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The Development of Open Data in The Netherlands

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DOI

[10.1007/978-94-6265-261-3_11](https://doi.org/10.1007/978-94-6265-261-3_11)

Publication date

2018

Document Version

Final published version

Published in

Open Data Exposed

Citation (APA)

van Loenen, B. (2018). The Development of Open Data in The Netherlands. In B. Van Loenen, G. Vancauwenberghe, & J. Crompvoets (Eds.), *Open Data Exposed* (pp. 215-232). (Information Technology and Law Series; Vol. 30). TMC Asser Press. https://doi.org/10.1007/978-94-6265-261-3_11

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Chapter 11

The Development of Open Data in The Netherlands



Bastiaan van Loenen

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Abstract Open data in The Netherlands dates back to the 1990s when the Ministry of Internal Affairs published the memorandum ‘Towards accessibility of government information’. More than two decades later, open data in The Netherlands has matured with the assignment of a responsible Ministry for open data, an open data vision and an open data action plan. The scope of government data that should or could be provided as open data was extended from only basic information of the democratic constitutional state, to public data available in electronic format, to a policy of all data publicly accessible, unless. This has resulted in usage statistics of several billion hits per year for some datasets. However, there are still a significant number of Dutch government datasets waiting to be reused. These are unknown to many, including government. Others are well known but financial interests of government, technical and legal barriers, among others, frustrate their reuse.

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11.1 Introduction

Open data offers unprecedented opportunities to develop new products and applications and to improve the efficiency and effectiveness of existing public and private sector processes. In addition, The Netherlands is working on promoting access to and reuse of public sector information.

Open data in The Netherlands dates back to the 1990s when the Ministry of the Interior and Kingdom Relations published the memorandum ‘Towards accessibility of government information’.¹ More than two decades later, open data in The Netherlands has matured with a responsible Ministry for open data, an open data vision and an open data action plan.² Partly based on the international Open Government Partnership, the vision adopted the general policy ‘publicly accessible, unless’: public data should be accessible to all unless there are overriding interests such as national security. Starting point for publicly accessible data is that these should also be available for reuse. Government needs to make the data publicly accessible either on request of a citizen or pro-actively.

The Netherlands is ranked eighth in the open data barometer³ and holds a 20th position in the Global open data index.⁴ Open data in The Netherlands has especially revolutionised the domain of geographic information. This type of public sector information appears to have a major role in the reuse of public sector geographic information.⁵ The Netherlands is one of the EU countries where the geographic information domain has fully embraced the spirit of open data and The Netherlands may be considered as one of the global best practice countries concerning open geographic data.

In this chapter, we provide an in-depth analysis of the Dutch open data evolution. We especially focus on the role open geographic data has had in building the Dutch national open data agenda. The chapter starts with a brief overview of The Netherlands and the open data landscape. Then, we discuss the three periods of open data development. We identify three periods through which the open data agenda evolved. First, transparency of government drove the agenda (1980–2000), followed by PSI reuse (2000–2010). Only after the publication of the Digital Agenda for Europe of the European Commission, the open data era started (2010–2017). In Sect. 11.7, we elaborate on the open data supply, use and benefits. The chapter ends with the open data challenges The Netherlands is facing.

¹ Kabinet 1997a.

² Kabinet 2013a, b.

³ World Wide Web Foundation 2017.

⁴ Open Knowledge Foundation 2016.

⁵ See Pira 2000; BDO 1998.

11.2 First Period Towards Open Data (1980–2000): Transparency

Until the beginning of the 1990s, access to government data was hardly a point of structured discussion in The Netherlands.⁶ The Public Records Act (PRA, *Wet openbaarheid van bestuur*) arranged for access to public records that concerned administrative affairs (*bestuurlijke aangelegenheid*). A policy for the reuse of government data was lacking. Government data was in this period typically provided at a price covering the cost and often beyond cost recovery.⁷

The first initiatives towards what we call open data today date back to 1994 when the Cabinet published the National Action Program Electronic Highways.⁸ This program expressed that Dutch government should utilise ICT to promote and improve communication between government on the one side and citizens and businesses on the other side. The elaboration of the program for government data followed in the memorandum ‘Towards accessibility of government information’ by the Ministry of the Interior and Kingdom Relations in 1997,⁹ which laid down the access policy and access fees for government data. The memorandum distinguished three categories of government data:

1. Basic information of the democratic constitutional state: legislation and regulation, statements by the judiciary courts and parliamentary information. These data should be made accessible as much as possible,¹⁰ and should be accessible free of charge.
2. Data of the administration within the scope of the PRA: These data should be available for no more than marginal cost of dissemination, and
3. Electronic government data and the information that can be created with these electronic government data: Regarding electronic data files of administrative authorities, the Cabinet noted in the memorandum that a policy needs to be developed governing access to file data, in particular access by the private sector.¹¹ No specific access policy was determined. The Cabinet concluded in 1997 that electronic data not (yet) used for the execution of a public task are not within the scope of the PRA.

The memorandum argued that government agencies should adhere to their original public task(s) and that services transferring data for profit making, or for commercial products, should not be financed by taxpayers. The Memorandum directly followed

⁶ Van Loenen 2000.

⁷ See De Jong 1998.

⁸ See Kabinet 1995.

⁹ Kabinet 1997a, b.

¹⁰ CEC 1999.

¹¹ CEC 1999.

with the notion that this may result in a ‘dilemma of the public task’. Government data may not be fit for purpose for business users. To make the data fit for purpose for these users, government should alter or improve the data and organise access to these data (through portals). The costs for making the data fit for purpose are not covered by the general budget, so an additional tariff should be applicable. However, this is not possible if the government solely adheres to the execution of the public task.¹² Consequently, data innovations will be blocked because government is not allowed to do so and businesses are unable or unwilling to do this.

In addition, a special reasoning was followed for electronic data: “These data should not necessarily be provided at marginal costs of dissemination, as specified in the PRA. Electronic data are often collected at high cost funded by the general budget. This does not imply that all tax payers should subsidise the development of commercial information products and services”.¹³ For specific datasets, the responsible Minister may decide that a government agency may add value to the core dataset in order to improve accessibility, even if this process is not part of the key tasks or public task of the government agency. That is only permissible if the commercial sector does not provide such services and the increased accessibility is of high societal interest.¹⁴ If the data were to be commercialised, the commercialisation should then be on a non-discriminatory basis.¹⁵

Because of this policy, the Dutch government contracted a consortium led by the publisher Kluwer to provide free access to basic information of the democratic constitutional state through the ADW database.¹⁶ As part of the National Action Programme Electronic Government, the Cabinet decided in 2000 not to continue the agreement with Kluwer and to develop its own database of basic information of the democratic constitutional state freely accessible and reusable at marginal cost of dissemination.¹⁷ Table 11.1 provides a snapshot of the era 1980–2000.

Table 11.1 Snapshot of open data in 1980–2000 [Source The author]

	1980–2000
Policy framework	‘Towards accessibility of government information’ (1997)
Legal Framework	Public Records Act
Organisation in charge	Ministry of Internal Affairs

¹² Berends 1997, p. 379.

¹³ Kabinet 1997a, p. 19; translation author.

¹⁴ See Kok 1999, p. 128.

¹⁵ Kabinet 1998a, b.

¹⁶ ADW stands for *Algemene Databank Wet- en Regelgeving* (General Database for Legislative Information).

¹⁷ Kabinet 2000a.

11.3 Second Period Towards Open Data (2000–2010): PSI Reuse

In 2000, the Minister of the Interior and Kingdom Relations presented new guidelines on access to public sector information in The Netherlands in the memorandum ‘Towards Optimal Availability of Government Information’.¹⁸ The memorandum promoted the availability of government information by stating that all government information should be disseminated at a maximum of the cost of dissemination. Government information covered by its own pricing mechanisms, such as cadastral information, and data in the Trade Register, was not subject to these guidelines. In addition, the policy does not apply to datasets, for which the policy line would result in financial problems for the supplier of the data, such as the data sets of the National Mapping Agency and some datasets of municipalities.

The memorandum closely followed the Green Paper ‘Public sector information in the information society’ of the European Commission.¹⁹ The resulting EU directive on the reuse and exploitation of public sector documents (the so-called PSI Reuse directive) was adopted in December 2003²⁰ and transposed into the Dutch Public Records Act in 2006 as a new chapter V-a.²¹ The new act applied to all information residing within government.²² The reuse rules also applied to information that does not concern an administrative affair (*‘bestuurlijke aangelegenheid’*) and to data for which a specific access regime was applicable. Information could only be reused if the information is public.²³ However, the PSI Reuse directive (and its transposition) did not introduce a right on reuse.²⁴ The Ministry of Internal Affairs and Kingdom Relations further developed new policies promoting the practical findability and reusability of PSI.²⁵

In the domain of geographic information several developments appeared. Firstly, the Ministry of Internal Affairs and Kingdom Relations, responsible for the PSI reuse policy, negotiated in 2007 an ‘Agreement of Intentions’ with the Dutch provinces to provide PSI for reuse uniformly and for a maximum of the marginal costs of

¹⁸ Kabinet 2000b.

¹⁹ CEC 1999. See further Chap. 2 of this book.

²⁰ Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information. OJ L345. In 2013, the original PSI Directive has been amended by Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information. OJ L175.

²¹ Wet van 22 december 2005 tot wijziging van de Wet openbaarheid van bestuur en enige andere wetten in verband met de implementatie van richtlijn nr. 2003/98/EG van het Europees Parlement en de Raad van de Europese Unie van 17 november 2003 inzake het hergebruik van overheidsinformatie (Wet implementatie richtlijn inzake hergebruik van overheidsinformatie), Stb. 2006, 25.

²² Kamerstukken II 2005/06, 30 188, nr. 3, p. 11.

²³ Kamerstukken II 2005/06, 30 188, nr. 3, p. 5.

²⁴ See further Van Eechoud 2008, p. 10.

²⁵ Kabinet 2011c.

dissemination.²⁶ The Water Authorities followed in 2009 with a similar agreement, with a notable exception for the national digital elevation dataset.²⁷ The Ministry of Internal Affairs and Kingdom Relations also consulted the association of municipalities, but the association showed no interest in an open data agreement with the Ministry.

Secondly, a major government data provider, Rijkswaterstaat (Public Works and Water Management Agency), announced in 2006 to provide its data as open data, including the National Roads Database (NWB) as of 1 January 2009.²⁸ However, Rijkswaterstaat was confronted with significant resistance from one commercial data provider that sold data similar to some of the Rijkswaterstaat data. The open data announcement was withdrawn awaiting the outcome of the lawsuit.^{29,30} Rijkswaterstaat did continue to promote open data with its fellow agencies within the Ministry of Infrastructure and Environment.

A third development was the outcome of three lawsuits on the reuse of government data: Landmark versus the City of Amsterdam, Falkplan Andes versus Rijkswaterstaat regarding the NWB and Post NL, and Cendris versus the Ministry of Infrastructure and the Environment regarding the national Postal Codes dataset.³¹ In all three cases, the court decided in favour of open data: in 2009 for environmental data in Landmark,³² and in December 2011 for the NWB³³ and the Postal Codes data.³⁴

Finally, the adoption of the EU INSPIRE Directive³⁵ in 2007 influenced the open data agenda. The INSPIRE framework introduces measures for the exchange, sharing, access and use of interoperable *geographical* datasets and *geographical* data services across the various levels of public authority and across different sectors. The INSPIRE framework requires, for example, to provide the metadata of both datasets and dataset services, obliges these to be conformed to INSPIRE data specifications, and to make the data and services available through discovery, view, download, and transformation services.³⁶ INSPIRE was transposed to Dutch legislation in 2009.³⁷ As part of the national INSPIRE program Dutch INSPIRE datasets and services, the national GI council agreed that as part of implementing

²⁶ Intentieverklaringen provincies en waterschappen: verstrekking en hergebruik van geo-informatie, *Kamerstukken II* 2010–11, 32 802, nr. 2.

²⁷ Id.

²⁸ *Aanhangsel Handelingen II* 2006/07, nr. 2124.

²⁹ Minister van Verkeer en Waterstaat 2010: Wijzigingsbesluit n.a.v. beroep Falkplan-Andes tegen tot Fietsersbond en AND gerichte Wob-beschikking, 19 January.

³⁰ Kabinet 2011c.

³¹ For more information on these see: Van Loenen and Kulk 2012.

³² ABRvS 29 April 2009, *LJN*: BI2651.

³³ Rb.'s-Hertogenbosch 14 December 2011, *LJN*: BU8010.

³⁴ Rb.'s-Gravenhage 21 December 2011, *LJN*: BU9147.

³⁵ Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE), OJ L 108/1.

³⁶ Van Loenen and Grothe 2014.

³⁷ Wet van 2 juli 2009 tot implementatie richtlijn nr. 2007/2/EG van het Europees Parlement en de Raad van de Europese Unie van 14 maart 2007 tot oprichting van een infrastructuur voor

Table 11.2 Snapshot of open data in 2000–2010 [Source The author]

	2000–2010
Policy framework	Memorandum ‘Towards optimal availability of government information’
Legal Framework	Public records act (chapter V-a) INSPIRE Act
Main organisations in charge	Ministry of Internal Affairs and Kingdom Relations Ministry of Infrastructure and Environment

the INSPIRE policy INSPIRE data and services should use one of the Creative Commons licences,³⁸ preferably a CC0 declaration. If these licences do not suit the needs of the supplier of the data then a national standard licencing framework, may be used.³⁹

These developments were the seeds for the acceptance and support for (the implementation of) open data (Table 11.2).

11.4 Third Period of Open Data (2011–2017): Open Data (Trimaran)

The publication of the European Commission’s ‘A digital agenda for Europe’ on 19 May 2010⁴⁰ boosted open data in The Netherlands and should be considered as the next stepping stone in the history of open data in The Netherlands. Three Ministries were openly competing on the open data dossier, which in the end resulted in a constructive cooperation on open data development: the open data trimaran.

Firstly, the national data portal, data.overheid.nl, was launched in January 2011 by the Ministry of Internal Affairs and Kingdom Relations, together with an array of hackathons at national level (Apps voor Nederland) and at local levels (Amsterdam, Enschede, Eindhoven, Zuid-Holland, Noord-Holland and Rotterdam).⁴¹

On 17 May 2011, the Ministry of Economic Affairs, Agriculture and Innovation promoted itself as the leading ministry in open data with the publication of the Digital Agenda NL, with one of its focus areas “Growth and innovation with ‘open data’ as raw material” (*Groei en innovatie met ‘open data’ als grondstof*).⁴² Two

ruimtelijke informatie in de Gemeenschap (Inspire) (Implementatiewet EG-richtlijn infrastructuur ruimtelijke informatie), *Sbt.* 2009, p. 310.

³⁸ See Chap. 6 of this book for a description of the Creative Commons suite.

³⁹ Geonovum 2014 Memo Wijzigingsvoorstel licentiestelsel. Proposal accepted by the GI Council in 2014.

⁴⁰ European Commission 2010.

⁴¹ De Hoog et al. 2012.

⁴² Kabinet 2011a.

weeks later (31 May 2017), the Ministry of Internal Affairs and Kingdom Relations sent a letter to the Parliament proposing that national government will no longer be able to exercise intellectual property rights and should only be permitted to charge the marginal cost of dissemination.⁴³ At that same period, a third ministry was also preparing for what one may consider an open data revolution: the Minister of Infrastructure and the Environment announced on October 4th 2011 that by 1 January 2015 all data of the Ministry of Infrastructure and the Environment would be available as open data⁴⁴ (see frame 1).

Four drivers may explain this open data revolution in the Ministry of Infrastructure and the Environment. The first driver was that the Ministry had significant experience with data sharing issues and the difficulties that come with these issues. The second driver is that the PSI Reuse directive raised the ministry's awareness that access policies should also satisfy user needs. The third relevant development was the publication of the Digital Agenda for Europe in 2010. The last driver was that frontrunners within the ministry carried out research on how to implement open data. With these developments, the interest of high-level bureaucrats was also raised. Most notably, the Secretary General of the Ministry of Infrastructure and the Environment showed interest in open data of this ministry.

On 4 October 2011, the Innovation Relay event was scheduled. This is a biyearly event organized by the Ministry of Economic Affairs and the Ministry of Infrastructure and the Environment, where the Ministers of both ministries present and discuss their innovation agendas. While the Ministry of Infrastructure and the Environment wanted to do something with open data, the Minister of Economic Affairs was expected to address the Digital agenda for Netherlands arguing the importance of open data for the Dutch economy. Therefore, the top of the Ministry of Infrastructure and the Environment, together with the Minister decided to overrule the Digital Agenda of the Ministry of Economic Affairs and announce a ground-breaking policy for all data of this ministry: the 'open data, unless' policy. All data were to be provided as open data as of 1 January 2015, unless there were reasonable arguments not to do so, for example due to privacy or national security interests. In addition, it was announced that within three months, on 1 January 2012, the topographical map of The Netherlands would be published as open data. In June 2012, the Ministry of Infrastructure and the Environment already received the PSI Alliance award for "best public authority in Europe", on nomination by reusers.

Frame 1 Open Data Policy Ministry of Infrastructure and Environment

1. In principle all datasets of the Ministry are available without cost as a download.
2. The datasets are accessible through the national open data portal.
3. The datasets are downloadable via in the metadata defined web address (URL).

⁴³ Kabinet 2011b.

⁴⁴ Netherlands Ministry of Infrastructure and Environment 2012.

4. The datasets are published with the standardised metadata as used in the national open data portal.
5. Datasets can be re-used without restrictions.
6. New versions of the datasets will be available as fast as reasonable possible.
7. The most up-to-date datasets are available, as well as at least the four preceding versions.
8. Ad hoc datasets will be available for at least five years.

After the announcement of the Minister of Infrastructure and the Environment late 2011, different representatives of the Ministry collaborated to write an Open Data Roadmap that was accepted by the highest administrative body of the Ministry of Infrastructure and Environment just before the summer of 2012. An open data team was assigned to support open data implementation and enforcement of the new policy of the Ministry of Infrastructure and the Environment.

At the same time, the national ‘Open Data Programme’ was launched by the Minister of Internal Affairs and Kingdom Relations. The Dutch Open Data Portal (data.overheid.nl) was launched, providing access to a large number of open datasets,⁴⁵ including the datasets of the National Georegister. The National Open Data Portal harvests all spatial data sets that are included in the National Georegister and considered to be open data. As a result, almost half of the open data in The Netherlands were at that time spatial data. According to a report of the Dutch National Court of Audit (*Algemene Rekenkamer*) approximately 95% of all spatial data in The Netherlands are available as open data.⁴⁶

Building on the success of the open data policy of the Ministry of Infrastructure and the Environment, the Ministry of Economic Affairs established an Open Data Breakthrough team in 2013. This Open Data Breakthrough team brought together representatives of the Ministry of Internal affairs and Kingdom Relations, the Ministry of Economic Affairs and the Ministry of Infrastructure and the Environment. This team was complemented by representatives of the private sector and academia, and was chaired by the CEO of Esri (a private geo-software company). The Open Data Breakthrough team lobbied for open data, investigated barriers to PSI reuse, organised open data innovation rallies to bridge open data supply and reuse,⁴⁷ and funded the geodatastore; a service that provides a simple way for governments to publish their open data on the web.⁴⁸ The Open Data Breakthrough team paved the way, together with many others, for opening the national elevation dataset as open data on 6 March 2014.

In the meantime, in 2013, the Ministry of Internal Affairs and Kingdom Relations presented the vision and associated plan for action for Open Government

⁴⁵ See Open State Foundation 2014 for a critical review of the performance of the portal in 2014.

⁴⁶ Algemene Rekenkamer 2014.

⁴⁷ Algemene Rekenkamer 2015, p. 36.

⁴⁸ See <https://geodatastore.pdok.nl/web/dut/index>. Accessed May 2018.

Table 11.3 Snapshot of open data in 2011–2017 [Source The author]

Policy framework	Program open government
	Open data road map Ministry of Infrastructure and the Environment
Legal Framework	Public Records Act
	Reuse of public sector information Act (<i>Wet hergebruik overheidsinformatie</i>)
	INSPIRE Act (<i>Wet INSPIRE</i>)
Main organisations in charge	Ministry of Internal Affairs and Kingdom Relations
	Ministry of Infrastructure and the Environment
	(Ministry of Economic Affairs) (Ministry of Education)

in The Netherlands.⁴⁹ The national vision was inspired by the Open Government Partnership principles of transparency and accountability, and introduced the central policy lines ‘publicly accessible, unless’, and ‘active provision of public data, unless’.⁵⁰ The action plan introduced 17 actions varying from ‘proactively publishing data about activities, decisions and financial information’ to ‘the further development and stimulation of open data and reuse of public sector information’. In 2015, a new action plan was presented.⁵¹ As a result, the Ministry of Internal Affairs and Kingdom Relations founded the national steering committee open data that drafted the national open data agenda (NODA).⁵² The NODA emphasises the importance of quality open data instead of the, until then, focus on publishing as much open data as possible despite the quality. Another part of the new action plan was that government agencies were assigned to make a data inventory and to indicate which of the identified datasets could be released as open data. They were also tasked to identify their ‘high value’ datasets. Further, as part of the new Action plan, the Ministry introduced in 2016 the so-called Stuiveling open data award⁵³ for the best open data application, established an open data education and expertise centre, and started to organise open data user group meetings.

On 18 July 2015, the revised PSI Reuse Directive was transposed into the Act on the reuse of public sector information⁵⁴ introducing the right to reuse PSI and limiting the number of government agencies that are allowed to charge more than the marginal cost of dissemination to only three organisations: The Netherlands’ Cadastre, Land

⁴⁹ Kabinet 2013a, b.

⁵⁰ Kabinet 2013b. This is, however, not as ambitious as the ‘open data, *unless*’ policy of the Ministry of Infrastructure and Environment.

⁵¹ Kabinet 2015b.

⁵² Kabinet 2015a. See also *Algemene Rekenkamer 2016*.

⁵³ See <https://www.opendata-award.nl/>. Accessed May 2018.

⁵⁴ Wet van 24 juni 2015, houdende regels over het hergebruik van overheidsinformatie (Wet hergebruik van overheidsinformatie). *Sitb* 2015, p. 271.

Registry and Mapping Agency (Kadaster), the National Chamber of Commerce (Kamer van Koophandel) and The Netherlands Vehicle Authority (Rijksdienst Wegverkeer)⁵⁵ (Table 11.3) provides a snapshot of open data in 2011–2017.

11.5 The Trimaran Evaporates?

In 2011, several ministries were fighting for the lead position in open data land. In 2018, the situation is a little different. Especially the role of the Ministry of Economic Affairs as active promotor of the open data agenda appears to have faded away. The successful Open Data Breakthrough team stopped after three years and the new Companies Registry Bill⁵⁶ did not embed the earlier intention of the Minister of Economic Affairs of July 2016 to open parts of this registry.⁵⁷ However, a positive development is that the Statistics Netherlands (CBS), also part of the Ministry of Economic Affairs and considered to be an open data champion, provided its majeure contribution of open datasets to the national data portal since 14 July 2014.⁵⁸

In addition, the role of Ministry of Internal Affairs and Kingdom Relations is not as ambitious as some members of Parliament would like to see. In 2012, two members of Parliament introduced the Open Government Bill (Wet open overheid, WOO).⁵⁹ This new act would introduce active publication of a register of all government data in electronic and machine-readable format, the appointment of an information commissioner who would decide in administrative appeals on PRA matters, extend the scope of the Public Records Act, reduce the response time to a PRA request to from four weeks to two weeks, and commend the gratis and without restrictions reuse of public documents. The Bill was not supported by the Minister of Internal Affairs and Kingdom Relations and by the Cabinet. In 2016, the Minister called for an impact analysis on the implementation of the WOO for national government,⁶⁰ and an impact analysis for local government.⁶¹ The consultants assessed the impact to be an additional annual cost for national government of several hundred million to one billion euro to execute the WOO. For local government the annual cost would increase by at least similar numbers. The consultants acknowledged the objectives of the WOO, but questioned whether a legal

⁵⁵ See Kamerstukken 2014–2015 34 123 nr. 3 Regels over het hergebruik van overheidsinformatie (Wet hergebruik van overheidsinformatie).

⁵⁶ Kabinet 2017.

⁵⁷ See Kabinet 2016. This is despite pressure from both Parliament and society. See for example Open State Foundation 2017.

⁵⁸ See also <https://www.cbs.nl/nl-nl/onze-diensten/open-data>.

⁵⁹ Kamerstukken 2011/2012.

⁶⁰ See ABTOPConsult 2016.

⁶¹ ABTOPConsult 2017.

Table 11.4 Number of datasets, visitors and page views in the national open data portal [*Source data.overheid.nl*]

	2011	2012	2013	2014	2015	2016	2017 (Jan–Aug)
#Datasets	96 ^a	Unknown	Unknown	Unknown	3,250 ^b	7,400 ^c	11,008
#Visitors	Unknown	Unknown	Unknown	Unknown	363,511	482,464	484,012
#Page views	Unknown	Unknown	132,048	197,128	10,220,835	17,919,361	16,006,871

Kabinet 2016; data.overheid.nl (d.d. 1 August 2017); personal communication with data.overheid.nl

^aIn November 2011 (see <https://www.slideshare.net/paul3287/presentatie-bzk-geonovum-9-1111>)

^bAlgemene Rekenkamer 2015 (February 2015)

^cAlgemene Rekenkamer 2016 (February 2016)

obligation is, at this moment, the best instrument to achieve these objectives.⁶² In 2018, the Bill is in its final stage of the parliamentary process: in the Senate. Judging by the provided assessment of additional annual costs, the Senate is unlikely to adopt the current version of the WOO.

11.6 Open Data Supply, Use and Benefits

Open data in The Netherlands resulted in clear progress concerning both the *supply* of open datasets and *use* of the open data. Since 2011, significant progress has been made on the supply of open data: the published metadata of open datasets in the national data portal increased from 96 datasets in 2011 to over 11,000 datasets (see Table 11.4). In addition, the number of visitors to the portal multiplied in 5 years with a factor 135: from 132 thousands visitors in 2013 to almost 18 million in 2016.

Further, research by The Netherlands' Court of Audit shows that since 2012, the Ministry of Infrastructure and the Environment, together with the Statistics Netherlands, are the main contributor of datasets published in the national data portal. These data are also available through a variety of web services in PDOK, a platform specifically developed to make public geographic data available through web services. The use of PDOK has more than doubled over the last 5 years (see Table 11.5).⁶³ Moreover, the use of the PDOK services has increased from approximately 580 million hits in 2013 to 6.3 billion hits for 2017. In addition, numerous new applications have been developed.

In 2014, user satisfaction of the open data in The Netherlands was studied by Van Loenen and Welle Donker.⁶⁴ Users are critical of the quality of the open data: (some of the) data are not timely enough, do not sufficiently cover the entire country, lack detail, are published in a proprietary format and lack sufficient quality

⁶² ABDTOPConsult 2016, p. 33.

⁶³ PDOK keeps track on its use statistics. Other open data providers not necessarily do so.

⁶⁴ Van Loenen and Welle Donker 2014, p. 70. See also Van Loenen et al. 2016.

Table 11.5 Number of datasets and data use of data services [Source PDOK 2012–2017]

Year	2012	2013	2014	2015	2016	2017
#Datasets	41	64	78	91	104	131
#Hits on services	Unknown	580 million	1.1 billion	2.1 billion	4.4 billion	6.3 billion

control. In relation to the metadata, these are not complete, not up-to-date, not machine-processable, metadata standards should be improved and the published metadata are not always relevant. Furthermore, users miss the raw research data that resulted in these datasets.⁶⁵

However, there are indications that the quality of the data has improved both from technical perspectives (more open formats, better findable) and non-technical perspectives (more free data, more open licences). The assessment categories were: recognisable: does the user know that the data exists?; findable: how easy is it to find the dataset?; affordable: can the user afford the data?; licences: is the user allowed to use the data for his/her purposes?; service level: active/passive publication, type of data service (view, download, API); delivery time: time between request and access, reliability: metadata availability, comprehensiveness, standardisation; clarity: does the user understand the data, any additional documentation available?; user-friendliness: real-time data or historical versions, choice of formats, among others; up-to-date: actuality of the data; long-term availability: policy commitment existence that guarantees long-term availability; and Tim Berners-Lee (TBL) score: how many stars in the 5-star deployment scheme for open data.⁶⁶ At least for the so-called Top 20 most wanted datasets,⁶⁷ an increase in such data qualities has been noted (see Fig. 11.1). In 2014, the aggregated scores for each of the shown indicators did not exceed four out of a maximum of five; in 2016, the aggregated scores were overall higher for these 20 datasets.

Other studies into the effect of open data confirm that providing open data leads to increased use of the data.⁶⁸ According to these studies, company use of topographic data multiplied by five within the first two years of publishing the topographic dataset as open data (2012–2014). In particular, small to medium-sized companies (SMEs) were experimenting with the open data to develop value added products. An expansion in the field of application is recognized. It is estimated that after two years of open data, at least €9 million was invested by companies to utilize the Key Register Topography since the

⁶⁵ Van Loenen and Welle Donker 2014, p. 71.

⁶⁶ See: <http://5stardata.info/en/>.

⁶⁷ The Top20 according to the businesses active in the geo-domain. The “Top 20 Most Wanted” datasets were: Key Register Topography (1:10,000), Company Register, Statistical information related to local areas, Key Register Large Scale Base Map, municipal information, aerial photography, Key Register Addresses and Buildings, cadastral information, energy usage data, energy labels of dwellings, soil information, national railway data, national roads data, real-time traffic information, spatial planning, digital elevation map, national waterways data, water levels (real-time), health risk areas, and healthcare information.

⁶⁸ Bregt et al. 2013, 2014, 2016.

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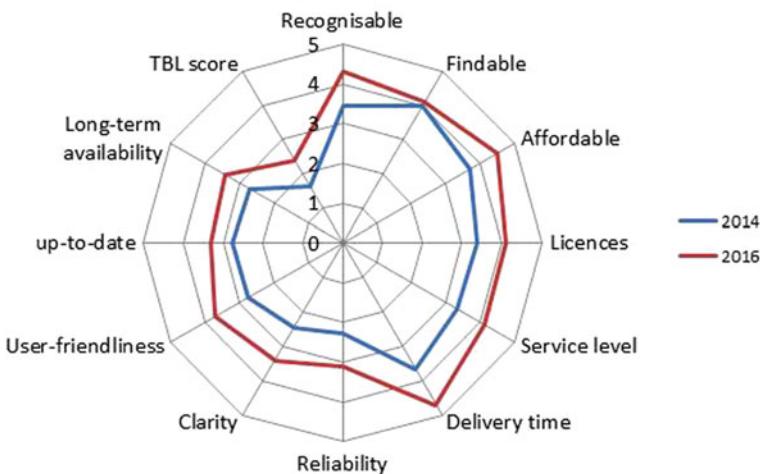


Fig. 11.1 Aggregated score of the 2014 and 2016 Top 20 most wanted datasets [Source Van Loenen et al. 2016]

data became available as open data. Moreover, a significant increase in private sector use was noticed, from 17⁶⁹ to 41%.⁷⁰ The private sector primarily uses the data to link the data with other data. The increased data requests were handled without problems since the data can now be downloaded directly from the national portal. This process has resulted in lower administrative costs for the National Cadastre, Land Registry and Mapping Agency.⁷¹ In addition, the use of the topographic data by citizens was assessed to have increased in three years from 3 to 22%.⁷² Other research suggests a use share of 48% of citizens in open data use.⁷³ A wide variety of apps are also built on open government data.⁷⁴ However, research providing an overview of the total amount of apps is lacking. More scientific solid research is required to confirm the positive impact of open data on Dutch society specific and other information societies in general.

⁶⁹ Percentage of the numbers of respondents to the survey (N = 56: Bregt et al. 2013, p. 19).

⁷⁰ Percentage of the numbers of respondents to the survey (N = 140: Bregt et al. 2014, p. 20). See Bregt et al. 2013, p. 28; Bregt et al. 2014, p. 8.

⁷¹ Bregt et al. 2014.

⁷² See Bregt et al. 2013, 2014.

⁷³ See Van Loenen et al. 2017.

⁷⁴ See, for example, <http://www.ndw.nu/toepassingen/nl/>, for examples building on the open data of the National Data Warehouse for Traffic Information (NDW).

11.7 2018 and Beyond

In the past two decades, The Netherlands has made significant progress on open data. The scope of government data that should or could be provided as open data was extended from only basic information of the democratic constitutional state, to public data available in electronic format, and ultimately, to a policy of ‘all data publicly accessible, unless’. This has resulted in usage statistics of several billion hits per year for some datasets.

Moreover, although Open Data has been successfully implemented in several Ministries, new challenges arise in The Netherlands. One challenge is the continuous debate about the role of the public and commercial sector: where does Open Data provision stop, and where does the role of the commercial sector begin? Discussions that started in 1997⁷⁵ are still undetermined today. A second challenge is knowledge of the use and the user of Open Data: who exactly is the user, for what purposes is Open Government Data (OGD) used and what is the impact of OGD? Moreover, which user(s) should government facilitate: only government users or any potential user?

A recent challenge appears to be the open data itself.⁷⁶ Should the scope of government data or documents be extended to include open sensor data as well, which is not stored but only streamed?⁷⁷ Should the scope also include data processed for virtual reality application and such like? Finally, the potential applicability of data protection legislation to open data is being debated at a national level: where does personal data stop and open data begin.⁷⁸

The decreased position on the Global Open Data Index (from a 5th position in 2013⁷⁹ to a 20th position in 2016)⁸⁰ may be explained by reaching the top of the hype cycle of open data in The Netherlands in the period 2011–2013. That does not imply that open data has reached its potential in The Netherlands. There are still a significant number of Dutch government datasets waiting to be reused. These datasets are unknown to many, including to the government. Others are well known but their reuse is frustrated by financial interests of government, and/or by technical and legal barriers, among others. Especially open data at the local level is lagging

⁷⁵ Kabinet 1997b.

⁷⁶ See Ploeger and Van Loenen 2016.

⁷⁷ Cf. Article 5.4 of the Proposal for a Directive of the European Parliament and of the Council on the re-use of public sector information (recast) (COM(2018) 234 final) as “a ‘soft’ obligation for Member States to make dynamic data available in a timely manner and to introduce APIs.”

⁷⁸ See Chap. 7 of this book.

⁷⁹ Open Knowledge Foundation 2012.

⁸⁰ See Open Knowledge Foundation 2013 and 2016. In the 2016 assessment, The Netherlands is especially not performing well in the domains of government spending, election results, draft legislation and company register, water quality, and land ownership (see <https://index.okfn.org/place/>). For the latter, it should be noted that the land ownership map is provided as open data since 1 January 2016.

behind.⁸¹ Although there are several frontrunners (e.g. the City of Utrecht and the City of The Hague), the majority of municipalities does not provide open data yet.⁸² The next step could be that the national agenda should dedicate a major role for stimulating open data provision at the local levels.

The open data challenges need to be addressed in order to arrive at the ultimate objective of open data: data that are being used and reused. Only with ubiquitous availability of open data and a better understanding of the user of open data, one can design and implement open data strategies that fulfil their needs. Only then will the open data potential be utilised to its maximum.

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⁸¹ See, for example, Van Loenen et al. 2016.

⁸² Although there was progress reported, see Tweede Kamer, vergaderjaar 2016–2017, 32 802, nr. 37 (Toepassing van de Wet openbaarheid van bestuur). 7 June.

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