



Interoperability Agenda

Room for direction

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Introduction

“These times call for a government that acts as an ally of society, a government that wants to be reliable and works to create solutions together with citizens. Professionals in the public sector are the people who apply this principle on a practical level. People and their opportunities, rather than methods and systems, should be at the heart of government thinking: the government must instil confidence, allow people their freedom, and equip them to participate fully and assume their responsibility. The human dimension serves to guide us through this process, and quality is key.”

The [Dutch] government is launching a series of projects aimed at creating a public sector dedicated to serving the community. Examples of such projects include a campaign to prevent early school leaving, creating opportunities for children, and ensuring safety through prevention. What these projects have in common is that their main objective is to create a better society through high-quality public services.

At the same time, the social issues are so complex that it would be impossible for one minister or one government body to resolve them; cooperation and data sharing have become essential to progress. This type of ‘interoperability’ increases efficiency and effectiveness, as well as improving the coherence and consistency of government action. It ensures a more transparent, more accessible and more credible government, thereby ultimately also improving the quality of our democracy. Interoperability is essential: without cooperation and re-use of data we will not achieve any results. The use of ICT is inextricably intertwined with this process, as ICT facilitates the efficient exchange and re-use of data.

Over the past several years, a number of significant steps were taken to improve public services: basic registrations are being developed or have been developed, the Civil Service Number was introduced, standardisation is high on the agenda, common facilities are being completed and ready for use, and the management of large-scale IT projects is justifiably a major focus of attention. Nevertheless, one factor that is still lacking in the current projects is awareness of the importance of interoperability, let alone that it is a specific focus in such projects. Without interoperability, the chances of achieving the government objectives are seriously impeded.

Interoperability is an issue that transcends organisations, and as such it is prone to failure as a result of not serving the objectives of individual organisations.



Everyone avoids the role of problem owner and no one claims responsibility. And in many cases there is an incongruity between costs and benefits, whereby the organisation making the investment is not always the party that benefits directly. Interoperability requires the development of new systems that are essentially able to exchange information.

This interoperability agenda presents a number of challenges in addition to existing policy, an agenda with issues the government still needs to resolve. This contributes to close intragovernmental cooperation, as well as government cooperation with citizens and businesses, at least with respect to data exchange.

The interoperability agenda also requires the courage to choose – the courage for people to surrender part of their independence in order to help achieve important social objectives. The interoperability agenda transcends the boundaries of individual government organisations: not based on statutory requirement, but by making and honouring mutual agreements. Implementing such agreements calls for a balance between the Poldermodel (the name commonly given to the Dutch politics of consensus, which peaked during the 1990s) and making key decisions (i.e. decisiveness). An exclusively top-down model is not effective in this area, as it is the executive staff rather than the administrative departments, ministries and central civil service that are likely to have the most knowledge of ICT, services and enforcement, as well as of the needs of citizens and businesses.

The issues on the agenda are ambitious, sometimes very ambitious, which makes it impossible to achieve them within a short period of time. Establishing a framework for interoperability is about programmatic change processes spread out over a longer period of time. Hundreds, if not thousands of public and private organisations are involved in this process, all of which know their own responsibilities and what they can expect from others.

The Standardisation Board was established to provide advice on promoting interoperability. This agenda offers the Board a number of strategic issues; issues that require further development. For this reason, the interoperability agenda is the next step towards a more effective government and, by extension, a more effective society.



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1. Three practical examples

Three practical examples involving data exchange across organisations demonstrate why it is important to achieve interoperability in the public sector. These examples relate to interaction between citizens and government bodies, between businesses and government bodies and between government bodies, in that order.

1.1. Citizens – Government bodies

Holders of a Heavy Goods Vehicle (HGV) licence who need to renew this licence currently have to deal with three different organisations: the Dutch Road Transport Directorate (RDW), the Central Office for Motor Vehicle Driver Testing (CBR) and their municipal authority. In addition, they have to schedule an appointment with a medical examiner and get their picture taken.

The Dutch Road Transport Directorate monitors the registration of driving licences, while the Central Office for Motor Vehicle Driver Testing assesses driving skills and the municipal authority issues the new licences. The government has divided these various tasks across several organisations.

The Dutch Road Transport Directorate has stated that the entire process – which citizens must orchestrate themselves – may take more than three months. Citizens applying for a driving licence are required to show up in person on nine different occasions, three of which are at the town hall. The government could simplify this process considerably through cooperation and data sharing.

Based on the assumption that most holders of HGV licences will want to renew their licence when it expires, the solution would be to send them an application package directly and in a timely manner, ensure that it is comprehensive and that a maximum amount of details has already been printed on the forms. Applicants can then use this information to schedule their medical screening (the package includes a list of practitioners in their area) and get their picture taken (the package contains a list of photographers that work in accordance with the specifications).

The next step is to send the package with all the applicant's information to the municipal authority, and once the driving licence is ready, the applicant can pay for it and collect it.

In this approach, the municipal authority orchestrates the application process, thereby relieving citizens of the burden of having to distribute forms between various government bodies.



1.2. Businesses – Government bodies

A container ship is approaching the Port of Rotterdam. A shipping agent transmits a message regarding the arrival and destination of the ship and its cargo to the Port Community System of Portinfolink in Rotterdam or Portnet in Amsterdam. The system sends the information for the various regulatory authorities to the 'government desk', which then forwards the information to the Customs authorities (to clear the goods), the Food and Consumer Product Safety Authority (VWA) and the Phytopathology Service, and the Ministry of Economic Affairs (for any licences), as well as a large number of other government bodies.

One message is all it would take, then, containing all the information necessary to complete the entire process. Even before the ship has entered the port, all the necessary reports have been filed, and once the ship has arrived, all procedures can be completed efficiently.

This is one possible scenario, were it not for the fact that there is no such single 'government desk' or point of contact. In the current situation, transport companies communicate with separate government bodies using a variety of systems. However, the first step towards a single government desk has been taken – a process in which the Customs authorities play a key role.

The Dutch Customs organisation is a member of the World Customs Organization (WCO). This organisation has developed a data model that is being implemented at all customs authorities in the world. This is a fine example of international standardisation, being convenient for both transport companies and Customs authorities, as it allows them to exchange data quickly and efficiently.

The latest version of the WCO model also includes information on agriculture, health and hazardous waste; the data model is set to be developed further. This is how you create the conditions for that single 'government desk' or, more accurately, for a single Dutch import and export desk.

The benefits of operating through a single point of contact are clear: transport companies only need to communicate with a single government agency, while cargo handling can be made more efficient. Government bodies will receive exactly the information they need and individual government bodies no longer have to worry about system development and maintenance. In other words, the benefits are substantial.

We are currently seeing large-scale standardisation – in the corporate sector and between the various customs authorities, as well as between the business community and individual government bodies.



We are seeing it everywhere, except between the various Dutch government bodies. In other words, interoperability can certainly be improved.

However, there is a common interest: If the Netherlands wants to maintain its competitive edge, it must turn that single government desk into a reality (since the development of the WCO organisation means that others in the world are making progress with their efforts). However, this requires authorisation as well as – possibly – a legal requirement and financial resources.

1.3. Government bodies – Government bodies

The Information Bureau supports inspection of the legitimacy of social benefits on behalf of the municipal departments of social services. The information received is compared to data from a variety of government registrations.

In the Netherlands, you are only eligible to receive social benefits if you have no other source of income, and this must obviously be verified before such benefits can be awarded. There was a time when applicants were asked to submit all their personal and financial records to the department, but fortunately this is no longer necessary.

The procedure is as follows: a citizen submits his request to his city's social services department, which then requests the Information Bureau to investigate the validity of the request. The tax authorities subsequently check the personal details provided by the applicant, after which the Custodial Institutions Service checks whether the applicant is in custody. Based on data provided by the Employee Insurance Schemes Implementing Body (UWV), the tax authorities and the Information Management Group (part of the Ministry of Education), an analysis is made of the applicant's financial and employment situation, while the land registry and the Dutch Road Transport Directorate check property and vehicle ownership.

This means the Information Bureau exchanges data with a range of government bodies, a process that benefits all parties involved. There is no longer any need for citizens to supply all their financial information to local governments, just as social services departments do not have to visit all those other government bodies. Just as importantly, all those other government bodies are not required to exchange data with all those social services departments.

This is a textbook example of interoperability between government bodies, with the various entities providing services to each other. There were quite a few hurdles to overcome before we finally reached this stage, the first of which is the semantic hurdle: the term 'income' is defined differently under different regulations. The second hurdle was technical in nature:



database storage structure is not yet uniform, and standardisation at a national or international scale should remove this problem. Another hurdle was related to privacy: data collected for a specific purpose may not automatically be used for another purpose. Then there are the organisational hurdles: e.g. who stores what data?

The final hurdle encountered by the Information Bureau was financial in nature: over the past several years, many government bodies have been placed at a distance by the Ministries to which they belong. The land registry and the Dutch Road Transport Directorate are responsible for their own finances: whenever they provide a service to a citizen or an organisation, they send an invoice - including to their fellow government bodies. In some cases, such agencies have budgets that do not provide for these types of services, resulting in significant delays for the Information Bureau.

No one will doubt the usefulness of the services provided by the Information Bureau, and everyone is aware that it makes no sense to circulate money from one government body to another, and this is best avoided, particularly when it leads to inefficiencies and presents obstacles to service provision.

After all, interoperability also means that government bodies do not send each other invoices. We have not actually arrived at that stage (yet).



2. Why interoperability?

The need for interoperability arises at the moment when the government sets its policy objectives. Developing and implementing an e-government is a precondition in achieving those objectives, while at the same time e-government cannot function without interoperability.

2.1. Cabinet policy

“A service-orientated government puts citizens first and is an organisation with which they can identify, operating on the basis of trust in citizens and professionals, and gaining trust because of its respectful approach and high-quality services. This type of government is also an effective organisation that provides higher quality with fewer people. In other words, the service-orientated government acts as an ally of society.

In addition to providing services, the government establishes rules and regulations and creates and enforces legislation. It is therefore important for citizens and businesses to know what they can expect at an early stage. The same principles apply at the municipal and provincial level as to the national level: all levels of government must collaborate in serving the public and not be publicly opposed to one another. This calls for a clearly defined division of roles and responsibilities.”¹

It is vitally important that organisations realise that they cannot achieve their objectives on their own.

2.2. The role of e-government

E-government is an important precondition for achieving the policy objectives of the government, municipalities, executives and all other government bodies.

'E-government' is defined as:

A government in which interaction between the government and the citizens² occurs electronically as much as possible, for the purpose of providing better services, ensuring more effective enforcement and promoting increased participation.

The interest of the citizens serves as the guiding principle in this process.

¹ Policy programme of the Fourth Balkenende cabinet:
http://www.regering.nl/Het_kabinet/Beleidsprogramma_2007_2011

² The Wallage Postma report makes reference to 'citizens', however in this section and further on in this document, this should be interpreted as meaning citizens and businesses.



Citizens must be able to rely on the fact that government bodies – at a national,³ regional and local level – will, in the near future, organise their services such that most – and the most essential – interactions between citizens and the government can occur electronically.”⁴

“However, improving government service is not possible without the dedicated efforts of the e-government’. [...] E-government has ‘key potential [...] to improve government services and achieve visible results for citizens and businesses, particularly when this infrastructure is truly used as a shared infrastructure at all levels of government.”⁵

2.3. Interoperability

“The government must provide its services in a coherent manner, in order to prevent overlap and contradictions. A coherent range of services requires close cooperation and consultation between various government organisations.”⁶

In the ‘Nederland Open in Verbinding’⁷ action plan, “The Government [...] defines interoperability as the ability of information systems to electronically exchange data and information among and between organisations. Interoperability is an essential precondition for a future-proof development of services and applications created by and with ICT in the broad sense”.

Government bodies can improve their effectiveness through interoperability, as it allows them to respond to the current information needs of citizens, businesses and government bodies through continuously changing partnerships. Moreover, interoperability allows organisations flexibility in performing their tasks.

It should be noted that interoperability does not affect government bodies alone, as illustrated by the simple fact that an account holder of a particular bank can also use ATMs operated by other banks. However, the fact that e-government is set to become a reality has made interoperability a more pressing issue than ever: In the unlikely event that the building blocks of e-government prove to be not interoperable, the government’s plans will be compromised.

³ This also includes international

⁴ Wallage Postma, Het uur van de waarheid (The moment of truth) (report), 2007

⁵ Lower House of the States General, session 2007-2008, 29362 no. 137

⁶ Lower House of the States General, session 2007-2008, 29362 no. 137

⁷ Lower House of the States General, session 2007-2008, 26643 no. 98



3. What is interoperability?

The RAND⁸ Corporation defines interoperability as follows: “*the ability of distinct systems to communicate and share semantically compatible information, perform compatible transactions, and interact in ways that support compatible business processes to enable their users to perform desired tasks.*”

The most important condition is that we can exchange data in a reliable and confidential manner. This is explained in more detail in the Explanatory Memorandum to the Electronic Administrative Communications Act:

“A serious problem in electronic data interchange is ensuring a sufficient level of security. Sending a simple e-mail is often not enough, as the medium lacks reliability. How can you be sure that the person sending the e-mail is who the person claims to be, and that the content of the message has not been changed along the way. Also, how can the sender be sure that unauthorised persons cannot gain access to the content of the e-mail?⁹ and finally: “The following aspects cover the essential details of the open standards of reliability and confidentiality.

- Authenticity = the origin of the document: did the data really originate from the sender?
- Integrity = the certainty that details are complete and have not been changed without authorisation
- Non-repudiation = irrefutability, undeniability.
- Transparency = the possibility that changes to the data can be traced at a later date and be made transparent.
- Accessibility = the accessibility and availability of the document.
- Flexibility = the degree to which new or old user requirements can be met.
- Confidentiality = exclusivity - the document is accessible only to those for whom it is intended.

The Board will have to take these principles into account for electronic communications. Authenticity relates to the origin of the document, i.e. is it authentic? did the data really originate from the sender? Is the sender really the person he pretends to be? Integrity relates to the possibility that the document has been manipulated along the way, i.e. is the document accurate and complete? The establishment of the time and date the message was sent also falls under ‘Authenticity’. It must be possible to fix the document. A principle that many regard as an extension of the first two is that of non-repudiation. This principle expresses that it must be impossible to deny that the message was sent or that it must be impossible to deny that the message was received. The principle of transparency represents the verification that changes to the data can be detected at a later date. This principle is particularly important to

⁸ RAND, Towards a Dutch Interoperability Framework, 2007

⁹ Lower House of the States General, session 2001–2002-28483, 28483 no. 3



the monitoring of the reliable operation of the systems used. The principle of availability relates to the accessibility of the document.

Essentially, it must be available for review at all times, even after some time has passed and other software applications have been implemented, for example following a conversion. [...] Another principle to take into account is flexibility. Software and technologies are subject to rapid development, and in many cases they are obsolete after just a few years. Modern technologies often contribute to a high level of reliability. This principle indicates to what extent the parties involved can be expected to always have the appropriate hardware and software. Confidentiality ensures that the document is available only to the person(s) for whom it is intended, and document encryption is one way of achieving this'.

Making technical agreements alone is not enough. These agreements must be made at every level, administrative agreements, laws and regulations right through to agreements on transport protocols.

It is important that these decisions are supported at the highest administrative level – and possibly at the political level. In making these agreements, the Government is advised by the Standardisation Forum and Board.¹⁰

3.1. Dimensions

Interoperability has three dimensions: organisational, semantic and technical interoperability.¹¹

- Organisational interoperability. The ability of organisations to arrange processes and systems for the purpose of exchanging data – possibly supported by ICT. For example, the renewal of the licence for heavy goods vehicles (chapter 1). The Dutch Road Transport Directorate could alert the municipal authority that a driving licence is about to expire. The municipal authority subsequently orchestrates the process vis-à-vis the citizen and interacts with the Dutch Road Service Directorate, without the citizen noticing this.
- Semantic interoperability. The ability of systems or organisations to interpret data in the same manner from the sender and the receiver. One of the hurdles for the Information Bureau (Chapter 1) was that the 'term' 'income' has numerous meanings, which has a number of different consequences.
- Technical interoperability. The ability to let systems communicate at the level of infrastructure and software. The Government Service Bus (GSB) ensures that

¹⁰ http://www.forumstandaardisatie.nl/fileadmin/OVOS/Instellingsbeschikking_Forum_en_College.pdf

¹¹ See also: European Interoperability Framework 1.0, <http://ec.europa.eu/idabc/servlets/Doc?id=19528>



organisations at underlying technical levels can communicate with each other, thus allowing more meaningful data interchange at a semantic and organisational level.

These three dimensions are inextricably intertwined. Data interchange requires interoperability at all three levels

3.2. Goals

Three goals for interoperability as stated in the RAND¹² research report closely match the ambitions of the Government.

- “Improve cost-effectiveness and cooperation within government”
- “Improve transparency/accountability/credibility of government” and
- “Improve citizen/business interaction with government”

In its research, RAND shows that selecting these goals leads to choices in terms of concrete actions. The RAND report proposes the following actions for the above-mentioned goals:

- *“Emphasize technical standardisation*
- *Coordinate intra-governmental semantics (ontologies etc.)*
- *Coordinate ICT-development across government*
- *Emphasize user-oriented semantics (ontologies etc.)*
- *Standardize eGovernment user interfaces*
- *Coordinate legal/legislative policies underlying transparency/accountability*
- *Include citizen- and business-oriented eGovernment use cases*
- *Emphasize citizen- and business-oriented services*
- *Emphasize sector-related portals*
- *Emphasize methods of presenting consistent semantics to users*
- *Include easy- to use choreography/orchestration”*

Chapter 4 will demonstrate the relationships between the interoperability agenda and these action items.

3.3. Interoperability and NORA

The Standardisation Forum believes: “Interoperability and standardisation within the establishment of e-government require a broad architecture function, as this is essential to the coherence between already developed and still to be developed e-government facilities. In addition, the fact that hundreds of government bodies and private institutions will be

¹² RAND, Towards a Dutch Interoperability Framework, 2007



connected to e-government over the next several years demands an architecture-based approach.”¹³

“The Dutch Government Reference Architecture (NORA) includes frameworks for the same approach. NORA was created to ensure that each government organisation can easily connect to the e-government’s infrastructure.”¹⁴

“The Dutch Government Reference Architecture (NORA) contains organisational principles, models and standards for the design and structure of the electronic government. The emphasis is on facilitating cooperation between government organisations in chains and networks.”¹⁵ Version 3.0 of NORA – which is currently being developed – explicitly positions interoperability as the key message.

NORA contains “a coherent set of the models, regulations and explanations”¹⁶ i.e. the previously made agreements. However, this does not mean that everyone has actually implemented these agreements.

3.4. The other side of interoperability

Interoperability also involves a number of risks that require attention. The following three risks are identified in the preliminary research:

1. “Interoperability may compromise privacy
 - By linking together information that is currently in separate storages
 - By making it easier to “connect the dots” about citizens’ behaviour.
2. Interoperability may compromise security, making each system only as secure as its least secure interoperating partner.
3. Interoperability adds technical complexity to system design:
 - Planned interoperability is more cost-effective than ad hoc interoperability
 - Both add cost (not necessarily paid by the beneficiaries)
 - The benefit hopefully outweighs the cost (though not always for the same parties)”¹⁷.

Interoperability always means finding the right balance between interchanging data and the impact this interchange may have.

¹³ http://www.forumstandaardisatie.nl/fileadmin/OVOS/CS_4apr07_doc03.2_NORA_Advies_1.0.pdf

¹⁴ Lower House of the States General, session 2007-2008, 29362 no. 137

¹⁵ http://www.e-overheid.nl/e-overheid-2.0/live/binaries/e-overheid/architectuur/NORAv2_0.pdf

¹⁶ <http://www.elektronischeoverheid.nl/data/files/architectuur/NORAontwikkeling%20DEF.pdf>

¹⁷ RAND, Towards a Dutch Interoperability Framework, 2007



4. The interoperability agenda

The Forum has observed that NORA still does not cover key issues related to interoperability, and for a variety of reasons these issues cannot yet be adequately translated into usable regulations. These gaps constitute the interoperability agenda.

The Standardisation Forum intends to act as a driver for the issues on the interoperability agenda. It is inconceivable that the Forum and the Board would resolve the information problem independently, as this requires cooperation between and with many different parties. This is why it is important to align with or to establish links to existing trends and developments wherever possible.

The development of issues on the agenda will result in a recommendation to the Board, including an impact analysis of the proposals. Any new agreements that were made will be included in the next versions of NORA.

The agenda is of a dynamic nature, which means that, depending on findings along the way, priorities may change or issues may be submitted or abandoned.

4.1. Open standard

Why?	No matter what direction it turns, the government will not be able to avoid standardisation. The rule in this process is: government bodies communicate through open standards where possible. Open standards are now the norm, and deviations are only permitted under specific conditions. Organisational and semantic standards are subject to the 'apply' or 'explain' policy, based on a Board decision. Technical standards, for their part, are often subject to de facto market development, and technical standards will usually not require a Board decision.
Barrier	Although open standards may be the norm, there is a lack of clarity regarding the open standards to be used in the public sector.
Dimensions	Organisational, semantic and technical operability
References	Nederland Open in Verbinding ¹⁸ Action Plan "Emphasize technical Standardisation Coordinate intra-governmental semantics (ontologies etc.) Emphasize user-oriented semantics (ontologies etc.)" ¹⁹

¹⁸ Lower House of the States General, session 2007-2008, 26643 no. 98

¹⁹ RAND, Towards a Dutch Interoperability Framework, 2007



4.2. Authentication and authorisation

Why?	Authentication and authorisation are essential to most transactions involving the government. Whether someone wants to find out about the debt on a student loan, needs to renew their passport or wants to apply for a felling permit. A comprehensive set of generic means of authentication for all transactions between businesses and citizens and government bodies, as well as between government bodies, is not yet available.
Barrier	Important questions in this domain include: <ul style="list-style-type: none">• What is safe?• What can the government leave to the market?• What standards do we use?• Does a business or an individual sign a letter on behalf of a business?
Dimensions	Organisational, semantic and technical operability
References	“Emphasize technical standardisation Coordinate ICT development across government” ²⁰

4.3. Governance of interoperability

Why?	Governance of interoperability involves orchestrating the effective application of standards and standardised solutions.
Barrier	Important questions in this domain include: <ul style="list-style-type: none">• What are critical success factors in the implementation of standards?• How can the Cabinet effectively influence the behaviour of individual government organisations?• How can the Cabinet best safeguard compliance with agreements with respect to interoperability.
Dimensions	Organisational interoperability
References	This issue refers to the main conclusion of the RAND research: Develop a governance model for interoperability.

²⁰ RAND, Towards a Dutch Interoperability Framework, 2007



4.4. Service concepts

Why? A service concept is an “elaboration of the manner in which processes, procedures, systems, the organisation and governance are structured in order to be able to provide services to citizens and businesses. Based on this concept, a number of key criteria/standards are defined that the services must meet.”²¹

Service concepts are about providing a cohesive set of services that are focussed on citizens and businesses. One of the aspects is the use of various channels. Although the Internet has made it possible for citizens to purchase services in a place and at a time that suits them, it is not realistic to assume that town and city halls will follow suit and be open 24/7 from now on. In addition, it is important for the government to remember those citizens who are not able to make use of all these new technologies.

Service quality must be consistent: if someone applies for a felling permit at the desk of the town hall and their application is granted, it is of course not acceptable for the same request to be rejected when submitted online. Additionally, it is highly desirable to gain insight into the progress of the process, so that citizens and businesses know what to expect from the government and when to expect it.

Barrier At an early stage, many citizens and businesses are unclear on the structure of the processes and when they can expect the results. Processes and process steps are insufficiently aligned, causing loss of data along the way.

Dimensions Organisational interoperability

References Citizen Service Code; including freedom of choice with respect to the communication channel²²

Service guideline²³

“Include easy-to-use choreography/orchestration”²⁴

²¹ <http://egem-iteams.nl/system/files/abcvandeandereoverheid.pdf>

²² http://www.burger.overheid.nl/wat_wij_doen/burgerservicecode

²³ http://www.ez.nl/Onderwerpen/Groeiende_economie/Dienstenrichtlijn

²⁴ RAND, Towards a Dutch Interoperability Framework, 2007



4.5. Financing arrangements

Why?	<p>There is currently no unambiguous, clear model for the financing of services, referring not only to development costs, but also to the management and implementation of a service.</p> <p>Providers often charge more for the use of a service by a government organisation than the cost of providing the service, while this was in fact already funded with public resources.</p> <p>In line with a court decision²⁵ regarding database law, the preferred situation is for government organisations to charge no more than the cost of providing the service.</p>
Barrier	<p>The current approach of many government organisations is based on the principle of financial self-sufficiency. This has tempted government organisations that want to procure data from another government organisation to choose between paying or bothering citizens with questions to which they already know the answer.</p>
Dimensions	Organisational interoperability
References	---

4.6. Handling data

Why?	<p>Citizens, businesses and institutions must be able to verify data and the information that is exchanged about them, and to rectify this through feedback.</p> <p>There may also be a conflict of interest between the principle of supplying data on a one-off bases, multiple use and the Personal Data Protection Act. The Personal Data Protection Act is based on the assumption that the purpose of the data request has been explicitly established.</p>
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²⁵ http://www.iept.nl/files/2008/IEPT20080206_Rb_Amsterdam_Landmark_v_Gemeente_Amsterdam.pdf



Barrier	Although it is still possible to determine the purpose of data collection within a chain, when exchanging data across the chains – e.g. data interchange between an educational institution and the social services department – it is much more difficult to determine whether the use of the data corresponds to the original purpose for collecting the data. There is also the fact that users cannot – or only with difficulty – find out what happened to their data, let alone be able to easily modify data (or have a third party do so).
Dimensions	Organisational interoperability
References	White Book on Privacy-Enhancing Technologies(PET) ²⁶ “Emphasize technical Standardisation Coordinate legal/legislative policies underlying transparency/accountability” ²⁷

4.7. Systematic semantics

Why?	Semantics implies that a sender and a receiver understand each other when exchanging information, and that they assign the same meaning to the terms used. The development of the basic registration system is a great leap forward, for its purpose is to store basic data in one, single location. Out of necessity, the basic registrations are rapidly being developed as an “information silo”. One-off data provision and the re-use of data should increasingly ensure that the basic registrations can exchange data in a comprehensible manner, both amongst themselves and with the outside world.
Barrier	Although the same objects and entities occur in different basic registrations, the various purposes for which the data was collected and the various contexts for which they are used, determine that they have a different meaning or a different weight. As such, exchange and re-use are not self-evident. Although measures for technical interoperability have since been implemented, such as the development of the OverheidsDienstenPlatform (ODP), the semantic aspect of data interchange has been very underexposed.
Dimensions	Organisational and semantic interoperability
References	“Coordinate intra-governmental semantics (ontologies etc.) Emphasize user-oriented semantics (ontologies etc.)” ²⁸

²⁶ https://www.cbweb.nl/downloads_technologie/Witboek_PET.pdf

²⁷ RAND, Towards a Dutch Interoperability Framework, 2007

²⁸ RAND, Towards a Dutch Interoperability Framework, 2007



5. Conclusion

The issues on the agenda relate to the three sub-areas of organisational, semantic and technical interoperability. In summary:

- **Organisational interoperability:** Open standard; authentication and authorisation; governance of interoperability; service concepts; financing of services and transactions, handling data.
- **Semantic interoperability:** Open standard; authentication and authorisation; systematic semantics.
- **Technical interoperability:** Open standard, authentication and authorisation.

It is worth noting that the agenda focuses mainly on organisational and – to a lesser extent – semantic interoperability. This is fully in line with the assignment of the Standardisation Forum and the Standardisation Board: “The top priority should not be to create a complete structure of standards, but rather the interoperability of information systems. The key focus is on making agreements on semantic and organisational standards and less on technical standards.”²⁹

²⁹ http://www.forumstandaardisatie.nl/fileadmin/OVOS/Instellingsbeschikking_Forum_en_College.pdf