

Raad
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Answers to questionnaire: The Netherlands



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Questionnaire: The Netherlands

Digital decision-making

The use of 'Big Data' and algorithms enables decisions to be taken more rapidly and more frequently, for example on whether to issue permits, award grants or pay benefits. Critics warn of 'government by robots' that is hard to keep in check, while proponents argue that such technology will improve the justification and efficiency of decision-making.

1. *Do administrative bodies in your country make use of automated decision-making? By 'automated decision-making' we mean decisions based on automated files or computer models.*

If yes, please provide an example. Please also indicate what consequences automated decision-making has for you when assessing decisions in a judicial capacity and/or what particular aspects you have to consider when drafting advisory opinions on legislative proposals relating to this topic.

If no, is there a public debate in your country on this issue? Is the introduction of such a system under consideration? What advantages and disadvantages have been identified?

Big data

Big data essentially means collecting large quantities of information to look for patterns. These patterns can then be used to make predictions, identify correlations and generate risk reports.

The Netherlands uses the Risk Indication System (*Systeem Risico-Indicatie*; SyRI) for this purpose. Under Dutch law, 17 types of personal data may be used in this way. The use of such data requires the exchange of information among public bodies that have been granted the necessary powers by law. To this end, two or more municipal executives, administrative authorities or supervisory bodies may establish partnerships to share data on social security or taxation. The aim of these efforts is to prevent and combat unlawful use of public funds and public provisions relating to social security and income-related schemes, and to prevent and combat tax and social insurance fraud or non-compliance with employment legislation. The bodies involved in such partnerships supply data to the Benefits Intelligence Agency (*Inlichtingenbureau*). This agency encrypts the data so that it cannot be traced to individuals, and integrates the files using one of the risk models adopted by the Minister of Social Affairs and Employment. The system then generates a number of 'hits', i.e. cases of potential fraud. Only the hits are decrypted and analysed by the Social Affairs and Employment Inspectorate. The minister decides if risk reports are required, and if so, submits them to the competent administrative authority along with the relevant data. For SyRI purposes, the minister is therefore responsible for analysing and supplying the data. After a risk report has been submitted to the competent administrative authority, the specific risks identified by SyRI must be investigated and the findings of that investigation may be used for a subsequent decision.

Using big data for automated decision-making

Public authorities in the Netherlands can use big data to make automated decisions. Automated decision-making takes less time and is therefore more efficient. The time gained can be spent on more complex decisions in which multiple factors have to be taken into account. Automated decision-making is fairly common in the Netherlands. Here are two examples:

- Automated decision-making for taxation purposes: Before tax is levied, taxpayers in the Netherlands have to file a tax return. All tax returns are placed in a large database. A computer program then selects suspicious tax returns, which are subjected to further checks by a tax inspector. An automated tax assessment is issued for all 'non-suspect' tax returns. Taxation of the income of private individuals is therefore largely automated in the Netherlands.

- A recent case about automated decision-making heard by a Dutch administrative court: It concerned the PAS programme, which aims to protect nature areas by regulating the deposition of nitrogen. When deciding whether to issue a permit, use is made of the AERIUS Calculator, a software program that determines whether the nitrogen deposition resulting from a particular project will have a disruptive impact on a nature area. Depending on the outcome, a permit may be issued automatically.

In this case, the Administrative Jurisdiction Division of the Council of State (*Afdeling Bestuursrechtspraak van de Raad van State*) made several important pronouncements on fully and partly automated decision-making.

It noted that with this method of decision-making, the assessment process may be non-transparent and unverifiable due to the lack of information on the choices made and the underlying data and assumptions. The decision-making process is a 'black box'. This could result in the parties to a legal dispute finding themselves in an unequal position, which is at odds with the 'equality of arms' principle. How the various highest administrative courts deal with this is an interesting issue for discussion in the context of this questionnaire.

To provide legal protection and prevent violations of the equality of arms principle between litigants in the Netherlands, the Council of State has ruled that, where decisions are fully or partly automated, the minister or state secretary concerned must voluntarily disclose, in full and in a timely fashion, the choices made and the data used. This is intended to enable the choices, data and assumptions to be assessed and, if necessary, contested in a reasoned manner. This makes it possible for there to be genuine legal protection against fully or partly automated decisions, and enables the courts to review the legality of such decisions.

Administrative courts have not so far found it necessary for there to be an explicit legal provision requiring the disclosure of such information, but the growing use of software may require this in the future.

Automated fines

Finally, it is worth noting that decisions on imposing fines may also be automated in the Netherlands. A machine identifies an offence and automatically imposes a fine. However, this does not involve big data. Most automated fines are for traffic offences, such as those detected by speed cameras.

Do you consider this topic suitable for a more detailed exchange of ideas at the Colloquium and, if so, what aspects of this topic warrant discussion?

Yes, we consider this to be a suitable topic for discussion at the colloquium. An interesting question in this regard is how the judiciary deals with automated decisions. How do the various administrative courts ensure that private individuals who are affected by automated decisions enjoy sufficient legal protection? Is a legal basis required for using computer systems for decision-making purposes? Which decisions can be made by computer systems and which cannot? What standards (e.g. regarding transparency) must automated decision-making systems meet?

Digital proceedings

An increasing number of countries now permit (or require) proceedings to be conducted digitally. The benefits of such a system are usually emphasised (e.g. efficiency gains), but how do digital proceedings relate in practice to principles such as access to the courts?

- 2. Are digital (paperless) forms of legal proceedings used in your country? Is it possible in your country to conduct proceedings digitally, for example online? If so, is this optional or mandatory?*

If yes, please describe your experiences, positive and/or negative.

If no, would you like to see the introduction of digital proceedings in your country? Is this under consideration? Is there a public debate on this issue? What advantages and disadvantages have been identified?

Digitalisation project

The Dutch government and judiciary have launched a digitalisation project called Quality and Innovation. Digital legal proceedings form part of this project. The introduction of digital proceedings is designed to improve access to the legal system, speed up the course of justice and make the system better able to cater for individual needs.

A digital environment has been created for this purpose. To access this digital environment, private individuals must log in to a web portal using a login code available from the government on request.

There are three web portals for administrative law: one for proceedings before district courts (*rechtbanken*), one for proceedings before the Council of State and one for tax proceedings before the Supreme Court (*Hoge Raad*).

Digital proceedings before district courts

As regards district courts, digital proceedings are compulsory in asylum and immigration detention cases if they concern decisions taken on or after 12 June 2017. Next year, digital proceedings will also be phased in for general cases involving immigration law. For all other administrative law cases, digital proceedings are not yet an option.

What do compulsory digital proceedings before district courts entail? Digital proceedings are in any event compulsory for professional parties, such as lawyers and administrative authorities. But private individuals can still opt for paper-based proceedings. Digital proceedings can be initiated online. Documents in the action must be submitted in digital form. Messages and communications can be sent to the district court online. The hearings remain the same, but the parties can take their documents to a hearing in digital form. The parties are notified of any developments in their case via the web portal. They subsequently receive the court's judgment online.

Appeals in immigration law cases are heard by the Council of State.

Digital proceedings before the Council of State

It is not yet compulsory for appeal proceedings in asylum and immigration detention cases to be conducted digitally. However, the Administrative Jurisdiction Division is phasing in the option of digital proceedings for lawyers. Conducting appeal proceedings in asylum and immigration detention cases digitally will not become compulsory until the web portal has proved to be efficient, reliable and safe. If a party opts for digital proceedings, this will have the same implications as the use of digital proceedings before a district court.

Digital tax proceedings before the Supreme Court

Tax proceedings under administrative law cannot yet be conducted digitally. However, written remarks in tax cases may be submitted in digital form, and lists of questions referred for a preliminary ruling under tax and civil law are available on the web portal.

Maintenance or technical faults

Parties can access a webpage showing when maintenance is scheduled or whether the website is unavailable due to technical issues. Website downtime could prevent submission deadlines from being met. A provision has been added to Dutch law to cover this. A party's failure to meet a deadline for submission is excusable if, on the day before the deadline expires, a technical fault occurs that cannot be attributed to that party and they submit the message concerned on the day after they could be expected to know that the fault has been fixed. The precise circumstances in which a technical fault is or is not attributable to a party are yet to be determined by case law. If the digital system of the judicial body in question is not working, users of that system will in any case not be held responsible.

Experience of digital proceedings

The Netherlands only recently began introducing compulsory digital proceedings. This will be a gradual process. There has not yet been an evaluation.

Do you consider this topic suitable for a more detailed exchange of ideas at the Colloquium and, if so, what aspects of this topic warrant discussion?

We do not consider this to be a suitable topic for discussion at the colloquium. Although the topic is interesting, a discussion would mainly involve sharing experiences of digital proceedings, and the focus would quickly shift to ICT and operational matters, which are less suitable for the colloquium.

Digital dispute settlement in the public sector without involving the courts

If a party knows in advance that they have virtually no chance of winning a case, there is little point in instituting proceedings. Computer programs can analyse tens of thousands of judgments and use the results to predict the outcome and the chance of success or failure.

3. *In your country, are you aware of parties using computer systems within the public domain in the settlement of disputes prior to possible court proceedings? Examples may include systems that predict the outcomes of new cases on the basis of case law analysis, allowing parties to decide whether or not to pursue legal proceedings or settle out of court.*

If yes, please provide an example. Is it only parties to proceedings that make use of such systems, or do the courts also use them to assist them in reaching judgments? Is there any debate in your country on the use of such systems, for example in relation to fundamental rights and legal protection?

If no, would you like to see such systems introduced? Is this under consideration? Is there a public debate in your country on this issue? What advantages and disadvantages have been identified?

Use of computer systems for settling disputes in the public sector

The Dutch public sector does not use computer programs that can predict the outcome of legal proceedings. This issue is, however, discussed in the literature, and large commercial law firms, especially those with an international focus, are known to be experimenting with such software, as part of the development of artificial intelligence (AI).

Three possible uses of computer systems for digital dispute settlement in the public sector are:

- Giving parties access to a knowledge-based system via a portal. This would enable them to access legally relevant information and better estimate their chances of winning in court proceedings and the legal soundness of their arguments.
- Giving parties access to an expert system via a portal. This system uses a questionnaire and a decision tree, and arrives at a conclusion based on the information requested. This, too, would allow parties to estimate their chances of success.
- Using early case assessment (ECA) methods. On the basis of a collection of documents, the computer analyses and estimates the risks and costs of instituting legal proceedings.

An advantage of using computer systems is that parties obtain insight into the costs and their chances of success in any legal proceedings at an earlier stage. They can then make a more informed decision on whether to institute proceedings.

Use of computer systems for dispute settlement by the judiciary

The Dutch judiciary often uses knowledge-based systems that provide easy access to a great deal of legally relevant information. These systems are maintained by commercial providers, courts and the government.

The Dutch judiciary does not use an expert system. However, judges could use such a system to prepare a hearing or decision. Cases about decisions based on legislation that can readily be turned into a questionnaire and a decision tree are more suitable for the use of an expert system than decisions based on regulatory frameworks involving open standards. The judiciary could accordingly choose to use an expert system for assistance when giving judgments on certain categories of disputes.

Public debate on use of computer systems for settling disputes

As far as we know, there is not yet a public debate on this issue in the Netherlands.

Do you consider this topic suitable for a more detailed exchange of ideas at the Colloquium and, if so, what aspects of this topic warrant discussion?

Yes, we consider this topic to be suitable for discussion at the colloquium. Digital dispute settlement in the public sector, without any involvement of the courts, does not yet exist in the Netherlands. However, it could still be discussed, because the use of computer systems for this purpose would give the public far more insight into the costs and consequences of initiating proceedings. The discussion could look at how different countries might apply digital dispute settlement to private individuals.

We regard the use of computer systems for the digital settlement of disputes by the judiciary to be a suitable topic for discussion at the colloquium. A system like Technology Assisted Review (TAR) has a great deal to offer the judiciary, but it also has drawbacks. The advantages and disadvantages of such a system could be discussed at the colloquium.

Technology-neutral legislation

If a statutory definition contains the words 'written' or 'in writing', does the definition also apply in a paperless context? If a self-driving car causes an accident, who is liable? The software manufacturer?

4. *Does your country have experience of legislation framed in a way that is technology-neutral or that otherwise takes account of future technological developments?*

If yes, please provide an example in the context of your legislative advisory role and indicate whether or not the legislation in question succeeded in this regard and why.

If no, does the lack of such legislation cause problems in your society or in other respects? Please provide an example.

Technology-neutral legislation

In fulfilling its legislative role, the government must ensure that legislation allows room for new developments. In other words, legislation must be future-proof. The Netherlands seeks to achieve this by using technology-neutral standards. To that end, the legislature employs standards that allow the use of several types of technology. The focus is mainly on the application of standards and not on specifying which technologies must be used.

One area in which the Dutch government uses technology-neutral provisions is environmental legislation. For instance, peremptory law requires the 'best available techniques' to be used, but leaves the choice of technology open. The 'best available techniques' requirement ensures that the techniques that are most effective in preventing or limiting adverse environmental impacts are used. The legislature has indicated that, when determining what the best available techniques are, account must be taken of costs, benefits, economic viability, feasibility and the obtainability of the technology.

The legislature is currently modernising the Dutch constitution. For instance, the constitution contains a provision protecting communication by correspondence, telegraph or telephone. The protection provided by this provision is no longer sufficient, in view of new developments like email and instant messaging protocols. The procedure for amending the constitution has already begun, and the bill was approved by the previous parliament. The present parliament will vote on the bill again in the near future.

How does the government ensure good technology-neutral legislation?

It is important to ensure that technology-neutral legislation has the desired effects. A balance must be struck between allowing room for innovation and safeguarding interests such as legal certainty. The Dutch government uses the following instruments to make legislation more future-proof and innovation-friendly:

- Feedback mechanisms: Such mechanisms provide information on the actual effects of existing legislation. The Netherlands has created various options allowing businesses in particular to report legislative problems that impede innovation. Several ministries have launched a programme in which businesses and policymakers work together to eliminate obstacles to innovation. The feedback provided and the findings of any evaluations can be taken into account when adopting new legislation.
- Including the 'right to challenge' in legislation: This allows citizens and businesses to achieve the objective of the legislation concerned in a different manner. Civil society organisations are allowed to perform municipal tasks themselves or pursue goals in what they consider to be the best way. An example is the equivalence provision included in the Buildings Decree (*Bouwbesluit*). Even if an initiative fails to meet the conditions set out in the Decree, a permit may still be issued provided other relevant standards are satisfied, such as those relating to

safety, energy conservation and practicability. This means that innovative initiatives that do not meet the conditions set out in the Decree can still be given a chance.

- Enacting legislation or legislative provisions allowing experiments: Including an experimentation provision in a piece of legislation enables small-scale experiments to be performed to try out new technology and assess the statute's effectiveness. An act of parliament allowing experimentation can also be passed. In the Netherlands we are currently working on a Self-Driving Vehicles (Experiments) Act (*Experimenteerwet voor zelfrijdende voertuigen*). This Act will make it possible to issue permits for testing self-driving vehicles on the public highway without a driver being present in the vehicle. On the basis of the practical tests carried out, the minister concerned may then decide to amend legislation to bring it into line with new developments. The use of provisions and legislation on experimentation also enables the judiciary to experiment with new techniques, provided it is presented with a relevant dispute between particular litigants.

Has the use of technology-neutral terminology produced results?

The use of technology-neutral terminology has not yet been evaluated in the Netherlands, so it is impossible to answer this question at this stage. However, the Advisory Division (*Afdeling advisering*) of the Council of State, together with the Ministry of the Interior and Kingdom Relations, the Data Protection Authority (*Autoriteit Persoonsgegevens*) and other parties, is currently examining how digitalisation and legislation interact. The Council of State is considering developing a number of concepts, including on the subject of technology-neutral terms.

5. *How do the courts (administrative or otherwise) in your country deal with legislation that is framed in terms of specific technologies? Do they apply strict interpretations in such cases or is it possible, or even customary, to apply a broader interpretation in order to resolve a problem? Is there any form of debate on this topic, for example with regard to fundamental rights?*

How should courts deal with 'outdated' laws?

A statute's wording and history and the accompanying explanatory memorandum form the starting point for establishing what the law requires; statutes are, after all, enacted democratically and derive their legitimacy from this fact. Courts can make use of various methods when interpreting a legislative text. One of them is the teleological method, which involves looking at the purpose and purport of the legislation in question. Another is the legal history method, which involves looking at the legislature's intention when it enacted the provision. A court can also interpret a statute by examining the system of the law. The idea is that courts should use the scope available to find a reasonable solution. Finally, another important question is whether international treaties and EU law apply to a particular case; if international or EU standards that have direct effect apply, they take precedence over the legislative text (regardless of whether or not it is outdated).

An example from Dutch case law is the RuneScape judgment. This case concerned the theft of a virtual amulet in the online game RuneScape. In Dutch criminal law, the term 'theft' is only applicable to goods. This raised the question of whether a virtual object could be characterised as a 'good'. The highest criminal court looked at what the legislature's intention must have been when it introduced the legislation in 1886. Its intention was to protect a rightholder's control over any good they owned. The court finally ruled that the virtual nature of the object did not prevent its characterisation as a 'good'. It also held that there would be plenty of borderline cases in which characterisation as a 'good' would depend on the specific circumstances and the court's assessment.

The Dutch judiciary therefore has various means for arriving at a reasonable outcome even though the legislation in question may not be tailored to new technologies. If, however, a statute is worded so clearly that it leaves the court with no room for manoeuvre, it is up to the legislature to amend it.

Debate on fundamental rights

There is a debate in the Netherlands on the use of technology-neutral legislation. Technology-neutral legislation is said to *enhance* citizens' legal certainty, because legislation containing more technology-neutral terminology will not become outdated as quickly, and there will be less need for courts to stretch the meaning of legislative texts when interpreting them. At the same time, however, technology-neutral legislation is said to *undermine* legal certainty, because the legislature has to use 'vaguer' terminology so that the legislation can cover possible future developments. The use of terms that can be interpreted in several ways will reduce people's legal certainty.

Government must avoid expanding its own powers excessively by deliberately choosing broad terms. For instance, the Council of State believes that the SyRI Decree (see under 'Digital decision-making' above) uses terms that are not sufficiently precise. As a result, several public bodies, including the intelligence services, have been given wide-ranging powers to use personal data. This has been heavily criticised in the Dutch media.

The legislature needs to find the right balance by adopting technology-neutral terminology that leaves room for new developments without being 'too vague'. It must ensure that powers are well defined so that the public know where they stand. To ensure that legislation is effective, it is necessary to understand its actual effects. The above-mentioned instruments can be used for this purpose.

Do you consider this topic suitable for a more detailed exchange of ideas at the Colloquium and, if so, what aspects of this topic warrant discussion?

Yes, we consider this topic to be suitable for discussion at the colloquium. Possible questions include: What aspects of technology-neutral legislation should a legislative adviser focus on? What safeguards should technology-neutral legislation offer? How should courts deal with the interpretation of provisions that are not technology-neutral? Is the use of technology-neutral terminology really the right solution?

Digital enforcement

More and more European countries are using digital data to enforce a range of legislation. In the Netherlands, digital data is used for a variety of purposes, such as vehicle speed checks on motorways and in lorries (by means of a tachograph), corporate and private tax returns filed online, and risk profiles developed by law enforcement authorities. In terms of fundamental rights and other such issues, what are the legal boundaries of digital enforcement?

6. *Do you know of cases in your country where automated data analyses are used for enforcement-related purposes, for instance to identify risk profiles? Perhaps the tax authorities use data analysis from various sources, for example, to perform targeted audits?*

If yes, please provide an example. What specific angles of approach do you, as a legislative adviser and/or administrative judge, consider important in this regard?

If no, is the introduction of digital enforcement under consideration? Is there a public debate in your country on this issue? What advantages and disadvantages have been identified?

Use of data analyses for risk reports

In the Netherlands several public bodies use data analyses that can generate reports on cases in which there is an elevated risk of fraud. They can then specifically investigate these cases. This may lead to the imposition of fines. For information on the system used for this purpose, see under 'Digital decision-making' above.

In the Netherlands there are also automated decisions imposing fines. A machine identifies an offence and automatically imposes a fine. Most automated fines are for traffic offences, such as those detected by speed cameras.

Digital enforcement is therefore used on a large scale in the Netherlands.

What aspects of digital enforcement do legislative advisers focus on?

The Council of State examines whether the purpose for which data is used is sufficiently restricted by the legislation in question. This is known as the principle of purpose limitation. Data may only be used for purposes that are clearly and precisely defined by law.

The Council of State examines whether it is clear to the public when and for what purpose their data will be used. This must be 'foreseeable'. This prevents public bodies from making arbitrary or unnecessary use of data analyses – which is in line with the data minimisation principle. This means that when collecting and analysing personal data, it is not permissible to use more data than is necessary to achieve the purpose for which it is being used. The legislature must lay down when each instrument is to be used.

The Council of State checks that the 'select before you collect' principle is applied. This means that personal data must be selected in advance, in accordance with objective indicators. This ensures that only necessary data is used.

Finally, the Council of State examines whether the processing of personal data and the associated interference with the right to respect for private and family life are necessary in a democratic society for the purposes set out in article 8, paragraph 2 of the European Convention on Human Rights. This will be the case only if the proportionality and subsidiarity principles are satisfied. A measure is proportionate only if such interference is not disproportionate in relation to the objective of processing personal data. The subsidiarity test assesses whether the objective of processing personal data can

be achieved in a different manner that interferes less with privacy. It is therefore important for the legislature to keep in mind the fundamental right to privacy where the use of data is concerned.

What aspects of digital enforcement do administrative courts mainly focus on?

Administrative courts mainly focus on the transparency of public bodies' decision-making processes. The Council of State noted in the above-mentioned PAS-AERIUS case that if decisions are fully or partly automated, the assessment made in arriving at them may be non-transparent and unverifiable due to the lack of information on the choices made and the underlying data and assumptions. Administrative authorities that use digital systems must therefore voluntarily disclose, in full and in a timely fashion, the choices made and the data used. In this way, administrative courts try to ensure that the authorities and the public enjoy equality of arms in the event of a legal dispute.

Do you consider this topic suitable for a more detailed exchange of ideas at the Colloquium and, if so, what aspects of this topic warrant discussion?

Yes, we consider this topic to be suitable for discussion at the colloquium. We think it would be a good idea to discuss this in conjunction with digital decision-making, since the two subjects overlap. Possible enforcement-related questions include: How is it ensured that all the relevant circumstances are taken into consideration when making an enforcement decision? In what areas can digital enforcement be used, and in what areas can it not be used? What should legislative advisers focus on and what should courts focus on?

Open-ended question for administrative jurisdictions

Are there technological developments (other than those already mentioned) that you believe will soon have far-reaching consequences for administrative courts (particularly developments you have already encountered or expect to encounter)?

Please list these developments in order of importance and explain why you consider them significant. Please also indicate whether you would like to discuss one or more of these topics in more detail in The Hague.

In this context, the most relevant topic to discuss at the colloquium is Technology Assisted Review (TAR). The aim of TAR is to automate the collation and classification of large document collections. This enables judges, for example, to quickly inspect the case law relevant to a particular case. In the United States, TAR is already applied on a regular basis, mainly because the law there consists predominantly of case law. It is therefore important for the correct and relevant case law to be found quickly, without having to search entire databases manually. TAR offers a good solution. A self-learning computer system can be used for this purpose. Experts first give the computer system feedback on the accuracy of document classification, and this enables the system to learn to classify correctly. Once the system can do this, judges can make use of it. Relevant case law can then be found quickly and you can be more certain that you will get to see all the decisions that are relevant. This is particularly useful in cases where large quantities of documents are used. The system then selects what is relevant to the case in question. The development of TAR opens up many possibilities for the judiciary and it would therefore be an interesting topic to discuss at the colloquium.

Open-ended question for legislative advisory bodies

Are there technological developments (other than those already mentioned) that you have already encountered or expect to encounter and believe will soon have far-reaching consequences for the legislative process and legislative advisory bodies in general?

Please list the developments in order of importance and explain why you consider them significant. Please also indicate whether you would like to discuss one or more of these topics in more detail in The Hague.

Developments in blockchain technology will be of relevance to the legislature and also to the Council of State, given its advisory role in the legislative process. A blockchain is an online ledger managed by a group of computers. In principle, anyone who wants to work on the ledger is free to buy a computer and participate. Every computer participating in the blockchain receives a complete copy of the ledger. The blockchain system has been designed with great care, making it virtually impossible to manipulate data in the ledger. Once data is recorded, it cannot be altered. The blockchain can be viewed by everyone and is therefore transparent. A blockchain can contain various types of data. For example, the blockchain for bitcoin, a cryptocurrency, is a ledger containing data on bitcoin transactions.

A new development is the smart contract. A smart contract is a computer program that can be placed in a blockchain. The computer program is therefore located in the ledger. A smart contract can be programmed so that a payment is automatically made if the conditions set out in an agreement are fulfilled. If the conditions are not fulfilled, the smart contract ensures that the money is returned to the original owner. This means that a 'third trusted party' is superfluous, as the smart contract assumes this role. Smart contracts could be used for many different purposes.

The Minister for Legal Protection has stated that research into blockchain technology is already being carried out in the Netherlands. According to the minister, the research is aimed at clarifying the scope allowed by current legal frameworks for utilising the opportunities that blockchain technology offers the public, businesses and government authorities and for mitigating the associated risks.

The legislature and the judiciary will have to deal with blockchain developments in the near future and it is therefore a good idea for the Advisory Division of the Council of State to study the matter. In its advisory opinion on the Act implementing the General Data Protection Regulation (*Uitvoeringswet Algemene verordening gegevensbescherming*), the Advisory Division noted that use of blockchains raises important questions about data protection and its supervision. For instance, the use of blockchains seems to be incompatible with the new General Data Protection Regulation (*Algemene Verordening Gegevensbescherming*; AVG) in certain respects. The following specific issues have already been identified:

- The data in blockchains is stored permanently. Articles 16 and 17 of the General Data Protection Regulation state that it must be possible to delete or correct data that is incorrect. But what happens when a system is designed never to forget anything?
- Because the data can, in principle, never be erased, the blockchain may eventually contain more personal data than is necessary. What should be done about this, in the light of the principle of data minimisation (article 5 (1) (c) of the General Data Protection Regulation)?
- Another question is who should be responsible for processing personal data and ensuring that it is done lawfully, properly and transparently. It is also uncertain who is responsible for determining the purposes for which data may be processed (principle of purpose limitation). Normally, this is the responsibility of a controller (as defined in article 4 (7) of the General Data Protection Regulation), but it is difficult to designate such a party in the case of a blockchain. What can be done about this?

- Finally, another important question is how data processing can be effectively monitored. How can we ensure supervision of a ledger that is not bound by national borders? This issue may have to be tackled at EU level.

These matters require careful consideration now that the use of blockchains is increasing rapidly. Since blockchains are located all over the world and are not bound by national borders, it would be interesting to discuss this at European level. This would therefore be another relevant topic for the colloquium.