NL DIGITAAL

Data Agenda Government

> nldigitalgovernment.nl/data-agenda
This agenda sets out how data can be used (even) better to improve policy-making and resolve social issues. We also pay specific attention to the protection of public values and fundamental rights. This agenda is called: NL DIGITAAL: Data Agenda Government (in Dutch: Data Agenda Overheid). In the introduction, we describe the context and reasons for creating this agenda. In chapters 1 to 5, we describe our approach to a number of specific themes, each articulated into specific actions. Finally, we discuss the financing and provide an overview of all our actions.

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Making data work for us

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Making data work for us

Data presents us with enormous opportunities. However, it also raises many new issues. This Data Agenda Government focuses on how data is used within our society and addresses the proper and responsible use of data by the government.

Everyone in the Netherlands uses and produces data, often without thinking about it. We search for somewhere new to live, post on social media, take the bus and use our access passes to enter our offices. This means we all generate a substantial digital trail. Because collecting, storing, sharing and processing of data is becoming increasingly cheaper, the volume of data is increasing at a dizzying pace. The ever-increasing impact of data on our lives is also referred to as datafication. This datafication is swiftly changing our world.

Social opportunities and public values
Datafication is closely linked to the emergence of new technologies, such as artificial intelligence and connecting devices to the internet (the ‘Internet of Things’). Smart applications of data and technology can improve the quality of our lives. They can make life easier, for example, by providing an automatically pre-filled tax return. Data are also necessary to resolve contemporary issues ranging from improving health care and education to optimising ‘critical infrastructures’ like transport and energy.
Making data work for us

Wider range of social gains through smart road maintenance

Using big data analysis, the Department of Public Works and Water Management (Rijkswaterstaat) is able to predict more effectively when asphalt requires maintenance work. These improved predictions allow the Department to create more efficient maintenance schedules for our national roads. This results not only in cost savings, but also in less traffic disruption, improved road safety, a reduction in CO₂ emissions, a reduction in raw material and energy consumption and a reduction in noise pollution.

At the same time, however, datafication raises many new questions about public values and fundamental rights. How do we prevent the unwanted influence of fake news? How do we prevent the use of robotics and artificial intelligence from undermining human rights? How do we safeguard the autonomy and privacy of every citizen? The government wants to use the enormous social and economic opportunities that data provide, but at the same time, greater datafication must not come at the expense of individual citizens and entrepreneurs.

Companies are now setting the standard for providing excellent service to consumers: fast, simple, personalised and always available. The government cannot and will not lag behind. However, we must also ensure that everyone remains able to participate in the digital society. We will, therefore, protect the rights of all citizens and entrepreneurs if these new developments place them under pressure. Citizens and entrepreneurs deserve no less from us.

Joint approach in the public sector

Digitalisation impacts society as a whole; therefore, it is a cabinet-wide topic. In 2018, the government published the Dutch Digitalisation Strategy: the overarching strategy for everything relating to going digital.

As part of the cabinet coalition agreement, it was agreed that the government will develop an ambitious, cabinet-wide agenda for continued digitalisation of the various levels of the public sector. That agenda was launched in 2018: NL DIGIbeter, Digital Government Agenda. NL DIGIbeter puts into practice the Dutch Digitalisation Strategy for the public sector. NL DIGIbeter states that the government must fulfil an exemplary role in dealing effectively and responsibly with data, and it was used to announce this Data Agenda Government.

As mentioned in NL DIGIbeter, this Data Agenda Government sets out that: ‘What the government as a whole is going to do to improve its handling of personal data, open data and big data. We are going to look at how the analysis and combining of government data can benefit policy-making and provide solutions to social issues. We will make better use of the possibilities offered by data and, in doing so, will also take into account rights and values.’

Central and local government are jointly responsible for implementing the Data Agenda Government. The Ministry of the Interior and Kingdom Relations plays a coordinating role in this respect, based on its responsibility for digital government and the safeguarding of fundamental rights.

At the same time as this Data Agenda Government, work has been carried out by the Ministry of Economic Affairs and Climate Policy in formulating the Dutch vision on data sharing between companies (De Nederlandse visie op datadeling tussen bedrijven). Whereas the focus of this data agenda is on government bodies, the focus of the data-sharing vision is on companies. The two policy documents are closely related and so have been drawn up in close collaboration. Another policy document related to this Data Agenda Government is the vision shared by the municipalities on taking a data-driven approach. The task of drawing up this policy in 2019 falls to the Association of Netherlands Municipalities (VNG).
Cross-departmental collaboration with departmental autonomy
These departments within national government are developing policies relating to datafication. The Minister for Education, Culture and Science and the Minister of Health, Welfare and Sport have presented to the Dutch Lower House their visions on big data for education and health care; respectively. In October 2018, the Lower House also received a letter from the Minister for Legal Protection concerning the transparency of algorithms used by the government. In 2018, the Ministry of Justice and Security launched the National Cyber Security Agenda.

Coordination between the various initiatives relating to data and data policies is crucial. This will ensure that the various actions support each other and that we, as the government, are actually making progress. This agenda focuses on general bottlenecks in datafication and the measures that transcend individual organisations and sectors in the public sector. Furthermore, this agenda is the vehicle used by the Ministry of the Interior and Kingdom Relations to set out the government’s ambition to maximise the opportunities offered by data while respecting public values.

Where this Data Agenda Government refers to ‘we’, this refers to all public sector bodies that have committed themselves to the various activities set out in this agenda. In drawing up this agenda, we spoke to researchers and representatives from the business community, in addition to representatives from the public sector.

Defining the boundaries
In this Data Agenda Government, we are consciously making use of the knowledge and experience of the forerunners in data-driven approach. Not only will we take practical measures, but in the coming years, we will also investigate where the data use in our society still requires the drafting of additional policies. Internationally, we see major differences in the way the public and private sectors operate in the area of data. In the United States, it is mainly the (social) platforms and business that are shaping the data economy.

In other parts of the world, such as China, the government plays a central role: it uses data to mould its relationship with its citizens. In the Netherlands and in Europe, the business community as well as government are driving the use of data in society. Privacy protection plays a significant role in European regulations on data traffic.

Both within the public and the private sector, many different parties are tackling the opportunities presented by a data-driven approach. This continuously raises questions. When does the government need to act as a facilitator and when does it need to act as a regulator? How can the government use people’s data as a tool for implementing policies?

Better sentiment analysis using social media
Analyses by the Statistics Netherlands (CBS) show that social media can provide an accurate picture of citizens’ views on a wide variety of topics (the ‘sentiment’). Over longer periods, this picture almost perfectly matches the traditional CBS consumer confidence index. Sentiment analysis based on social media is a faster and more efficient alternative to the traditional consumer confidence index.

When it comes to collecting data on citizens in the public domain, the government is ‘only’ one of the parties involved. There is an increasing trend to use sensors, also by commercial parties. Can the government use this data to direct the behaviour of its citizens? The government must — in consultation with society and the business community — determine where the boundaries are for using data.
Joanne Petersen, mother of three children and teacher at De Goudse Waarden in Gouda:

“How can we make young people more aware of how they handle their data?”

“I think that my students sometimes underestimate what organisations are able to do with all the data collected about them. Even amongst themselves, they are often too trusting. They share all kinds of things online but they don’t think about the consequences, for example, when they fall out with their friends. Who will make sure that these young people become aware of the role data plays in society? I think that teachers as well as parents play a major role in this. As a teacher, I’ve noticed that parents often don’t know enough about the topic. Perhaps the government can play a part in this: how can the government make sure that parents learn more about aspects such as data and privacy? Personally, I think long and hard before I post a picture of my children online. You never know where it will end up and how it will be used.”

Continuous monitoring and improvement
Datafication requires that we make constant improvements and work continuously on the framework conditions. This agenda is not a blueprint. Every year, we will review what is needed in the broad area of data in the public sector and the impact of data on society. We will make changes to the Data Agenda Government based on any new insights provided by those reviews. Data in the public domain is the first theme that we will focus on; in the coming years, we will add new themes to the agenda. For every theme that we address, our approach will be aimed at protecting fundamental rights and public values. We will monitor the effect of the initiatives set out in this agenda on the government and society. This agenda lays the foundation for the government’s data policy for the coming years.

Special Donald Duck edition on digitalisation
The Ministry of the Interior and Kingdom Relations has issued a special edition of Donald Duck. It covers various topics related to digitalisation, including new technological developments and their impact on public values. This special edition is aimed at making children aged 7-12 aware of the opportunities as well as threats of digitalisation, in a format that appeals to them.

Actions
New regulations and agreements about data in the public domain
- The Ministry of the Interior and Kingdom Relations and the Association of Netherlands Municipalities will present a ‘model agreement on the use of data collected in the public domain’. (2019)
- The Ministry of the Interior and Kingdom Relations will prepare an inventory of the bottlenecks regarding the use of data in the public domain. (2019)
- The Ministry of the Interior and Kingdom Relations, the Association of Netherlands Municipalities and the municipalities involved in the inventory (such as Amsterdam, Eindhoven and Groningen) will present a detailed analysis of the bottleneck inventory. They will then propose a package of measures based on this analysis. (2019)

Social dialogue on the proper use of data in the public domain will remain an ongoing process at the central and local level in 2019 and beyond.
1 Problem solving with a data-driven approach

Data can be enormously helpful with formulating policies, providing services and performing government tasks. This is something that we will tackle systematically. To achieve this, we will draw upon the experience of some of the frontrunners and invest in knowledge and contacts.

Taking a data-driven approach refers to the systematic collection, management, analysis, interpretation and application of data. Every government organisation should ask itself: what data do or might we possibly hold (inside or outside our organisation) that could help us solve a (social) problem? In order to actually solve that problem, it must be possible to combine data from different government organisations. Analysis of these data must be carried out within the chains in which government tasks are organised.

**Data only the means to an end**

Data are only ever the means to an end. This applies to data held by government as well as data held elsewhere. Several frontrunners within the government are already relatively experienced with a data-driven approach. Sharing this experience can make an important contribution when it comes to tackling major social challenges. In this respect, following the guidelines set out in the Intergovernmental Programme (IBP) is crucial. Cooperation with the private sector is also essential in tackling these challenges. Ministries, provinces, municipalities, water boards and implementing organisations have selected a number of sample projects in which a data-driven approach contributes to addressing major social tasks (see pages 18 and 19).

**Taking a joint approach**

To increase the usefulness of the available data, we need to work with citizens and businesses, as well as research and education. Organisations in the telecommunications and construction sector, hospitals, energy companies and public transport companies all hold data of potential importance for dealing with social issues. We are encouraging them to publish or share relevant data.
Using a data-driven approach to deal with social challenges

These ongoing initiatives have been selected to serve as examples for the government in the coming years.

ENERGY TRANSITION
VIVET programme (EZK, BZK, municipalities, provinces and water boards)
A large volume of data is available for realising the required energy transition, ranging from the energy consumption of individual households, to data on energy networks and energy production. The fragmented data need to be effectively combined and shared. This is the aim of the VIVET programme* (Improving the provision of information for the energy transition).

*The VIVET programme uses information from various parties, including the Statistics Netherlands (CBS), the Land Registry, the Netherlands Enterprise Agency (RVO.nl) and the Netherlands Environmental Assessment Agency (PBL).

MANURE ISSUE
Enhanced Enforcement Strategy for Manure (Ministry of Agriculture, Nature and Food Quality, LNV)
With the Enhanced Enforcement Strategy, the Ministry of Agriculture, Nature and Food Quality aims to improve and optimise compliance with legislation and regulations. The Ministry makes clever use of data. Data can, for example, help to better map manure and nutrient flows. Supervision and enforcement can, therefore, be carried out in a more risk-oriented manner.

SUBVERSIVE CRIME
The Zicht op ondermijning programme (which includes the Ministry of the Interior and Kingdom Relations (BZK), Justice and Security (JenV), Statistics Netherlands (CBS), municipalities and Association of Netherlands Municipalities (VNG).
Data analyses can provide valuable insight into patterns of subversive crime (real estate fraud and drug-related crime). For example, an analysis of sewage water can reveal where high concentrations of metabolised drug substances can be found. In the Zicht op ondermijning programme, governments exchange knowledge about projects that can advance a preventive approach to subversive crime.

POVERTY AND THE ISSUE OF DEBT
Various projects to map poverty (including the Association of Netherlands Municipalities, VNG)
Municipalities want to take a targeted approach to tackling poverty and are increasingly using data-driven methods. For instance, they use databases that show where the working poor live in a city or which children are at a higher risk of remaining in poverty. This information provides a basis for specific interventions.

Research into statistical patterns
Data can improve the assistance given to people in debt, for example, by helping with detecting the early signs of debt.* The Ministry of Justice and Security (JenV) is investigating whether and how data analyses can also contribute to identifying statistical patterns (and therefore predictions) in the area of debt problems. In a living lab, combined data from Dutch court decisions (Rechtspraak) and the Central Judicial Collection Agency are used for this purpose.

*The Ministry of Social Affairs and Employment (SZW) recently offered the amendment to the Municipal Debt Counselling Act for internet consultation. This amendment will enable municipalities and their mandated bodies to detect the early signs of debt problems.

INFRASTRUCTURE AND SPATIAL BOTTLENECKS
Various projects concerning big data (the Ministry of Infrastructure and Water Management (IenW), Interprovincial Consultative Committee (IPO), Dutch Water Authorities (UvW)
Analyses of big data are already thoroughly exploited for the physical infrastructure. For example, historical data on road use are combined with weather forecasts to determine where the greatest risk of an accident occurring might be. Another example is flood forecasting: data can help in carrying out stress tests and determining escape routes if things go wrong.
Problem solving with a data-driven approach

Jacob van den Borne, farmer and owner of Van den Borne Aardappelen

‘Thanks to open government data, we are able to improve the running of our business’

“On our farm, we use precision agriculture; for example, we use sensors and drones to gather information about the crops. This allows us to determine exactly how much water and fertiliser the potato plants need. As a result, we use 30% less water per tonne of potatoes and 20% less fertiliser. We also share our data with TU Eindhoven: they use this data in their research and that enables our sector to continue to innovate. The government makes a lot of open data available. If I want to lease a plot of land, I can use Boer&Bunder, for example. This is where I can find out exactly what type of soil it is and which crops have been grown there before: this is very important information for a farmer.”

Students are helping to reduce nuisance

In recent years, the municipality of Gouda has seen an increase in the number of nuisance cases in residential areas. These cases include noxious smells, drug addicts and anti-social behaviour. It is going to use students from Utrecht University to find a better approach. Those students will analyse open data from various organisations, including Statistics Netherlands (CBS). Based on these analyses, the students will develop data models that will provide the municipality with insight into possible solutions for each problem.

Start-ups and scale-ups play a very specific role. With their strength in innovation and flexibility, they can play an important role in developing new services and economic activities. The government recognises this important role of start-ups and scale-ups; the Ministry of Economic Affairs and Climate Policy has been focusing on this in its policies for years. In the ‘Start-up in Residence’ programme of the Ministry of the Interior and Kingdom Relations, governments and start-ups collaborate to find innovative ways to solve social problems. Challenges are used to motivate start-ups to come up with a solution for social issues, such as removing natural gas connections from our homes.

Actions

Collecting and sharing the lessons learned from the example projects

- We are taking a data-driven approach to several important social issues; energy transition, manure surplus, subversive crime, poverty and debt issues, as well as infrastructural and environmental bottlenecks. The Ministry of the Interior and Kingdom Relations is gathering the lessons learned from this and taking the initiative to share this knowledge at conferences and meetings, in knowledge networks and via online publications (including digitaleoverheid.nl). (2019 and onwards)

Working with start-ups

- Ministries, municipalities and provinces are working together with start-ups in the Start-up in Residence programme: via challenges they are given the task of using data to solve social challenges. (2019 to 2021)
2 Focusing on legislation and public values

How far is the government allowed to interfere in the privacy of its citizens? In the Data Agenda Government, we take into account the legal and ethical frameworks, and we are working together on new, general principles.

In the public sector, we are looking for a responsible way of dealing with data. We are focusing intently on algorithms: step-by-step instructions that computers need to perform tasks.

On the one hand, we realise the enormous potential that algorithms and artificial intelligence can offer in solving social problems. On the other hand, we wonder how we are allowed to use algorithms and to what extent we should be transparent about it.

Transparency about algorithms
Algorithms can lead to a conscious or unconscious bias or a distorted picture of reality. In machine learning and deep learning, systems no longer carry out the instructions they are given, but they will start making data-driven conclusions and taking follow-up steps. This means that subsequently, it will not always be possible to determine where a result has come from and what a particular decision has been based on. This could place a strain on individual rights. This is why we need to be transparent about algorithms.

In the pursuit of transparency, we must also pay attention to open-source software. This is software that can be accessed, modified and used by everyone. This means that anyone can make improvements to this software and share it free of rights. The government also uses software that may be suitable for this purpose.
Practical questions about the GDPR
The General Data Protection Regulation (GDPR) protects the rights of citizens and imposes restrictions on the use of personal data. For many (government) organisations this still leads to practical questions about the possibilities and restrictions regarding the use of data and the need to exchange knowledge and experiences.

Sharing insights about legal possibilities
Organisations often find that sharing data with other parties takes up a lot of time and prompts legal discussion. One example of this is the municipality of Amsterdam, which in 2018 discovered that a large proportion of debtors were not known to the municipality or debt management agencies. Together with the Central Administrative Office (CAK), the municipality started a pilot scheme for ‘payment arrears in health insurance’ (betalingsachterstand ziektekostenverzekering). The pilot demonstrated that the General Administrative Law Act did indeed provide room for the necessary data to be shared between government organisations. This pilot will now be followed-up in eighty municipalities.

Investigations are still ongoing into the extent to which new legislation or an amendment to existing legislation concerning privacy is required. The Ministry of Justice and Security has prepared a bill aimed at making data processing easier for collaborating parties. If it becomes easier for different parties to process data together, this could lead to a more efficient approach to fighting subversive crime.

The bill also contains several safeguards for the protection of privacy. The Ministry of Justice and Security seeks to proceed with the bill within the foreseeable future, as soon as it has processed the advice that it has received.

Every situation is different
Ethical dilemmas in datafication cannot be resolved simply by defining exactly how executive government bodies need to act. It is impossible to draw up rules for every situation. The integrity policy teaches us that it is better to formulate joint general principles: agreements on how we, as the government, will deal with data responsibly. These principles can be practised via training courses using practical examples.

Actions

Research into algorithms and open-source software
- The Ministry of the Interior and Kingdom Relations, together with the Ministry of Justice and Security, Statistics Netherlands (CBS), the Department for Public Works and Water Management and the Association of Netherlands Municipalities will map out what considerations are involved in deciding whether to publish algorithms. (2019)
- The Ministry of the Interior and Kingdom Relations, together with the Ministry of Justice and Security, are investigating the use of algorithms; together we are developing policies and guidelines concerning transparency about (open) algorithms. (2019)
- The Ministry of the Interior and Kingdom Relations is starting an intergovernmental collaboration on a ‘transparency lab’: a place where applications are developed and tested, aimed at increasing governmental transparency about data, source codes and algorithms. Via this transparency lab, government organisations can exchange knowledge and experiences. (2019)

General principles for the responsible use of data
- The Ministry of the Interior and Kingdom Relations is taking the initiative to formulate government-wide principles for the responsible handling of data. We are using existing initiatives both in the Netherlands and abroad. (2019)
- From its Intergovernmental Programme (IBP), the Ministry of the Interior and Kingdom Relations will draw up a Code of Good Digital Administration for the benefit of intergovernmental collaboration. This Code will also describe what principles the government will apply with respect to the responsible use of data. (2019)

Conferences to share experiences and to make agreements
- This spring, the Ministry of the Ministry of the Interior and Kingdom Relations is organising a national data conference about data and artificial intelligence (AI). This will be followed, possibly in September, by a second international data conference to agree on the government’s international data regulations. (2019)
- The Ministry of the Interior and Kingdom Relations is going to support the National Data Week Den Bosch from 28 October to 2 November: a new annual conference about the applicability of data. The aim is for this conference to become the national, leading event about the opportunities presented by data. (2019)
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Improving the quality of government data and using it more effectively

Data can contribute to a well-functioning administrative and democratic system. To be considered as a government that is service-oriented and transparent, we need to have the right data and be able to share (open) data at the right time and in the right way.

Some government data are open. That is to say: publicly available, free to use and free of copyrights or rights of third parties. To qualify as open data, the data must be easy to find, accessible and reusable. However, according to the privacy legislation, open data may not be traceable to identifiable persons or companies. The Dutch government has open data about every conceivable topic, including the economy, security, transport and health. These data can be found on data.overheid.nl.

**Data are of public importance**

Open government data contribute to a transparent, readily accountable government. Open government data offer companies the possibility to develop new, innovative business models. In addition, government data can benefit citizens and civil society organisations, for example, via initiatives that improve neighbourhood safety. And last but not least, data sharing creates new networks between government, business and civil society organisations.

For a number of years now, the government has been making more and more open data available. The next step will be to improve the quality, usability and findability of that data.

Improving the quality and usability of government data is also carried out within a European framework. The Netherlands are contributing to a new European directive for better re-use of government data.
**Automatic local council information**

WaarOverheid makes clever use of open data. This web application searches all local council documents (such as motions and reports) for the names of districts, neighbourhoods and streets and places them on a geographical map. This gives citizens an insight into when their council will discuss their neighbourhood or district. Users of this website can also set up a notification alert for certain neighbourhoods or topics. They will then automatically receive a message when a new item that matches their interests is added to the council agenda.

**Data in order is a prerequisite**

Data can only be reused if the information is accurate, complete and up-to-date. Moreover, data must be properly managed and used correctly. In short: government organisations must have their data in order. This applies to both closed and open data.

Of course, there are also legal requirements that organisations must comply with. Within Europe, for example, it has been agreed that governments will not unnecessarily request data from citizens and businesses. Important data, such as names and addresses, are listed in the key registers. Citizens and companies are not unnecessarily approached by the government for this information. The cabinet coalition agreement states that the key registers will be modernised and that citizens will have more control of their personal data.

The new Open Government Act (Wet Open Overheid) ensures that the government does a better job of storing and managing data. Part of this Act is the Multi-annual plan for improving data management. At the heart of this is the launch of a National Platform for Public Sector Information (Landelijk Platform Openbare Overheidsinformatie), where all the documents of administrative organisations are made public and can be easily found.

**Demand is key**

When the range of data is better tailored to the demand of the user, data becomes more valuable. That is why data need to be ‘FAIR’: easy to Find, Accessible, Interoperable and Reusable. Reusable, for both man and machine. Part of this is the use of meta data: data about data, such as the subject and the owner of the data.

A collection of data is also called a data set. To increase the use of data sets, we focus on those with the highest social value. These have a high socio-economic added value or contribute significantly to a transparent and more accountable government. We call these high-value datasets.

Many government organisations already have extensive knowledge of and experience with accessing, processing and using data within their own domain. Quite often, they already have a national and international network and already make a substantial amount of data available. These include Statistics Netherlands (CBS) on statistics and the Land Registry in the geo-domain. There is already much cooperation. Such as that between the water boards, provinces and the Department of Public Works and Water Management, all of whom provide access to data regarding the water level management of the waterways.

**Valuable insights for water boards**

Many water boards make their work more efficient by working data-driven. Examples include the smart control of sewage pumping stations (Rijnland water board), optimizing the planning of lawn mowing (Aa and water board Maas) and having/creating a better understanding of the ammonium concentration (De Founding Rhine countries). In all these cases, the water boards are able to perform their task in a more targeted manner. This helps them save time and financial resources.

The government wants to make smart use of these existing resources and collaborations. This will help to create a transparent government and a properly functioning data system. The cooperation between Statistics Netherlands (CBS), the Land Registry and the Dutch Official Publications Office (KOOP) is particularly vital. We must, therefore, ensure that we invest in this. The aim is for the re-user to proceed to one central point: data.overheid.nl.
Actions

Improving the population and business registers of citizens and organisations

- Together with other departments and local authorities, the Ministry of the Interior and Kingdom Relations is developing a vision for a compulsory use of the key registers that will also cover the control of one’s own personal data. (2019)
- Together with administrators and policy-makers, the Ministry of the Interior and Kingdom Relations is making an inventory of all the basic registrations to identify the necessary improvements in the areas of quality and use of data from the system of key registers. This is how we can improve our service to citizens and businesses. (2019)
- The Netherlands Court of Audit will provide the results of its investigation into the key registers, seen from the perspective of citizens and entrepreneurs. (2019)

Improving the government’s data management

- The Ministry of the Interior and Kingdom Relations will improve the usability of geo key registers (such as data on soil substrates and buildings) via clarifying 3D images (2019)
- The Ministry of the Interior and Kingdom Relations, together with the Ministry of Economic Affairs and Climate Policy and the Dutch Standardisation Forum, is creating an inventory of which new standards are required. (2019)
- Together with local and regional governments, the Ministry of the Interior and Kingdom Relations is developing the Multi-annual plan for improving data management. An independent advisory committee of experts is advising about this. (2019)
- The Ministry of the Interior and Kingdom Relations supports and co-finances pilots launched by local and regional governments that focus on improving the government’s data management (2019).

Promoting the re-use of open government data

The following actions are carried out by Statistics Netherlands, the Land Registry and the Dutch Official Publications Office (KOOP) on behalf of the Ministry of the Interior and Kingdom Relations and the Ministry of Economic Affairs and Climate Policy:

- We are improving the quality, traceability, findability and usability of the national open data register, data.overheid.nl, with better data sets and informative texts and visualisations. We are developing specific application examples and will regularly check the central register. (2019 and 2020)
- Together with TU Delft, we will provide the results of an investigation into the requirements of re-users of open data in order to improve the provision of open data. (2019)
- We are organising regular meetings about open data with user groups. (2019 and 2020)
- Together with municipalities, we are improving the government’s high-value data sets, and we are encouraging their reuse by providing a better description of them. (2019 and 2020)
- Together with the Association of Netherlands Municipalities, we are providing a smoother transition for converting data from municipalities into nationwide data sets. (2019 and 2020)
Collecting and sharing knowledge about a data-driven approach

There is considerable knowledge about data-driven approaches available in the public sector, but it is often very fragmented. Part of the Data Agenda Government is to report on the progress of the agenda and to share the available best practices efficiently.

Of course, departments, provinces, municipalities and water boards will remain responsible for the social challenges within their own domain. Not all government organisations can release the same amount of capacity for a data-driven approach. The way in which data is collected and used also differs: one government organisation makes full use of sensors, while another government organisation primarily collects data from administrations or surveys.

Re-inventing the wheel
Quite unintentionally, many areas in the Dutch public sector are reinventing the wheel. Often because organisations do not know how other parties are using data to solve the same type of issue. That is why there is a need for business intelligence about how to take a data-driven approach. This needs to be more than just a library with good examples. It needs to be a living network.

Wider use of municipal initiatives
The municipality of Breda has developed a business intelligence concept (Veiligheidsinformatieknopspunt, VIK). By connecting data sets from different municipal domains and chain partners, the municipality has better insight in the relationships between suspicious individuals and properties. This business intelligence concept can help in the fight against subversive crime. The Association of Netherlands Municipalities is investigating to what extent this concept can also be used — wholly or partially — by other municipalities.

Secure multiparty computation can be a good solution for analysing sensitive data. This allows data to be analysed without making it public. This allows organisations to work together on solutions while maintaining privacy and protecting the interests of every data subject.

Benefiting from forerunners
In addition to being examples of good practice, forerunners can also share their facilities. The advantage of this is that those lagging behind and smaller organisations do not have to create the sometimes costly and complex facilities, such as a data lab.
Some government organisations even have multiple data labs. One example of this is the Ministry of Infrastructure and Water Management that also has access to the data lab of the Department for Public Works and Water Management. As part of this agenda, the Department for Public Works and Water Management also makes this data lab available to other government parties wishing to use it.

**Monitoring with more market knowledge through experimental data analysis**

In a Departmental Data Centre, the knowledge Statistics Netherlands has on data processing is linked to policy questions from central government. For example, the Radiocommunications Agency Netherlands (Agentschap Telecom) is responsible for monitoring LED lamps. Data on the international trade in this product are essential. Statistics Netherlands carried out an experimental analysis in collaboration with the Radiocommunications Agency and the Netherlands Food and Consumer Product Safety Authority (NVWA): data on imports and exports of LED lamps were combined with business characteristics, such as size, economic activity and mode of transport. The results will enable the Radiocommunications Agency to perform its monitoring tasks with greater knowledge of the market, thus enabling it to operate more efficiently.

Within the public sector, there is a need for support for a data-driven approach, such as regarding questions about the application of the GDPR. The starting point is always that a public body must take legally founded decisions itself, but it must also be able to turn to a (possibly temporary) help desk for its questions. It is also important for organisations to be able to test the extent of its data-driven approach. Organisations can do this by using the so-called self-assessment on data governance.

**Actions**

**Sharing knowledge about responsible data-sharing**

- Together with Statistics Netherlands and Logius, the Ministry of the Interior and Kingdom Relations is conducting various experiments involving big data. Insight into patterns of users allows us to improve, for instance, mijnoverheid.nl.

We are sharing the experience that we are gaining from experiments on big data. (2019 and 2020)

- In the coming years, Statistics Netherlands in collaboration with universities and non-profit organisations, will conduct experiments regarding the use of secure multiparty computation and encryption for new data analyses of sensitive data that many parties are working on at the same time. (2019 and 2020)

- The Ministry of the Interior and Kingdom Relations is expanding the (Big) Data Knowledge Platform with representatives of provinces, municipalities and water boards. They will join the 250 (data) specialists who have already forged connections via the platform. (2019 and 2020)

- The Ministry of the Interior and Kingdom Relations will provide an overview of best practices of a data-driven approach on digitaleoverheid.nl and will regularly add examples. (2019 and 2020)

**Making facilities available**

- The Ministry of Infrastructure and Water Management is investigating together with all data labs within central government how these data labs can optimally work together. The results of this investigation will be shared with other departments and authorities. (2019)

**Information point for connecting and sharing knowledge**

- The Ministry of the Interior and Kingdom Relations will develop the current Open Government Learning and Expertise Centre (LEOO Expertise Centre) into the Data-Driven Approach Learning and Expertise Centre. This information centre will act as a driver and is aimed at connecting (government) organisations. We are working together with the Ministry of Economic Affairs and Climate Policy, the Ministry of Justice and Security, the Association of Netherlands Municipalities and Statistics Netherlands. (2019)

- In the Data-Driven Approach Learning and Expertise Centre, we are developing a toolkit for governments to enable them to formulate data-driven policies. This toolkit contains answers to frequently asked questions (FAQs), a step-by-step plan, best practices and definitions. (2019 and 2020)

**Facilitating self-assessment**

- In cooperation with I-Interim Rijk, the Ministry of the Interior and Kingdom Relations will produce a self-assessment on data governance, which can be used by all government organisations. (2019)
Investing in people, organisations and changes in corporate culture

The shift towards a data-driven approach cannot be achieved with a few simple measures, such as training and providing good examples. It requires a change in corporate culture as well as the employees.

To adopt a data-driven approach, people need a number of skills, such as a feeling for numbers and being able to perform simple analyses in Excel. This is where the government can make some improvements with their current staff. Particularly in smaller organisations, such as small municipalities or partnerships. Furthermore, municipalities have been given a lot of additional tasks in recent years and complexity has increased. Basic knowledge of data among current staff is essential to harness the power of data within the public sector.

Chatbot makes services more efficient
The Education Executive Agency (Dienst Uitvoering Onderwijs) has conducted a pilot with a chatbot: an automated conversation partner. Using artificial intelligence (AI) technology, this chatbot analyses incoming questions from students and connects them to the most likely answers. The aim of this chatbot is not only to make the service more efficient, but also more user friendly.

Training for current staff entails more than learning basic data skills, it also involves raising awareness about the possibilities of data. Ethical issues also need to be raised. This is important for the data scientist, but also very explicitly for the rest of the staff. Policy-makers especially need to be trained in what they can and are allowed to do with data. If necessary, the government — together with scientists — can develop a government-wide data dilemma-training programme.
Multiple existing initiatives
There are many initiatives for establishing or adapting training and data-related training and courses. RADIO (Rijksacademie voor Digitalisering en Informatisering Overheid, the Governmental Academy for Digitalisation and Computerisation of the Government) for example, developed a digital learning course on artificial intelligence, which started in January 2019 and which is available to every civil servant in the Netherlands. Universities, university colleges, Higher Vocational Education and market parties offer training courses on data-driven policies and working with data. Furthermore, the Ministry of Infrastructure and Water Management commissioned Leiden University to develop a knowledge and change programme for middle management. The aim of this programme is to enfold a data-driven approach into the existing way of working.

In addition to training courses, events such as ‘hackathons’ and ‘data challenges’ are also a way to come into contact with data: in a short period time, participants learn what data are available and what possibilities they offer.

An attractive employer for data scientists
The government wants to be an attractive employer for data scientists; a sought-after profession at the moment. In order to recruit and retain those employees for the government in this time of great demand, government organisations must place these employees in teams where they have room to innovate. The availability of facilities and the career prospects are also important prerequisites.

Relevant data make the government an attractive employer
The province of Zuid-Holland has large amounts of data at its disposal that could be used to solve major social issues. Many data specialists believe this is important. This is also known as public sector motivation. The province also gives its employees plenty of space to innovate and the prospect of constantly tackling new issues, in a different department and with a different team. It turns out that it is definitely possible to attract the right type of people.

Data scientist is a collective name for a whole range of functions; the shortages are mainly in related functions, such as data engineers. An important point of attention is the gap between policy officers and data specialists. This gap requires investment in mutual understanding and co-creation. This can be achieved through training, focusing on creating strong contacts and active knowledge transfer.

Rapid new insights because of data matches
During a ‘data match’, for a few days employees of Statistics Netherlands work in a laboratory environment with staff from a particular government organisation. Linking data from Statistics Netherlands to data of the government organisation can result in gaining new insights very quickly.

Trainees also play a role in linking policy with data science. Not only because of their valuable contribution to data projects, like writing their thesis, but also because such a project is a good introduction to the government organisation and its people, possibilities and purposes. This may make it easier for trainees to become employees upon graduating.

There are several initiatives to recruit (young) data and IT professionals for the government. For example, the Data Science trainee scheme that forms part of the umbrella Public Sector Business Support Agency (UBR) and the Government IT trainee scheme.

In the Netherlands, we need to do more to improve our IT knowledge and to prevent that knowledge from going abroad. At present, 62.4% of international students leave the Netherlands after completing an IT-related degree. With the current student numbers, that equates to more than 1200 students studying for an academic degree.
Erwin Haas, data scientist and co-founder of Landscape: a start-up in data science

‘A specific problem is best solved by breaking it down into small steps’

“As a start-up, we help organisations make smart use of data. A data-driven approach is not achieved by using a checklist, it is rather like a puzzle. Sometimes it is simple, and sometimes it is very complicated. The key questions need to be: what information do I have and what do I want to achieve with it? Basic knowledge of how to take a data-driven approach is crucial in this respect. How does it work? And what are the consequences? There are many organisations that could give this more consideration. Government and businesses have a tendency to look for a single global solution to all problems. It often works better to solve specific problems in small steps. Governments can learn from start-ups, because they deliver solutions as efficiently as possible and always test them in practice. I think it is a positive development that they want to work with start-ups more.”

Actions

Training and knowledge and change programmes
- The Ministry of the Interior and Kingdom Relations provides a professional development programme for creating data-driven policies via RADIO (Rijksacademie voor Digitalisering en Informatisering Overheid, the Governmental Academy for Digitalisation and Computerisation of the Government). We are investigating whether this training should become a standard or even a mandatory part of the employee development plan. (2019)
- Together with the Ministry of Infrastructure and Water Management and Leiden University, the Ministry of the Interior and Kingdom Relations is investigating how the knowledge and change programme for middle management can be used by other departments and authorities. (2019)
- The Ministry of the Interior and Kingdom Relations will determine if and how the Data Science trainee scheme should be expanded. (2019)

Keeping international students in the Netherlands
- The Ministry of the Interior and Kingdom Relations together with the Association of Universities in the Netherlands (VSNU), NL ICT, Nuffic and Talent Coalition Netherlands is drafting a coherent approach containing measures to increase the ‘stay rate’ of international students in the Netherlands. (2019)

Connecting policy and data science
- Via the Data-Driven Approach Learning and Expertise Centre, the Ministry of the Interior and Kingdom Relations is investigating how the University Data Science Centres can use their knowledge and expertise to encourage a data-driven approach within the government. Government organisations will bring a policy problem and specific expertise about an issue, and the universities provide expertise about the organisation and techniques of working with a data-driven approach. (2019 to 2021)
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Financing

The Data Agenda Government is an ambitious agenda with a corresponding price tag. To ensure a successful start, we have reserved more than EUR 2.5 million for 2019.

For 2020 and 2021 intergovernmental, innovative activities with government-wide effects will be proposed for funding from the Digital Government Investment Post. This Investment Post is the joint funding source of the central and local governments, intended to jointly tackle and finance tasks concerning digital government.

Insofar as the activities will not be financed from the Investment Post from 2020 onwards, the Ministry of the Interior and Kingdom Relation will look for alternative cover in consultation with the other government parties.

Costs for action points in the Data Agenda Government (amounts in thousands of euros)*

<table>
<thead>
<tr>
<th>Action Point</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>National data dialogue (including congress)</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Vision development and research</td>
<td>100</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Data-Driven Approach Learning and Expertise Centre</td>
<td>700</td>
<td>700</td>
<td>700</td>
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<tr>
<td>Data labs and experiments on social challenges</td>
<td>500</td>
<td>500</td>
<td>500</td>
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<tr>
<td>(Open) data system</td>
<td>550</td>
<td>500</td>
<td>500</td>
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<tr>
<td>Training, learning network, knowledge exchange</td>
<td>300</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Advisory board on the progress of the Open Government Act (Wet Open Overheid) Multi-annual plan</td>
<td>50</td>
<td>75</td>
<td>100</td>
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<tr>
<td>Innovative pilot projects on data management</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>2,550</td>
<td>2,575*</td>
<td>2,600*</td>
</tr>
</tbody>
</table>

*Figures excluding the continued development of the agenda from 2020 onwards.
Overview of the action points

1 Problem-solving with a data-driven approach
   • Knowledge sharing of selected example projects. (2019 and onwards)
   • Start-up in Residence programme. (2019 to 2021)

2 Focusing on legislation and public values
   • Considerations for publishing mapped out algorithms. (2019)
   • Policy concerning transparency about (open) algorithms. (2019)
   • Developing a transparency lab. (2019)
   • Government principles for the responsible handling of data. (2019)
   • Organising the national data conference about data and artificial intelligence. (2019)
   • Organising the second (international) data conference about data regulations. (possibly in May 2019)
   • Code of Good Digital Administration. (2019)
   • Supporting the National Data Week Den Bosch. (2019)

3 Improving the quality of government data and using it more efficiently.
   • Vision on more compulsory use of key registers. (2019)
   • Inventory of areas for improvement in the system of key registers. (2019)
   • Completion of the report by the Netherlands Court of Audit on the key registers. (2019)
   • Improved usability of geo-key registers. (2019)
   • Inventory of new standards required. (2019)
   • Developing the Multi-annual plan for improving data management. (2019)
   • Supporting and co-financing data management pilots. (2019 and onwards)
   • Improving data.overheid.nl. (2019 and 2020)
   • Results of the investigation into the requirements of re-users of open data. (2019)
   • Organising meetings about open data with user groups. (2019 and 2020)
   • Improving the government’s high-value data sets. (2019 and 2020)
   • Linking data from municipalities to national data sets. (2019 and 2020)

4 Collecting and sharing knowledge about a data-driven approach
   • Various big data experiments concerning MijnOverheid. (2019 and 2020)
   • Experiments using secure multi-party computation and encryption for data analyses. (2019 and 2020)
   • Expanding Central Government’s (Big) Data Knowledge Platform with representatives of provinces, municipalities and water boards. (2019 and 2020)
   • Up-to-date overview of best practices of a data-driven approach on digitaleoverheid.nl. (2019 and 2020)
   • Research into cooperation between data labs within the government. (2019)
   • Developing the current Open Government Learning and Expertise Centre (LEOO Expertise Centre) into the Data-Driven Approach Learning and Expertise Centre. (2019)
   • Toolkit for data-driven policies for governments. (2019 and 2020)
   • Developing the self-assessment on data governance which can be used by all government organisations. (2019)

5 Investing in people, organisations and changes in corporate culture.
   • Developing the professional development programme: data-driven policies. (2019)
   • Research into possibilities to make wider use of the knowledge and change programme for middle management. (2019)
   • Package of measures in order to increase the ‘stay rate’ of international students in the Netherlands. (2019)
   • Research into expanding the Data Science trainee scheme. (2019 to 2021)
   • Cooperation with University Data Science Centres to promote a data-driven approach within the government. (2019 to 2021)
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The following parties are represented in this consultation:

CIO-Rijk
The Association of Dutch Provinces (IPO)
Ministry of the Interior and Kingdom Relations
Ministry of Economic Affairs and Climate Policy of the Netherlands
Ministry of Infrastructure and Water Management
Ministry of Justice and Security
Ministry of Education, Culture and Science
Ministry of Social Affairs and Employment
Ministry of Health, Welfare and Sport
Logius
Dutch Water Authorities
Cooperation Agency of the Association of Netherlands Municipalities

Other parties involved:

Department of Public Works and Water Management
Statistics Netherlands

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www.nldigitalgovernment.nl
www.rijksoverheid.nl
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