but the good examples presented in chapter 2 can help. The ministries could also learn from each other.

Figure 4.3 **Barriers and solutions**⁶⁷



The ministries believe most of the barriers relate to privacy and personal data. Even aggregating or anonymising data can sometimes be inadequate to prevent the identification of natural persons because some datasets can be combined with others. But this barrier, and concerns about the publication of open data, can be removed with the aid of manuals and training courses.

Other frequent barriers named by the ministries relate to the organisation. Too little capacity to open data for example, a lack of direction or priority from senior management or a complex organisational structure, where individual organisational units have their own information systems (at various stages of development). Possible solutions are the involvement of senior management and the development of a vision from the top and the tiers immediately below it. Better information management will ultimately save costs, too, for example because less time is needed to deal with freedom of information requests (see chapter 1). Sharing knowledge and best practices (also among ministries) also helps remove barriers. Finally, the open data activities should be evaluated in order to progress.

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The solutions are taken from the following two reports: 1) Open data in government: How to bring about change" (Open Data Institute, 2015); 2) Over open data (Open State Foundation, 2014).

The final barrier the ministries name is uncertainty about who is the actual owner of certain data. It is not always the government. In such cases, the various parties with an interest in the data should be consulted. It can also help if agreements are made in advance, for example by including specific open data provisions in an agreement. Such questions will become less frequent when the principle of open data becomes more embedded in the regular work processes.

5 Conclusions and points for consideration

5.1 Conclusions

Steady progress

We found that the government and the individual ministries have taken steps in the past year to make open data more widely accepted. Partly in response to our first Open Data Trend Report, the Ministry of the Interior and Kingdom Relations is currently carrying out a government-wide data inventory. That should clarify by spring 2015 what data (open and closed) the government holds. This is an important step because it will then be easier to determine what data can be published as open data. By doing so, The Netherlands is following the good examples set by the United Kingdom and the United States. These countries provide open data via national data portals and provide insight into what data are currently closed. The Dutch government intends to focus on stimulating the re-use of open data. An independent committee will study what data disclosure instruments will be the most effective in the Netherlands and what investments are required.

Open data still fragmented and one-sided

There was no significant increase in the Netherlands' provision of open data via the national open data portal in the past year. Furthermore, ministries have opted for their own portals (sometimes out of necessity), which has fragmented the provision of open data. The situation will probably be improved by the forthcoming upgrade of data. overheid.nl. We also found that the open data provided through the national data portal was one-sided. Virtually all the open datasets are geo-data, and almost all of those are published by Rijkswaterstaat (the Ministry of Infrastructure and the Environment's Directorate-General for Public Works and Water Management). Data that are important for the monitoring of government finances and government activities ('action data') are hardly available.

5.2 Points for consideration

The following points should be taken into consideration for the further development of the Dutch open data policy:

1. Set ambitions and milestones in a concrete action plan

Based on the results of the government-wide dataset inventory, the ministers must aim to reach concrete agreements among themselves and with the House of Representatives regarding the publication of specific datasets. The examples of the United Kingdom and the United States show that working with concrete tasks and deadlines has a positive impact on the publication of open data.

2. Make publication of open data mandatory

We think that mandatory publication of open data is both desirable and necessary, especially if the data are to form part of the National Information Infrastructure. The examples from the United Kingdom and the United States show that mandatory publication can lead to more open data in the short term. The Flemish government can

also be regarded as a good example in this regard. It has issued two decrees (the Open Government Decree of 2004 and the Re-use of Government Information Decree of 2007) that make the publication of open data a statutory requirement. The recent DATA Act in the United States could also serve as inspiration for new legislation in the Netherlands.

3. Develop a National Information Infrastructure

An important pillar of a concrete action plan is the development of a National Information Infrastructure, similar to the one in the United Kingdom.⁶⁸ The government should use the government-wide dataset inventory to determine what data are of greatest social importance and what data should be published in any event.

4. Put open data to work, for example in the decentralisation of social services

Several of our audit reports have pointed out the opportunities greater open data availability can create. In all policy areas, whether regarding culture budgets, the reform of the Exceptional Medical Expenses Act, EU funds, school buildings or nature conservation, the use of open data can potentially improve policy and accountability. Furthermore, we have provided suggestions for datasets that could be published as open data relatively easily in all our letters on the ministries' budgets for 2015.

One important potential application of open data is the provision of information regarding the decentralisation of social policies and reforms in long-term health care. This could then serve as a practical/tangible case for the proposed National Information Infrastructure. Municipalities and central government are still designing their information systems, related objectives and what data they will need for it. Steps have been taken to provide an insight into government performance but not enough to provide an insight into the ultimate impact of decentralisation on the public.

Disclosing this information as open data will ensure that all parties concerned (citizens, care providers, public authorities) can communicate about the impact of decentralisation on for example the quality of care and the macro-costs of care. Standardised indicators on expenditure as well as results are necessary to be able to compare the effects among municipalities.

During the transitional period, the Minister of the Interior and Kingdom Relations should take the lead to develop a common language for both expenditure and policy results and to refine the existing instruments (BBV and IV3).

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See <https://www.gov.uk/government/publications/national-informationinfrastructure/nationalinformation-infrastructurenarrative>.

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