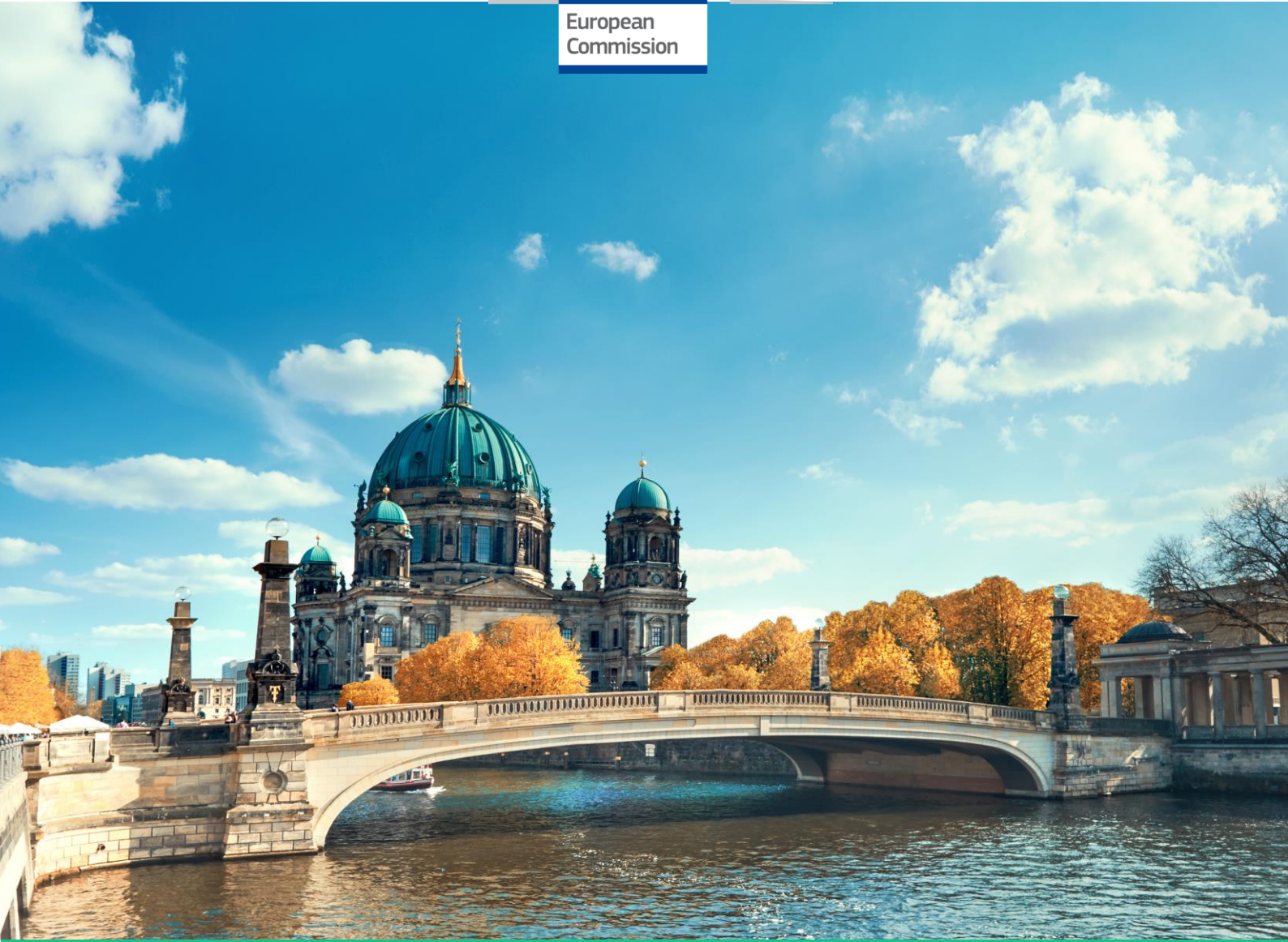




European
Commission



Digital Public Administration factsheet 2020

Germany

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1

1

Country
Profile

Country Profile

1.1 Basic data

Population: 83 019 213 inhabitants (2019)

GDP at market prices: 3 435 760 million Euros (2019)

GDP per inhabitant in PPS (Purchasing Power Standard EU 27=100):123 (2018)

GDP growth rate: 0.6 % (20)9)

Inflation rate: 1.4 % (2019)

Unemployment rate: 3.2% (2019)

General government gross debt (Percentage of GDP): 59.8 % (2019)

General government deficit/surplus (Percentage of GDP): 1.4 % (2019)

Area: 357 386 km²

Capital city: Berlin

Official EU language: German

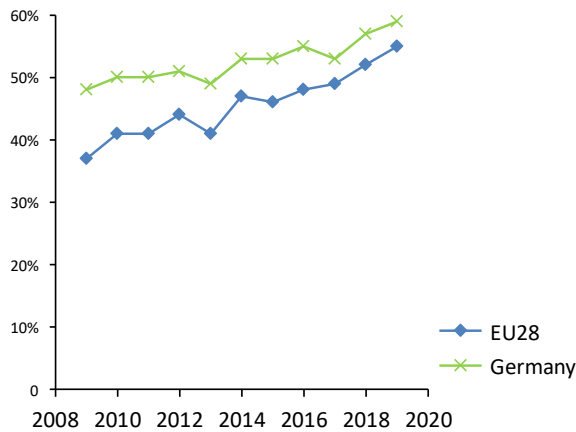
Currency: Euro

Source: Eurostat (last update: 27 April 2020)

1.2 Digital Public Administration Indicators

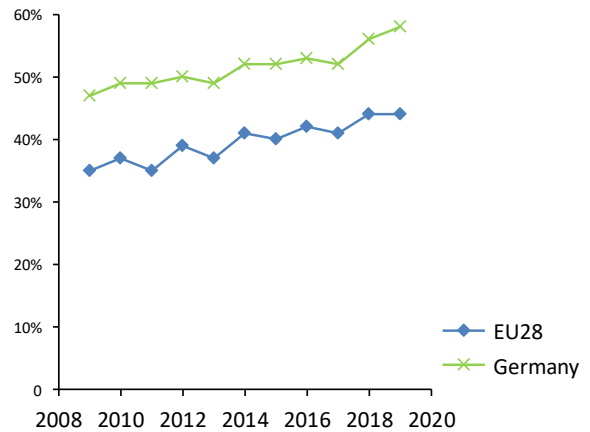
The following graphs present data for the latest Digital Public Administration Indicators for Germany compared to the EU average. Statistical indicators in this section reflect those of Eurostat at the time the factsheet is being prepared.

Percentage of individuals using the internet for interacting with public authorities in Germany



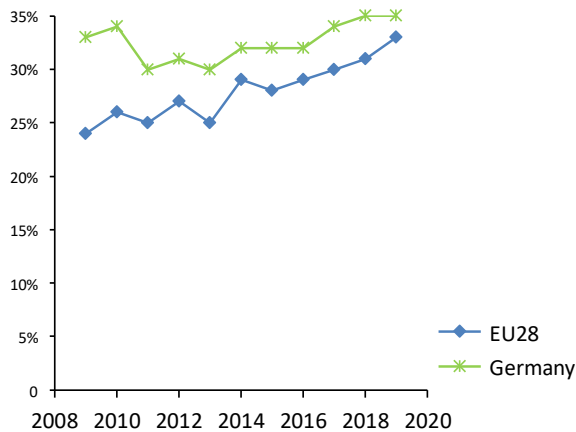
Source: Eurostat Information Society Indicators

Percentage of individuals using the internet for obtaining information from public authorities in Germany



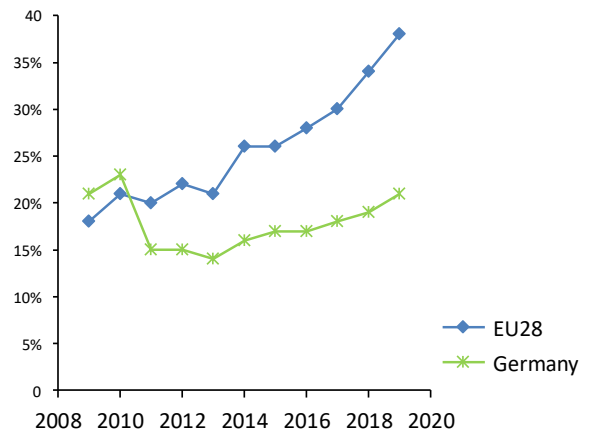
Source: Eurostat Information Society Indicators

Percentage of individuals using the internet for downloading official forms from public authorities in Germany



Source: Eurostat Information Society Indicators

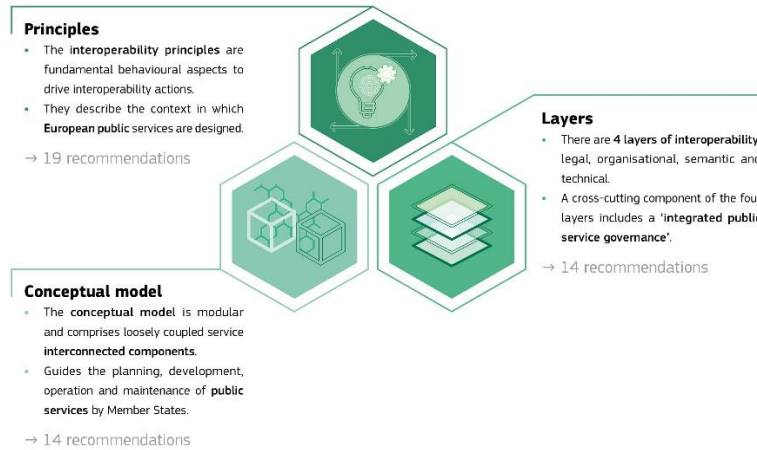
Percentage of individuals using the internet for sending filled forms to public authorities in Germany



Source: Eurostat Information Society Indicators

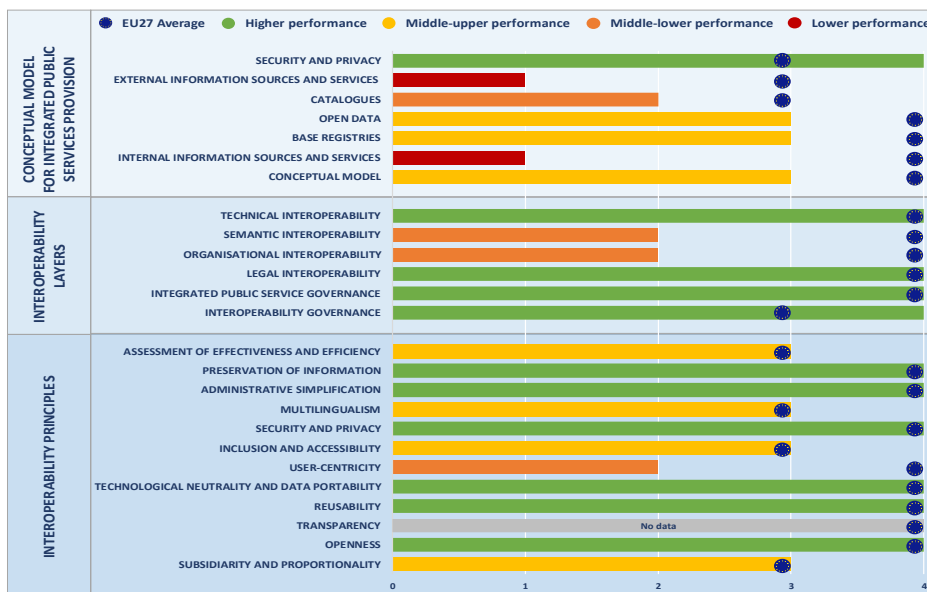
1.3 Interoperability State of Play

In 2017, the European Commission published the European Interoperability Framework (EIF) to give specific guidance on how to set up interoperable digital public services through a set of 47 recommendations. The picture below represents the three pillars of the EIF around which the EIF Monitoring Mechanism was built to evaluate the level of implementation of the EIF within the Member States. It is based on a set of 68 Key Performance Indicators (KPIs) clustered within the three main pillars of the EIF (Principles, Layers and Conceptual model), outlined below.



Source: European Interoperability Framework Monitoring Mechanism 2019

For each of the three pillars, a different scoreboard was created to breakdown the results into their main components (i.e. the 12 principles of interoperability, the interoperability layers and the components of the conceptual model). The components are evaluated on a scale from one to four, where one means a lower level of implementation, while 4 means a higher level of implementation. The graph below shows the result of the first EIF Monitoring Mechanism data collection for Germany in 2019. It is possible to notice an overall medium performance of the country. The areas of improvements are distributed throughout the three scoreboards and the main ones are related to the external information sources and services and internal information sources and services.



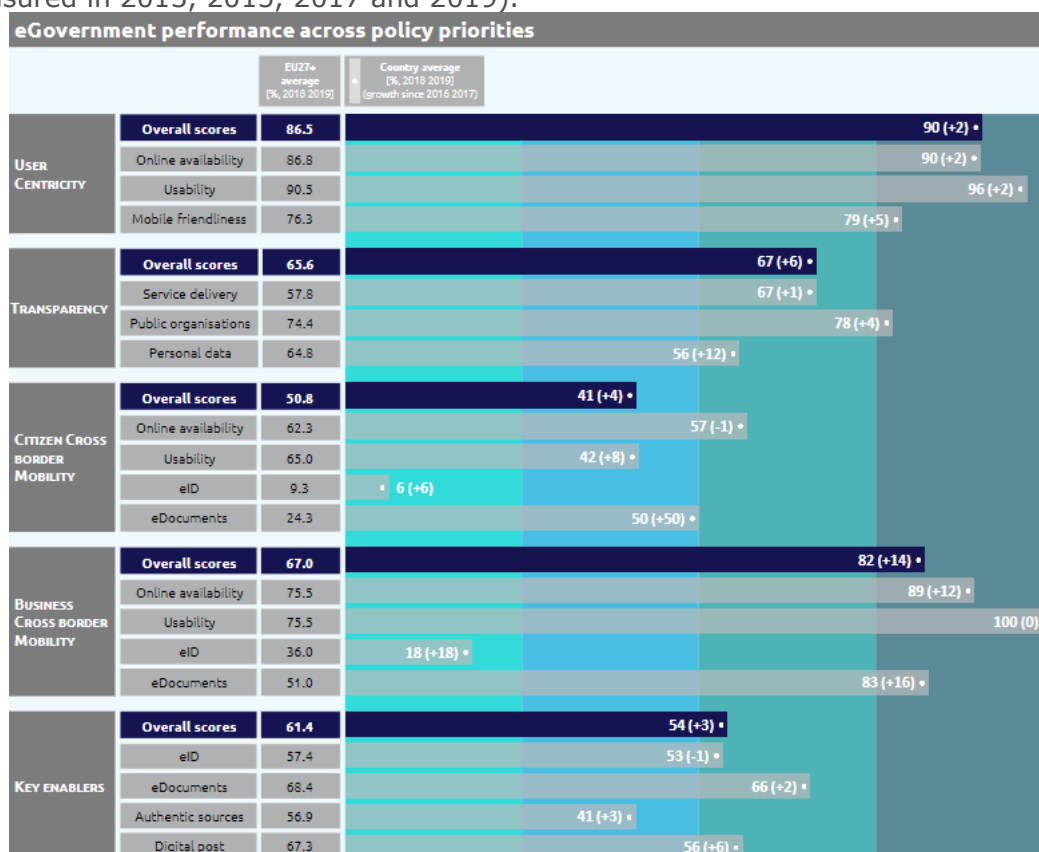
Source: European Interoperability Framework Monitoring Mechanism 2019

1.4 eGovernment State of Play

The graph below is the result of the latest eGovernment Benchmark report, which monitors the development of eGovernment in Europe, based on specific indicators. These indicators are clustered within four main top-level benchmarks:

- **User Centricity** – indicates to what extent (information about) a service is provided online and how this is perceived.
- **Transparency** – indicates to what extent government are transparent regarding: i) their own responsibilities and performance, ii) the process of service delivery and iii) personal data involved.
- **Cross-Border Mobility** – indicates to what extent EU citizens and businesses can use online services in another country.
- **Key Enablers** – indicates the extent to which five technical pre-conditions are available online. There are: Identification (eID), electronic documents (eDocuments), Authoritative Sources, and Digital Post. Digital Post refers to the possibility that governments communicate electronically-only with citizens or entrepreneurs through e.g. personal mailboxes or other digital mail solutions.

The 2020 report presents the biennial results, achieved over the past two years of measurement of all eight life events used to measure the above-mentioned top-level benchmarks. More specifically, these life events are divided between six 'Citizen life events' (*Losing and finding a job, Studying, Family life*, all measured in 2012, 2014, 2016 and 2018, and *Starting a small claim procedure, Moving, Owning a car*, all measured in 2013, 2015, 2017 and 2019) and two 'Business life events' (*Business start-up*, measured in 2012, 2014, 2016 and 2018, and *Regular business operations*, measured in 2013, 2015, 2017 and 2019).



Source: eGovernment Benchmark Report 2020 Country Factsheets



2

Digital Public
Administration
Highlights

2 Digital Public Administration Highlights

Digital Public Administration Political Communications

Germany is part of the Open Government Partnership initiative in which the governments of 75 countries commit to implement Open Government. Germany has been participating in the Open Government Partnership since December 2016 and adopted the first **National Action Plan** (*Nationaler Aktionsplan im Rahmen der Teilnahme an der Open Government Partnership*) in August 2017. A second National Action Plan to push forward the development of Open Government was published in September 2019: **Second National OGP Action Plan 2019 – 2021**.

The federal German cabinet has adopted the key points of its **data strategy** (*Datenstrategie des Bundes*). On the one hand, the cabinet follows the aim to increase the provision and responsible use of data. On the other hand, the Federal Government wants to prevent data abuse. The final strategy shall be published by spring 2020.

Digital Public Administration Legislation

User-friendly digital administration requires changes of legislation. All administrative procedures will be affected because the obstacles to user-friendly digitalisation are identified and solved by introducing new legislation. This is an ongoing process.

One of the last legislation to enter into force is the Directive on open data and the re-use of public sector information (Directive (EU) 2019/1024). It replaces the Public Sector Information Directive (Directive 2003/98/EC), which was amended by the Directive 2013/37/EU. Member States have to transpose Directive (EU) 2019/1024 by 16 July 2021. Once fully transposed on the national level, it will promote all public sector content that is in principle freely available for re-use, except in very limited cases. It will stimulate the transparency, non-discrimination and non-exclusivity of data. Furthermore real-time data available via Application Programming Interfaces (APIs), open access to publicly funded research data, and high value datasets will stimulate innovation and benefit both society and economy.

Digital Public Administration Governance

In carrying out its tasks in accordance with Article 91c of the Basic Law and Section 1 (1) of the State Treaty on IT, the IT Planning Council is assisted strategically and operationally by the **FITKO** (*Föderale IT-Kooperationen*). FITKO's tasks include developing and implementing a federal digital strategy and a federal IT architecture, promoting joint IT solutions, administering the budget for digital technology and creating a network to connect all relevant stakeholders.

Digital Public Administration Infrastructure

The eInvoicing service for the Federal Government was completed on 27 November 2019. Government bodies at the Federal Government level now receive and process electronic invoices via eInvoicing platforms (*Zentrale Rechnungseingangsplattform des Bundes, ZRE and Onlinezugangsgesetzkonforme Rechnungseingangsplattform, OZG-RE*). From 27 November 2020, suppliers to Federal Government authorities and agencies must submit electronic invoices. Regulations of the German federal states may show some differences.



3

Digital Public
Administration
Political
Communications

3 Digital Public Administration Political Communications

3.1 Specific political communications on Digital Public Administration

Shaping Digitalisation: Implementation Strategy of the Federal Government

The implementation strategy "Shaping Digitalisation" (*Digitalisierung gestalten – Umsetzungsstrategie der Bundesregierung*) was adopted in November 2018 and aims to shape the future of Germany's digital transformation. Focus is placed on what digitalisation can bring to the individuals and on the necessity to preserve the liberal and democratic values present in the German constitution. The main goal of the strategy is to further increase the quality of life for all German citizens in order to be able to develop additional economic and ecological potential and secure social cohesion.

Interim Report on the Implementation for the First National Action Plan (NAP) for 2017-2019

The federal government's Interim Report on the Implementation for the First National Action Plan (NAP) for 2017-2019 in the framework of Germany's participation in the Open Government Partnership (OGP), published in November 2018, constituted a self-assessment of Germany's progress so far. It showed that, for some projects envisioned in the NAP, good progress was made on the implementation of the commitments. Moreover, Germany's participation in the OGP is increasingly provoking conversations at various levels about how open government can be strategically deployed and what opportunities it might present for projects in a wide range of policy areas. Still, some other projects experienced delays, since the first half of the NAP period was dominated by the Germany general election and the ensuing government formation process. This meant initially operating under interim budget rules and then resulted in a transfer of responsibility.

National eGovernment Strategy

The **National eGovernment Strategy** (NEGS), adopted by the IT Planning Council on 24 September 2010, is regularly evaluated and updated. The goal of the current strategy is to guide the country's eGovernment progress in the coming years. The strategy has been developed in cooperation with a broad spectrum of stakeholders from the fields of administration, politics, science and business.

The National eGovernment Strategy aims at ensuring a common orientation for eGovernment activities and efforts at federal, state and local levels in order to establish an attractive eGovernment and information technology approach for citizens and businesses. According to the new vision enshrined in the strategy, eGovernment should be characterised by five principles:

- usefulness for citizens, businesses and public administration: potential users of eGovernment offerings/services should be fully aware of the services offered to them and be able to access them. In particular, broadband access in rural areas should be improved as well as citizens' digital/media literacy;
- cost-effectiveness and efficiency: in order for the public administration to provide rapid, cost-effective and high-quality services, process chains within the public administration should be supported by electronic means and designed, following a customer-centric approach. The various processes will be digitalised, with the federal government and the States putting the appropriate

legal, organisational and technical instruments in place for ensuring the mandatory use of digital technologies;

- data protection, cyber security and transparency: data protection, security and transparency constitute important preconditions for the citizens to accept, trust and intensively use eGovernment. Therefore, the National eGovernment Strategy aims at ensuring data transparency and security by paying attention to only collect and process the data that is absolutely necessary for providing a particular administrative service. In addition, the protection of the providing systems is vital for the acceptance of eGovernment services;
- social participation and transparency: the active participation of citizens and businesses in policy as well as in planning and decision-making processes is fostered, as far as it is reasonable and allowed by law. The impact and the results of the participation should be made transparent to citizens and businesses;
- innovation and sustainability: federal, State and local public administrations will support the capacity for innovation and openness to change through their own high-performance and client-oriented eGovernment offerings.

The National eGovernment Strategy also contains six key principles that new legislations and initiatives should consider:

- citizens and businesses should be able to carry out as many operations as possible from the same point of access, regardless of time and location;
- authorities should be able to cooperate quickly across different levels to minimise the administrative burden for citizens, businesses and public administration, e.g. by providing spatial data via the Spatial Data Infrastructure Germany initiative (GDI-DE);
- citizens and businesses should know which public authorities process their personal data. They should be confident that eGovernment is secure;
- citizens should be able to use electronic media to participate actively in the policy process and in organising the provision of public services;
- The public administration should use cooperation models with the business and research community when developing and operating eGovernment solutions. This will enable innovative business models, through online services and information;
- information security management should lead to a high level of IT security for eGovernment procedures and guarantee confidentiality, integrity and availability of data.

Memorandum for the National eGovernment Strategy

At its fifth meeting on 30 June 2011, the IT Planning Council took the first concrete steps towards the implementation of the National eGovernment Strategy, by publishing a [memorandum](#), which outlines the agreed strategic goals. The focus was placed on building a federal infrastructure and aligning individual measurements. According to the memorandum, IT planning envisages the following priorities to be addressed:

- transparent government and regulatory actions should be promoted by appropriate measures of information technology and eGovernment;
- federal and state governments need to adapt to the IT processes and current threats from the internet. Therefore, minimum uniform standards for communication between government departments should be developed;
- develop a common eID strategy to enable citizens and businesses to securely transact with the administration over the Internet. In this regard, the notification procedure to the European Commission for the German eID was fully finalised in 2017. As reported by the Federal Office for Information Security (BSI), "the German eID fulfils all requirements of eIDAS Level of Assurance high";

- a federal information management system will bring together faster and more efficiently knowledge management to improve public services;
- sharing initiatives involving federal, State and local governments are developed to save costs on IT-infrastructure;
- the definition of IT security and IT interoperability standards is one of the main tasks of the IT Planning Board;
- the framework for levels across eGovernment should be further developed. The IT planning supports the coordinated activities of the federal and State laws to further adjust the regulatory framework.

The IT Consolidation Programme of the German Federal Government

The German Cabinet decided in the summer 2015 to substantially modernise the IT of the German federal government. Consolidating information technology at federal level will serve several aims, namely: ensure information security in an increasingly complex IT environment; maintain sovereignty and control over federal IT also in the future; respond swiftly to technological innovations; ensure effective, efficient, stable and future-proof operations; and enable the government to remain an attractive employer for IT experts. Data of the federal administration must be comprehensively protected and secured against misuse. Until 2022, IT consolidation will follow three lines of action: consolidating operations, consolidating services, and centralising procurement.

IT Strategy of the Federal Administration

The IT Strategy of the Federal Administration (*IT-Strategie der Bundesverwaltung*) defines ten cross-departmental goals for the strategic IT development. With six overarching fields of action, the strategy sets priorities for the further development of IT and thus forms the basis for prioritising existing and future IT measures. To this end, the federal administration's IT strategy takes into account specifications and decisions at European as well as at national level.

Key Points of the Federal Data Strategy

The German Federal cabinet has adopted the key points of its **data strategy** (*Datenstrategie des Bundes*). On the one hand, the cabinet follows the aim to increase the provision and responsible use of data. On the other hand, the Federal government wants to prevent data abuse. The final strategy will be published at the latest by spring 2020.

The Once-Only-Principle

A publication of the IT Planning Council on the **Once-Only-Principle** (*Das Once-Only Prinzip – Potenziale für Bürger, Unternehmen und Verwaltung*) from 2017 analyses the current situation of eGovernment with citizens and business having to provide the same information several times to different public authorities. Besides the description of the current situation, the publication compares the situation in different countries and presents a selection of best practices. In addition, the publication points out four major opportunities of the Once-Only-Principle for citizens and the administration in Germany.

Citizens:

- gain in transparency: citizens can track in their user accounts which authority has queried their data;
- quick notices: faster administrative services through interoperable data exchange;

- proactive eGovernment services: the offer of proactive eGovernment services without time-consuming applications can be increased by reusing citizen's data;
- administrative burden: reduce administrative burden as they only have to submit data once.

Administration:

- efficiency gain: faster and more efficient processing thanks to simplified data exchange;
- networking: closer exchange of knowledge between administrations through co-creation and collaboration;
- growth dynamics: Dynamic European single market thanks to lower barriers between states;
- validity: valid, forgery-proof data in high quality from an authentic source.

Finally, the publication highlights that in Germany the eGovernment-Law constitutes the legal framework to fully establish the Once-Only-Principle.

3.2 Interoperability

Architectural Guideline for Federal IT

With the Architectural Guideline for Federal IT (*Architekturrichtlinie für die IT des Bundes*), adopted in July 2018, the Federal government aimed to provide a comprehensive IT architecture management in order to achieve IT consolidation within Germany. To do so, binding architecture guidelines, which were subjected to ongoing development, were developed for all areas affected by the IT consolidation in the Federal government.

3.3 Key enablers

3.3.1 Access to public information

Broadband Atlas

The **Broadband Atlas** (*Breitbandatlas*) is the key information medium for broadband coverage in Germany. The Broadband Atlas is updated regularly and is available free of charge to all interested citizens. Interactive maps show which band width and technologies are available for data transmission.

Open Government Partnership

Germany is part of the **Open Government Partnership initiative** in which the governments of 75 countries commit to implement Open Government in their respective countries. Germany has been participating in the Open Government Partnership since December 2016 and adopted its first National Action Plan (*Nationaler Aktionsplan im Rahmen der Teilnahme an der Open Government Partnership*) in August 2016. A **second National Action Plan** to push forward the development of Open Government was published in September 2019.

Geoinformation Strategy

The **federal Geoinformation Strategy** (Nationale Geoinformations-Strategie) was adopted by representatives of the federal administration, country representatives and local authorities in 2015. The strategy follows the aim to secure basic services, facilitate multiple use and promote innovation for a forward-looking and sustainable

geographic information policy. Geoinformation is used for spatial decision-making processes in all social groups, is economically profitable and brings added value.

3.3.2 eID and Trust Services

Personalausweisportal: the eID Card Website

The Federal Ministry of the Interior, Building and Community publishes on a dedicated website (www.personalausweisportal.de) information regarding the eID function of the German eID Card. There is information available for citizens, businesses and local administrations. In addition, the website contains news about new possible utilisations of the eID and a brochure with background information about it.

3.3.3 Security aspects related to digital public administration

Cybersecurity Strategy for Germany

On 9 November 2016, the **Cybersecurity Strategy for Germany** was adopted by the federal government. This built upon the lessons learnt and continued the initiatives outlined in the 2011 Cybersecurity Strategy. The new strategy formed a cross-departmental strategic framework for the activities of the federal government about cybersecurity.

The overall aim of the new strategy was to ensure the protection of networked information infrastructures without affecting the opportunities and benefits offered by the cyberspace.

3.3.4 Interconnection of base registries

No political communication has been adopted in this field to date.

3.3.5 eProcurement

eProcurement in Germany

In Germany, the autonomy of three different levels of government (1 federal, 16 federal States (Bundesländer) and about 8500 cities and smaller communities) creates a complex legal and regulatory framework in all areas, including public procurement. The laws and regulations at different levels of government have evolved independently. Due to historic reasons, the legal framework of public procurement at the federal level in Germany is embedded both in economic and budgetary law. Thus, the complexity of the technological environment is rather high and the baseline for the introduction of modern, user-centred eProcurement systems is really demanding. Due to some more recent EU directives that did impose temporal deadlines for the implementation of eProcurement in EU member states, the modernisation process started in 2018, when the federal electronic tendering platform was launched successfully. Yet, it will take some more time to achieve the degree of functional integration between the eProcurement systems at all three levels that is necessary to satisfy the needs of all stakeholders involved.

Only one small example for good eProcurement solutions that has already been put in practice is the Federal Ministry of the Interior, Building and Community establishing a dedicated **portal** to inform about eProcurement (E-Beschaffung). The portal covers information about the process of eProcurement as well as about placing an order. In

addition, there is a portal providing information about the Federal Shop (Kaufhaus des Bundes), which is an eProcurement platform for German public authorities.

Information on eInvoicing and how it works, further information on legislation, timeline, and where to submit electronic invoices, has been published on the website of the Federal Ministry of the Interior. Subsequently, different target groups - like billers, business associations or ERP providers - will be informed by group-specific media over the year. Due to legal obligations, billers of the federal government will have to send electronic invoices from the 27 November 2020. The Federal Ministry of the Interior will launch a communication campaign with the objective of promoting knowledge about eInvoicing in Germany and fostering support for the Ministry's work in order to increase the number of electronic invoices.

3.4 Domain-specific political communications

eGesetzgebung: a project aiming at a fully digital legislation process

eGesetzgebung is a project of the Federal Ministry of the Interior, Building and Community adopted in April 2018, aimed to create a fully digital legislative process. It will be achieved by making the legislative process at the federal level completely electronic, interoperable, and free of media discontinuity. At the same time, the process should orientate itself towards current technological developments by providing, for instance, user-friendly applications. Examples of these are the Demonstrator (prototype), ePlanning and Text-matching (restricted access).

High-Tech Strategy 2020 for Germany: Ideas, Innovation, Prosperity

The Federal Ministry of Education and Research has developed a **High-Tech Strategy** that aims to stimulate Germany's scientific and economic potential in a targeted way and to find solutions to global and national challenges. Germany would like to continue its efforts to become a worldwide innovation leader through a set of formulated innovative goals, defined priorities, and introduce new instruments within a wide range of different fields of innovation.

The High-Tech Strategy is the first broad national concept which presents the joint vision of the key stakeholders involved in innovation. It is based on five pillars:

- prioritising future challenges related to prosperity and quality of life;
- consolidating resources;
- strengthening the dynamism of innovation in industry;
- creating favourable conditions for innovation;
- strengthening dialogue and participation.

mFUND: an initiative to support the development of data-based solutions for mobility

The **mFUND** (*das Startkaptial für Mobilität 4.0*), a research initiative of the Federal Ministry of Transport and Digital Infrastructure, has been funding research and development projects relating to digital data-based applications for Mobility 4.0 since 2016. Besides the financial support, the mFUND supports networks of political actors, researchers and businesses, as well as access to the mCLOUD data portal.

Future of the countryside: Digitalisation Opportunities for rural areas

The Federal Ministry of Food and Agriculture established the **programme Smart Countryside Project** (Land.Digital: Chancen der Digitalisierung für ländliche Räume) to support innovative technological projects in rural areas. The project follows the overall

objective to use information and communication technologies to overcome challenges in rural areas.

3.5 Emerging technologies

AI Strategy (*Strategie Künstliche Intelligenz der Bundesregierung*)

This Artificial Intelligence (AI) Strategy (**Strategie Künstliche Intelligenz der Bundesregierung**), adopted in November 2018, was put forward by the Federal Ministry for Education and Research, the Federal Ministry of Economic Affairs and Energy and the Federal Ministry of Labour and Social Affairs. With this AI strategy, the federal government established the framework for the holistic development and application of AI in Germany.

3.6 Interoperability

No political communication has been adopted in this field to date.

4

4

Digital Public Administration Legislation



Digital Public Administration Legislation

4.1 Specific legislation on Digital Public Administration

The Single Digital Gateway Regulation

On 11 December 2018, the **Single Digital Gateway (SDG) Regulation 2018/1724** entered into force. Based on a decision of the IT Planning Council, a national stakeholder network for the SDG implementation was set up in April 2019. It consisted of SDG multipliers appointed by each of the 16 federal States, the national coordinator appointed by the Federal government, contact persons of the federal ministries and representatives of the leading municipal associations. The network will meet at least twice a year. On 21 May 2019, a national kick-off meeting for the SDG implementation took place at the German **Federal Ministry of the Interior, Building and Community** in Berlin.

The implementation of the SDG regulation was an integral part of the implementation of the German **Act for the Improvement of Online Access to Administration Services** (*Onlinezugangsgesetz, OZG*). A major screening process of the SDG regulation took place to identify the concrete implementation requirements on all administrative levels. The aim of this screening process was to set up a detailed requirement catalogue for the project managers of the current digitalisation initiatives (portal network, digitalisation programme, service accounts, Federal Information Management - FIM, IT consolidation at federal level, modernisation of registries, among others). A 280-page checklist was published to provide detailed information about the requirements of the German Act for the Improvement of Online Access to Administration Services. In addition, the SDG implementation requirements featured a **new website** that gives citizens an overview of which eGovernment Services will be digitalised and which are already available online.

Act for the Improvement of Online Access to Administration Services

On 18 August 2017, the **Act for the Improvement of Online Access to Administration Services** (*Onlinezugangsgesetz, OZG*) entered into force. Federal, regional and local governments are now required to take comprehensive measures in order to promote electronic government services. Core requirements include:

- All (suitable) administrative services must be available online within five years after the law's entry into force;
- Federal and municipal eGovernment services must be available both through a newly created federal online portal and the online portals of the federal states (*Länder*). All portals are meant to be connected to a network of portals, the *Portalverbund*. Thus, access to electronic government services becomes easier and more user-friendly;
- Access to all administrative services in the portal network must be allowed via a secure single-user account. In the user account, personal data (e.g. date of birth, residence) can be stored permanently for the users' convenience, provided they have given their consent.

Act on the promotion of electronic Government

On 17 June 2013, the Bundestag, with the approval of the Bundesrat, adopted the **Act on the promotion of electronic government** (eGovernment Act, EGovG). The German law for the promotion of eGovernment came into effect on 1 August 2013. Its aim was to facilitate electronic communication with the administration and to enable federal, State and local authorities to provide simpler, more user-friendly and efficient eGovernment services. The main provisions include:

- obligation for federal, state and local authorities to open a point of access for the transfer of electronic documents;
- obligation for federal authorities to open a De-Mail access and to offer an electronic proof of identity via electronic identity (eID) card and electronic residence permit;
- electronic record keeping;
- enabling electronic evidence and electronic payment in administrative procedures;
- obligation to document and analyse processes before implementing information technology systems;
- provision of machine-readable data (open data);
- georeferencing of electronic registers.

The eGovernment Act triggered legislative activities in most of the German federal States. By now, seven federal States have already adopted their own eGovernment Act while, several others have initiated legislative procedures.

German Basic Law (Articles 91c and 91d)

On 1 August 2009, within the framework of the second round of reforms of Germany's federal structure, important changes in the **German Basic Law** (*Grundgesetz*) came into force with articles 91c and 91d. Article 91c ensured the simplification of IT bodies and decision-making processes, thus increasing their effectiveness and enabling their adaptation to the needs of the fast-evolving technical progress. The German federation now has the exclusive legislative competence for the development of a secure linking-up network to interconnect the IT networks of national and federal States, which can prevent any underlying media issues. Furthermore, Article 91d constituted a vital component for the modernisation of the administration as it provides the legal basis for facilitating the federation and the federal States to directly and effectively benchmark their administrations in order to increase their effectiveness and transparency, and provide better public services.

Law on the Connection of Information Technology Networks of Federal and State Governments

The envisaged objectives of the German Basic Law are implemented through the connection of IT networks of federal and State governments (IT-NetzG), adopted on 10 August 2009, as well as through an Inter-federal State Agreement, which came into force on 1 April 2010. According to this agreement, the IT Planning Council was established and tasked with developing the technical requirements for the use of the core network infrastructure. Moreover, the IT Planning Council bears the responsibility to steer cross-disciplined eGovernment projects involving both the federation and the federal States. Finally, the Council adopts decisions on IT interoperability and security standards.

4.2 Interoperability

No legislation has been adopted in this field to date.

4.3 Key enablers

4.3.1 Access to public information

Law on the Re-use of Public Sector Information

The Directive on open data and the re-use of public sector information (Directive (EU) 2019/1024) entered into force on 16 July 2019. It replaces the Public Sector Information Directive (Directive 2003/98/EC), which was amended by Directive 2013/37/EU. Member States must transpose Directive (EU) 2019/1024 by 16 July 2021. Once fully transposed at national level, it will promote all public sector content that is in principle freely available for re-use, except in very limited cases. It will stimulate the transparency, non-discrimination and non-exclusivity of data. Furthermore, real-time data available via Application Programming Interfaces (APIs), open access to publicly funded research data and high value datasets will stimulate innovation and benefit both society and the economy.

Freedom of Information Act

After being narrowly approved by the Bundestag in early June 2005, Germany's **Freedom of information (FOI) Act** was voted on 8 July 2005 by the Bundesrat, published in the Federal Gazette on 13 September 2005 and came into force on 1 January 2006. The law provided the public with a general right to access federal government information. However, this general right was limited by several broadly defined exemptions, covering, for instance, security-sensitive issues, potential threats to public safety and even the "fiscal interests of the federal government". The legislation also contained an "Internet clause" to compel federal administration bodies to make a few items publicly available online. Certain federal States also have their own Freedom of Information Legislation.

Open Data Act (EGovG, Article 12a)

The principle of open data is becoming increasingly important worldwide and the availability of data is becoming an important economic factor.

Considering this, on 18 May 2017, the German Bundestag passed the draft **Federal Open Data Act** amending the eGovernment Act, presented by the Federal Minister of the Interior, which initiates cultural change in the administrations and obliges federal authorities to publish unprocessed data in the future.

The law sets out common criteria for open data. These include free of charge provision, free access to the data, as well as machine readability. At the same time, data protection applies, ensuring that only data suitable for publication is provided.

The nation-wide metadata portal GovData was created to ensure that the open data provided by the different administrations can be easily found

4.3.2 eID and Trust Services

Draft Legislation Introducing a Card for EU Citizens and Members of the European Economic Area

The draft legislation introducing a card for EU citizens and members of the European Economic Area (Gesetz zur Einführung einer Karte für Unionsbürger und Angehörige des Europäischen Wirtschaftsraums mit Funktion zum elektronischen Identitätsnachweis sowie zur Änderung des Personalausweisgesetzes und weiterer Vorschriften) was prepared in 2018 and was adopted by the German parliament in June 2019. It introduces the electronic ID card for a larger circle of people. The card is not mandatory and is available upon request for citizens of the European Union and the European Economic Area. The eID card is not a classic ID since it has an electronic chip that contains the most important personal information (especially name, date and place of birth, address).

Brexit withdrawal agreement

The persons covered by the Brexit withdrawal agreement will also be issued an electronic residence permit with integrated eID

eIDAS Implementation Act

Since 1 July 2016, the **eIDAS Regulation** has been the single legal framework for electronic trust services across the EU. In Germany, the **eIDAS Implementation Act** entered into force on 29 July 2017. The core of the eIDAS Implementation Act was the Trust Services Act (VDG). It regulates the national requirements for the effective implementation of the eIDAS Regulation. On 28 February 2019, the Trust Services Ordinance (VDV) came into force, providing the final specifications on the requirements for trust services and trust service providers, such as accessibility and financial security.

Electronic Identification Promotion Act

The **Electronic Identification Promotion Act** came into force on 15 July 2017. It aimed to promote the use and dissemination of online identification through the German eID card, making it easier and more secure. The eID card has an electronic proof of identity function and was introduced in 2010. This feature enables citizens, government agencies and businesses to reliably identify themselves on the internet. However, the use of the eID function lagged behind the expectations. In order to address this situation, since 15 July 2017, each new identity card is issued with a ready-to-use electronic identification function. With the Electronic Identification Promotion Act, several other additional measures were taken in order to promote the usage of the national eID function. The responsible data protection authorities monitor compliance with data protection.

Digital Signature Act

The German **Electronic Signature Act** came into force on 22 May 2001, implementing **EU Directive 1999/93/EC** on a Community framework for electronic signatures and replacing the previous Digital Signature Act that was adopted as part of the Information and Communication Services Act of 1 August 1997. It regulated the necessary secure infrastructure for the use of electronic signatures, which received the same legal status as hand-written signatures. It was complemented by an **Ordinance on Electronic Signatures** of 16 November 2001 setting out standard requirements and responsibilities for certification authorities, as well as minimum requirements for technical components used to create digital signatures. The Digital Signature Act was amended by the Signature Act (1. SigÄndG) of 04/01/2005.

4.3.3 Security aspects related to digital public administration

Federal Data Protection Act

Germany has one of the strictest data protection laws in the European Union. The world's first data protection law was passed in the federal State Hessen in 1970. In 1977, a Federal Data Protection Law followed, which was replaced in 1990, and amended in 1994 and 1997. An additional revision took place in August 2002 to align German legislation with the EU Data Protection Directive (**95/46/EC**).

On 6 April 2016, the EU agreed to a major reform of its data protection framework by adopting the data protection reform package. It comprised the General Data Protection Regulation (**Regulation (EU) 2016/679** - GDPR), replacing Directive 95/46/EC and the Police Directive (Directive (EU) 2016/680). The GDPR applied from 25 May 2018 and became directly applicable. The GDPR was designed to harmonise data privacy laws across Europe, to strengthen the protection of the individual's right to personal data protection to guarantee the free flow of personal data between EU

Member States. However, the GDPR permitted Member States to modify several provisions under certain conditions via local legislation (opening clauses). In order to keep the quality of German data protection standards Germany used several opening clauses and adopted the **Act to Adapt Data Protection Law to Regulation (EU) 2016/679** and to Implement Directive (EU) 2016/680, including a **Federal Data Protection Act**. The amendments came into force in May 2018.

4.3.4 Interconnection of base registries

Commercial Registry

The most important legislation for the Commercial Registry is the **German Commercial Code**. Part II, Article 8, states that the Commercial Registry is under the control of the courts, and the right to inspect the Registry is open to everyone. Copies of the entries can be obtained upon request and can be authenticated. Another important regulation is the Commercial Registry Regulation. According to article 3, the Commercial Registry addresses two categories: individual merchants and registered joint stock companies. Information regarding the electronic maintenance of the Commercial Registry, recorded files, registry folders and inspections can also be found in the regulation.

Population Registry

The Population Registry is under the **Federal Registration Act (BMG)**. The Act does not provide a definition of the Population Registry, but it regulates areas such as the required reference data to be registered, registration authorities and their duties, storage of data, accuracy and completeness of the Population Registry, information restrictions, storage and deletion of data, registration certificates, use restrictions, automatic retrieval and data transfer.

Land Registry

Both the Land Registration Code (**Grundbuchordnung - GBO**) and the **Civil Code (BGB)** contain paragraphs which are relevant to the Land Registry. The Grundbuchordnung places more emphasis on governing the procedural part, the required processes and formalities. Its articles cover information such as the entries to be made in the Registry, the rectification of the data, the exchange of copies of the Land Registries, public charges, access to basic files and more. The Civil Code covers items such as land leases, rental fees, annuities and property management.

4.3.5 eProcurement

Official Contracting Terms for Award of Service Performance Contracts

The government transposed Directive 2004/17/EC, Directive 2004/18/EC and Directive 2005/51/EC into national law when the official contracting terms for the award of service performance contract were published on 6 June 2006. The original contracting terms were subsequently simplified through the **Contract Awards for Public Supplies and Services-Part A (VOL/A)** published on 29 December 2009 in the Federal Gazette (Volume 61, No.196a), again with a corresponding correction published on 29 February 2010. The amended **Procurement Ordinance (Vergabeverordnung, VgV)**, which came into force on 11 June 2010, regulated the submission of electronic bids in the area of public procurement.

On 1 December 2016, the Bundestag adopted the Law on the Transposition of Directive on electronic invoicing in public procurement (**Directive 2014/55/EU**).

eInvoicing

In Germany, the competence in the field of eInvoicing is shared between the **Federal Ministry of the Interior** (at the federal level) and the federal states. The legislation in place makes reference to the **eInvoicing Law** of 4 April 2017 (*E-Rechnungsgesetz*), which mandates the receipt and processing of eInvoicing for all federal contracting authorities. As far as other State and local entities are concerned, they shall rely on supplementary legislation by the federal States. Following a decision by the National IT Planning Council in June 2017, XRechnung, the German Core Invoice Usage Specification (CIUS) based on the European Norm 16931, has become the leading eInvoicing standard for central, regional and local authorities in Germany. Furthermore, the eInvoicing platform was activated by the federal government for B2G public procurement at the end of 2018. Since November 2019, B2G eInvoicing is mandatory in Germany for all government bodies at national level. B2G eInvoicing became mandatory also at regional and communal level on 18 April 2020.

4.4 Domain-specific legislation

Electronic Commerce Act

The **Electronic Commerce Act**, of 14 December 2001, implemented the EU eCommerce Directive (2000/31/EC) into German law. The Act amended the **Tele Services Act** and the **Tele Services Data Protection Act** of 1997 (both of which had been adopted as part of the Information and Communication Services Act of 1 August 1997), as well as some provisions of the German Civil Code.

Act on De-Mail Services and Amendments to other Legislation

The **Act on De-Mail services and amendments to other legislation** . contains the legal requirements for registration as a De-Mail provider. The draft was adopted by the Federal Cabinet on 13 October 2010 and entered into force on 3 May 2011. De-Mail enables the sending of traceable and confidential documents and messages online. Contrary to conventional e-mails, De-Mails provide a proof of delivery. It is not possible to read or manipulate the contents of a De-Mail on its journey across the internet. De-Mail providers are interoperable and provide the same level of security based on an accreditation process that is specified by the legislator. De-Mail providers have to fulfil high requirements concerning security, functions, interoperability and data protection. Furthermore, the De-Mail legislation foresees that providers must not only furnish the stated certificates for security, functionality and interoperability, but must also demonstrate comprehensive measures to protect personal data within the scope of the accreditation procedure.

The basic specifications for security, functionality and interoperability were drawn up by the federal government together with future De-Mail providers and laid down in technical guidelines. To ensure compliance with these guidelines, De-Mail providers are screened in an accreditation process. De-Mail focuses on data protection and requires, for instance, that De-Mail providers can enable the use of e-mail pseudonyms, to prevent traceability of communications, or consumer profiles. Furthermore, when requested, De-Mail providers must store the user's encryption certificates in the directory to support (additional) end-to-end encryption of De-Mails. The German Federal Office for Information Security (BSI) has published the approval criteria on its [website](#).

4.5 Emerging technologies

No legislation has been adopted in this field to date.



5

Digital Public
Administration
Governance

5 Digital Public Administration Governance

5.1 National

5.1.1 Policy

Minister of State for Digitalisation

The role of the State Minister for Digitalisation at the Federal Chancellery was established in March 2018.



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Minister of State for Digitalisation

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Federal Ministry of the Interior, Building and Community

The responsibility for Germany's eGovernment policy lies with the Federal Ministry of the Interior, Building and Community.



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Federal Government Commissioner for Information Technology

The Office of the Federal Government Commissioner for Information Technology was established on 1 January 2008, in line with the guidelines of the Federal IT-Steering Strategy. In accordance with the Cabinet's decision, the Commissioner is responsible for the following activities:

- elaboration of the federal eGovernment and IT security strategy;
- development of the federal IT architecture, standards and methods;
- control the provision of central IT infrastructure of the federal government.

Apart from establishing the Office of the Federal Government Commissioner for Information Technology, all government departments have appointed a Chief Information Officer (CIO). The CIOs of all government departments form the CIO Conference, which is the central decision-making body for IT-related laws and regulations in the federal public administration at the ministry level.

The Commissioner chairs the CIO Conference and is the federal representative in the IT Planning Council, which is responsible for steering and coordinating cross-disciplinary eGovernment projects involving both the Federation and the federal States.



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Directorate-General for Digital Society

Within the **Federal Ministry of the Interior, Building and Community**, the Directorate-General for Digital Society drives the digital transformation and modernisation of the public administration in order for it to meet current requirements in terms of performance, responsiveness, efficiency and transparency.



Peter Batt

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IT Council

The **IT Council** is the central strategic body for overarching digitalisation issues. Its members are civil servants responsible for administrative digitalisation and information technology policies in all federal ministries.

The main task of the Council is the strategic management of information technology, administrative digitalisation and the federal government's IT consolidation.

5.1.2 Coordination

Federal Ministry of the Interior, Building and Community

The Federal Ministry of the Interior, Building and Community is the main body that coordinates the combined implementation efforts of all federal ministries and agencies, in order to provide a modern IT infrastructure at national level. It does not coordinate the IT implementation at federal state or community level.

Federal Chancellery

The Federal Chancellery (*Bundeskanzleramt*) coordinates the strategic aspects of the digitalisation of the public sector across ministry boundaries.

Federal Government Commissioner for Information Technology

The Office of the Commissioner for Information Technology brings together the units responsible for the coordination of the "Information Society", the main IT strategy of the German federal administration, and the Office of the Task Force "Deutschland Online" as well as the unit responsible for the operative trans-departmental IT-steering, including large scale programmes such as the IT consolidation programme. The Commissioner is the key contact person in the federal government, cooperating with federal States, municipalities and all relevant national and international stakeholders on IT-related matters. The Commissioner represents the federal government in the IT Planning Council.

IT Planning Council

The IT Planning Council is an important body which brings together the Federal Government Commissioner for Information Technology (the responsible State Secretary at federal level), the State Secretaries responsible for information technology (CIOs at State level), the Federal Commissioner for Data Protection and Freedom of Information and representatives of the national associations of local authorities.

The IT Planning Council is responsible for steering and coordinating cross-disciplinary eGovernment projects involving both the Federation and the federal States. According to Article 91c of the German Basic Law, the Council is tasked with the coordination of the cooperation between the Federation (Bund) and the States in the field of information technology; decisions on IT interoperability and security standards; the steering of eGovernment projects; and the planning and implementation of the core network infrastructure according to the [Law on Linking up Federal and Land IT Networks](#).

Federal IT cooperation (FITKO)

In carrying out its tasks in accordance with Article 91c of the Basic Law and Section 1 (1) of the State Treaty on IT, the IT Planning Council is assisted strategically and operationally by the FITKO Project Team. The Project Team is also preparing the role of FITKO as an institution under public law, which has been set up in early 2020 and is based in Frankfurt. This public institution, which is jointly sponsored by the 16 federal States and the federal government, will consolidate the existing organisational structures as well as the personnel and financial resources of the IT Planning Council. FITKO's tasks also include developing and implementing a federal digital strategy and a federal IT architecture, promoting joint IT solutions, administering the budget for digital technology and creating a network to connect all relevant stakeholders.

The Cabinet Committee on Digitalisation

The Cabinet Committee on Digitalisation (Digitalkabinett) is the central steering body for digital policy issues at the highest political level. Its members are the Federal Chancellor, all Federal Ministers as well as the Ministers of State Dorothee Bär and Monika Grütters. As usual, the Cabinet Committee is preceded by a preparatory coordination meeting of the State Secretaries. It is chaired by the Minister of State Dorothee Bär.

The Cabinet Committee is a committee set up by the federal government to prepare Cabinet decisions. It may include some or all members of the government. The recommendations must be approved by the Federal Cabinet.

OZG-Kommunal

Initialised by the representatives of German administrative districts and municipalities, **OZG-Kommunal** should support local authorities during the implementation of the German Act on the Improvement of Online Access to Administration Services. OZG-Kommunal is a coordinative forum, which is intended to promote the exchange of information among eGovernment experts and across different political levels.

Coordination Office for IT-Standards (KoSIT)

The **IT Standards Coordination Office** (*Koordinierungsstelle für IT-Standards - KoSIT*) has the task of coordinating the development and operation of IT standards for data exchange in the public administration.

KoSIT supports the IT Planning Council in its task of elaborating independent and interdisciplinary IT interoperability and IT security standards, as well as managing eGovernment projects that transcend federal and State borders.

5.1.3 Implementation

German Federal Office of Administration (BVA)

The **German Federal Office of Administration** (*Bundesverwaltungsamt - BVA*) is Germany's central public service agency. It performs more than 100 different tasks for all federal ministries. This includes the development of some of the country's eGovernment infrastructure components, such as the government portal **Bund.de**, or the content management system "**Government Site Builder**".

Individual Government Ministries and Agencies

Government ministries and agencies are responsible for the implementation of their departmental ICT projects. The Federal Ministry of the Interior coordinates the combined implementation efforts of all federal ministries and agencies.

5.1.4 Support

Federal Office for Information Security (BSI)

The **Federal Office for Information Security** (*Bundesamt für Sicherheit in der Informationstechnik - BSI*) is the central IT security service provider for the German government. One of its key tasks is to provide support to federal authorities on IT security.



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ITZBund

ITZBund (*Informations Technik Zentrum Bund*) is the central IT service provider of the federal administration. Its main task is to provide high-performance and high-quality IT solutions, especially for the federal administration. The establishment of the ITZBund in 2016 represented a first step towards the implementation of the general concept of IT federal consolidation.

Digital Council

The **Digital Council** is an advisory body, tasked with facilitating a close exchange between politicians as well as national and international experts. It is composed of independent experts from the fields of science, research and business coming from Germany and other countries, who are working on an honorary basis. With their expertise, they cover as many areas of digitalisation as possible.

The Council shall provide technical support and, where necessary, advise the federal government on how to shape digital change within society, industry and administration.

Agency for Innovation in Cybersecurity

To ensure digital sovereignty, an **Agency for Innovation in Cyber Security** (*Agentur für Innovation in der Cybersicherheit*) will be established. The agency's purpose is to award targeted contracts for ambitious research projects with high innovation potential in the field of cybersecurity and related key technologies to meet the needs of the State in the area of internal and external security. In particular, the agency will support innovative projects which are characterised by radical technological novelty and which can therefore have a market-changing effect.

5.1.5 Interoperability coordination

Federal Ministry of the Interior, Building and Community

The body responsible for interoperability activities in Germany is the Federal Ministry of the Interior, Building and Community.

5.1.6 Base registry coordination

Federal Ministry of Transport and Digital Infrastructure and Federal Motor Transport Authority (KBA)

The **Central Vehicle Registry** collects, records and processes vehicle and owner data from local registration authorities.

German Commercial Register

The **German Commercial Register** (*Handelsregister*) portal is run by the Ministry of Justice of the federal State of North Rhine-Westphalia on behalf of the other German federal States (Länder). It provides centralised access to all federal State registers of companies, cooperatives and partnerships and to announcements for the register.

5.1.7 Audit

Federal Court of Accounts

The President of the **Federal Court of Accounts** also serves as Federal Commissioner for Efficiency in the Public Administration. S/he puts forward proposals, recommendations, reports and opinions in order to enhance the efficiency of the federal administration. The Commissioner may also advise parliament upon request.

National Regulatory Control Council

The **National Regulatory Control Council** (*Normenkontrollrat*) is an independent advisory body to the federal government. Since 2006, it has been reviewing the transparent and comprehensible presentation of the bureaucratic costs arising from information obligations and, since 2011, the total follow-up costs of the federal government's draft laws. This gives decision-makers in government and parliament reliable information about the costs associated with their decisions. One of the main topics of the Regulatory Control Council is to advance the digitalisation and modernisation of the administration.

5.1.8 Data Protection

Federal Commissioner for Data Protection and Freedom of Information

The **Federal Commissioner for Data Protection and Freedom of Information** is responsible for the audits/controls of all federal agencies, with regard to the observance of data protection legislation.



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Data Ethics Commission

The use of algorithms and artificial intelligence, as well as the handling of data, holds great potential. At the same time, numerous ethical and legal questions arise when dealing with new technologies. The federal government's **Data Ethics Commission** (*Datenethikkommission*) should provide answers to these questions and, on the basis of scientific and technical expertise, develop ethical guidelines for the protection of the individual, the preservation of social coexistence and the safeguarding and promotion of prosperity in the digital age.

Under the leadership of the Federal Ministry of the Interior, Building and Communities and the Federal Ministry of Justice and Consumer Protection, the Commission is tasked with providing the federal government with recommendations for action, as well as proposing regulatory options. A final report on the work carried out by the Commission was published in October 2019.

5.2 Subnational (federal, regional and local)

5.2.1 Policy

German Federal States

All of the federal States (*Länder*) are currently setting their own eGovernment strategies. As a result of these strategies, nearly all local authorities have an Internet presence and over 80% of local authorities are already providing relevant online services. Furthermore, a large number of local authorities in Germany offer central access to their online services via highly efficient portals. The federal *Länder* and local authorities are working in parallel to further expand their own eGovernment services.

Conference of Minister-Presidents and Conferences of Specialised Ministers

The Conference of Minister-Presidents and the Conferences of Specialised Ministers are bodies in which the federal States cooperate in their own spheres of responsibility. The federal States use these conferences to agree on proceedings in matters of joint interest, develop their position in relation to the federal government and also seek mutually agreed solutions with the federal government.

5.2.2 Coordination

IT Planning Council

The IT Planning Council (*IT-Planungsrat*) is an important body which brings together the Federal Government Commissioner for Information Technology Technology (the responsible State Secretary at federal level), the State Secretaries responsible for information technology (CIOs at State level), the Federal Commissioner for Data Protection and Freedom of Information and representatives of the national associations of local authorities.

The IT Planning Council is responsible for steering and coordinating cross-disciplinary eGovernment projects involving both the Federation and the States (*Länder*). According to Article 91c of the German Basic Law, the Council is tasked with the coordination of the cooperation between the Federation (*Bund*) and the States in the field of information technology; decisions on IT interoperability and security standards; the steering of eGovernment projects; and the planning and implementation of the core network infrastructure according to the Law on the connection of the IT networks of the Federation and the States.

Federal IT cooperation (FITKO)

In carrying out its tasks in accordance with Article 91c of the Basic Law and Section 1 (1) of the State Treaty on IT, the IT Planning Council is assisted strategically and operationally by the FITKO (*Föderale IT-Kooperationen*). This public institution, which is jointly sponsored by the 16 federal States and the federal government, consolidates the existing organisational structures as well as the personnel and financial resources of the IT Planning Council. FITKO's tasks also include developing and implementing a federal digital strategy and a federal IT architecture, promoting joint IT solutions, administering the budget for digital technology and creating a network to connect all relevant stakeholders.

5.2.3 Implementation

Individual Federal States and Municipalities

The individual federated States and municipalities are responsible for the implementation of their own eGovernment projects. They are supported by regional IT companies. These companies are often partly owned by the federal State or collectively by a union of municipalities.

5.2.4 Support

Federal Ministry of the Interior

The Federal Ministry of the Interior is responsible for promoting new IT structures connecting the federal, State and local levels. The introduction of Article 91c of the German Basic Law calls for further cooperation in information technology in the administration of federal and State governments.

5.2.5 Interoperability coordination

No responsible body has been reported to date.

5.2.6 Base registry coordination

Ministry of Justice

Land Registries are set up for each district and are therefore managed locally.

Municipalities and Interior Ministries of the federal states

The German Population Registry (Melderegister) is administered locally. Only some States have centralised registries. There is also a central registry for foreigners.

5.2.7 Audit

State Court of Accounts

Each German federal State has its own audit body, which liaises and works on equal terms with the Federal Court of Accounts, in areas where there is dual responsibility for the provision and delivery of public services. In cases where the Federal Court works with one or more of the State Courts, they perform joint audits or agree to divide audit responsibilities among their respective organisations. There are also joint working parties where the Federal Court and the various State Courts discuss matters of common interest, such as budgetary law, taxation, public works, data processing and other matters of general policy and guidance.

5.2.8 Data Protection

State Data Protection Commissioners

German States have their own Data Protection Commissioner, responsible for controlling the observance of data protection legislation by public bodies located in their jurisdictions.



6

Digital Public
Administration
Infrastructure

6 Digital Public Administration Infrastructure

6.1 Portals

6.1.1 National Portals

Bund.de: A new nationwide German digitalisation platform for the public administration

A modern administration needs to consistently take advantage of the opportunities offered by digitalisation and align its electronic service to citizens' and businesses' expectations and needs. The number of public administrative procedures in Germany that can be completed online has therefore been significantly increased. These eGovernment services became easier and faster to find on the web - as users no longer need to know which federal jurisdiction is responsible for the respective procedure.

To achieve this aim, the German federal, state and local governments worked on a **common digitalisation platform**. This platform took the shape of a joint network of the administrative portals at the federal and state level. The portals are structured according to life and business situations. Municipal portals and services are connected to the portal network via state portals. To allow for simple and secure processing of eGovernment offers, users are provided with service accounts, similar to customer accounts in online commerce, which also feature post office box functions. In order to save time and costs, the portal network builds on existing solutions.

In 2018, the German Federal government launched a newly revised portal that provides access to eGovernment services of the federal authorities via a federal service account. This account complied with the requirements of the Regulation (EU) No 910/2014 of the European Parliament and of the Council on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC - in short, eIDAS Regulation. Federal ministries and government agencies using this account thus automatically complied with the EU-requirements that came into force in September 2018. As part of the portal network, the new administrative portal will eventually also offer access to procedures and services within the jurisdiction of the federal states and municipalities. The legal basis for the entire project was the so-called **Online Access Act** which came into force in August 2017.

The digitalisation initiative is flanked by a digitalisation programme of the IT Planning Council, a central body in which federal and state authorities work together on issues of information technology in the public sector. Within this programme, selected administrative procedures with high relevance for citizens and companies were digitalised. These procedures were made available online nationwide via the portal network.

The digitalisation of public administration in Germany was further supported by FIM (Federal Information Management). By offering textual information, form fields and processes, FIM laid the foundation for a uniform and unambiguous description and structuring of public tasks and duties both for the enforcement level and for the legislation. FIM furthermore provided the conditions for a simplified electronic mapping of cross-organisational administrative processes in the form of IT-based procedures. The three building blocks (services, forms and processes) as well as the overall coordination were jointly operated by the German Federal government and the state governments. A **Beta Version** of the new portal was launched in September 2018.

GovData Portal

The German data portal **GovData** provides a unified, centralised access to administrative data from federal, State and local governments. The goal is to make this data accessible in one single place and thus easier to use for both citizens and businesses. In the spirit of the Open Data principle, the portal aims to promote the use of open licenses and increase the supply of machine-readable raw data.

6.1.2 Subnational Portals

Portalverbund

At the moment subnational and regional portals run independently. Following the concept of the federal State portals (Portalverbund), the local portals will be intelligently connected with the federal structures. The portal network Portalverbund is part of the implementation of the German Act for the Improvement of Online Access to Administrative Services.

eGovernment-Portals in Bavaria and North Rhine-Westphalia

The federal eGovernment portals in **Bavaria** and **North Rhine-Westphalia** have been examples for the further development of the Once-Only Principle in Germany since 2017. Both States established portals to which citizens only need to log in once to use eGovernment services from a whole range of providers.

6.2 Networks

Berlin-Bonn Information Network (IVBB)

The infrastructure supporting internal communications among the federal authorities is the **Berlin-Bonn Information Network (IVBB)**, established in the 1990s, when the German parliament and the federal government moved from Bonn to Berlin. The IVBB provides the main federal authorities with central internet access and networking services. Until July 2006, the IVBB also provided access to the IVBB intranet, which was replaced by the Federal Intranet (Intranet des Bundes). The new intranet portal features new content, services and workflows, such as a persons and federal agencies search engine, a travel management system and access to information and document databases.

The IVBV is a private IP-based communication network, which serves as intranet among the different public administration departments. Its infrastructure facilitates the incorporation of the Berlin-Bonn Information Network (IVBB) as well as of other networks of the federal administration into a comprehensive IP-based network, featuring, amongst others, a firewall system, comprehensive encryption of the data communication and permanent observation of the connected users and the established connections.

Federal Networks (NdB)

The **Federal Networks (Netze des Bundes - NdB)** substitute the Berlin-Bonn Information Network (IVBB) and the Information Network of the Federal Administration (IVBV) and increase the efficiency and security (in terms of availability and privacy) of the networks involved. The aim is to create a common infrastructure for the federal government in the long term. NdB provides the main federal authorities with central internet access and networking services. In 2006, the Federal Intranet (Intranet des Bundes) was introduced. The intranet portal features services and workflows, such as a persons and federal agencies search engine, a travel management system and access to information and document databases. NdB is a

private IP-based communication network, which serves as intranet among the different public administration departments.

The importance of network infrastructures has changed over the last 20 years. Today network infrastructures are essential for the modern administration. Nearly every public authority needs special IT procedures to perform its tasks.

Due to the increased threat level by highly developed malware (e.g. Trojan software), NdB fulfils the highest connection security requirements at federal and State level. Therefore, NdB provides firewall systems, comprehensive encryption of the data communication and permanent observation of the connected users and the established connections.

The sponsor for NdB is the Beauftragte für Informationstechnik der Bundesregierung (BfIT). The BDBOS is responsible for the operation of NdB.

Deutschland-Online Infrastructure (DOI)

In June 2006, the **Deutschland-Online action plan** was approved federal government and the federal States. A core project within the Deutschland-Online action plan was the Deutschland-Online Infrastructure project, which aimed at establishing the network infrastructure for widespread and integrated electronic processing between administrative units. The DOI network was implemented as a connective network structure (coupling network) for the public administration networks in Germany, with junctions to the sTESTA network of the European Union and to the federal networks IVBB and IVBV/BVN, that are to be replaced in the project **Federal Networks (Netze des Bundes, NdB)**.

6.3 Data Exchange

De-Mail

De-Mail is an easy-to-use technology that takes conventional e-mail one step further as it allows citizens, businesses and administrations to exchange electronic messages in a secure manner. Compared to conventional e-mails, the delivery of De-Mails and the identity of senders and recipients can be proven. It is not possible to read or manipulate the contents of a De-Mail on its journey across the internet. One important aim is to make De-Mail confidential, reliable and binding through basic security functions that are easy to use and do not require additional installations for the end-user. The sender and recipient of a De-Mail can be clearly identified. Send and delivery certificates can be easily generated.

De-Mails are encrypted during transport and can neither be intercepted nor manipulated. Spam and phishing are effectively prevented because the De-Mail sender can be clearly identified by secure initial identification and users are able to log on with two-factor authentication using the new German eID card or a mobile phone-based method (mobile TAN).

Furthermore, De-Mail offers huge potential to optimise electronic communications in the private and public sector. Recently, business and administration processes were marked by media inconsistencies that produced considerable delays and additional costs. With the additional security functions that De-Mail provides, a large part of today's paper-based business and administration processes can now be handled fully electronically, simply, quickly and from any location.

The legal requirements for registration as De-Mail provider are contained in the Act on De-Mail services and amendments to other legislation, which entered into force on 3 May 2011. So far, inter alia Deutsche Telekom AG, GMX.DE, WEB.DE and Mentana GmbH have become accredited De-Mail providers.

6.4 eID and Trust Services

Electronic Identity Card

Germany's next generation **Identity Card (eID)** was launched on 1 November 2010. The new eID card in credit card format replaced the existing national identity card and offers more functions than the current conventional ID. By utilising a microchip, the card provides an online authentication functionality, applicable to both eGovernment and eBusiness transactions. Due to the assignment of authorisation certificates and mutual authentication, cardholders can be confident that whoever requests their data is also authorised to obtain it. The secure eID card provides further protection against identity theft and offers new, user-friendly ways to guarantee valid client data for service providers and to protect young people by age verification. Furthermore, the eID card can be used as identification and authentication means for remote signatures. To ensure that national ID cards continue to serve as secure travel documents, eID cards contain biometric identifiers stored on a chip, which satisfies the requirements for official identity checks. All eID cards include a digital biometric photo; cardholders could choose to include two fingerprints on the chip as well. Both identifiers provide an efficient way to increase security at border controls.

In February 2017, Germany was the first Member State to trigger the **pre-notification procedure** to make sure that EU citizens and businesses could use their trusted electronic identification means (eID), as provided under eIDAS, to digitally authenticate themselves in order to use online services across the European Union. eID cards shall guarantee an elevated level of security and protection of personal data. The notification procedure for the German eID was completed in 2017 at a high level of assurance.

Electronic Passport (ePass)

Germany was among the first countries to introduce the **Electronic Passport (ePass)**, in November 2005. It was developed to comply with Council Regulation (EC) **No 2252/2004** and equipped with a microchip, holding the owner's data, such as name, surname, date of birth and nationality. Beyond traditionally relevant data, a digital facial image of the owner was also stored on the microchip. In June 2007, the revision of the **Passport Act**, as approved by the Federal Council, laid down the legal foundation for second generation electronic passports. In addition to the digital facial image, the new passports featured two fingerprints in digital format. Fingerprints were to be stored exclusively on the passport's microchip, and never stored locally on issuance authorities' systems, or in any other central database.

In March 2017, Germany issued a new generation of passports. For the new passport, traditional high-quality security features were complemented by additional, innovative features combining state-of-the-art materials with cutting-edge technology.

Signature Alliance

Administration and private partners founded the Signatures Alliance in 2003. The cooperation aims at promoting the usage of electronic signatures in Germany and delivering their benefits to both public and private service providers. All citizens should be able to use a standardised technical infrastructure, to access interoperable applications in the areas of eBusiness and eGovernment, using their diverse signature cards. More information and details may be found in the document "**Requirements and convergent objectives of the Signature Alliance**" (Vorgaben und Konvergenzziele für das Signatürbündnis).

6.5 eProcurement

eTendering Platform (XVergabe)

XVergabe is the official website of Germany's project for the development of eTendering cross-platform communication standards, which has been operational since July 2011. The project's aim is to develop platform-independent eTendering standards for the cross-platform exchange of documents and data between the bidders and the eTendering platforms. To date, the xvergabe.org website contains basic project information, as well as the most important documents that are released as part of the project's work.

Federal eProcurement Platform (eVergabe)

The **eVergabe** project was considered to be one of the most important projects of the BundOnline 2005 initiative. The service features the electronic awarding of orders based on communications between the awarding agency and potential bidders that are comprehensive, legally binding and free from media discontinuities. The offering ranges from notification via electronic tender submission to contract award using the contract award platform. The documents containing the contract terms can be downloaded and bids can be submitted with an electronic signature. The eAward project falls within the remit of the **procurement agency** of the Federal Ministry of the Interior (BMI). In technical terms, the service was implemented as a web-based transactional platform using Java clients and combined with a web interface to search for tenders. In addition to the eVergabe platform, all public tenders from this platform were automatically published online on bund.de.

Federal eGovernment Shop (Kaufhaus des Bundes)

Federal eProcurement Platform, the Procurement Agency of the Federal Ministry of the Interior also developed the Federal **eGovernment shop** eGovernment Shop (Kaufhaus des Bundes, KdB). With this solution, the ordering of materials takes place through an electronic catalogue. Supplies of printing paper, for instance, are ordered with a few mouse clicks. Even customised PCs and cars can be ordered online directly from the company. Conservative calculations estimate that each electronically executed order via KdB saves at least 377 minutes (which equals EUR 195 of personnel expenses) compared to the simplest form of single tender action.

E-Rechnung

The eInvoicing service of the federal government was completed on 27 November 2019. Federal government bodies now receive and process electronic invoices via eInvoicing platforms (**Zentrale Rechnungseingangsplattform des Bundes, ZRE** and **Onlinezugangsgesetzkonforme Rechnungseingangsplattform, OZG-RE**). From 27 November 2020, suppliers of federal government authorities and agencies will have to submit electronic invoices. The regulations of the German federal States may show some differences.

6.6 ePayment

ePayBL

ePayBL (*ePayment des Bundes und der Länder*) was established as a mandatory basic IT component at the federal government level. ePayBL is a software component developed by a joint community of federal (Bund) and State (Länder) administration. It supports several payment options.

6.7 Knowledge Management

Library Portal (Bibliotheksportal)

This **library portal** (Bibliotheksportal) provides quick and easy access to a wide range of information through the federal intranet. This portal lists the literary works, the electronic publications, the databases and the services made available by twenty-two libraries. Users can, anytime and from anywhere, search the library catalogues of all participating libraries and the portal for specialised databases, such as "Beck-Online", "juris", "Makrolog" and the "Munzinger Archive". In addition, the portal contains a comprehensive list of links to relevant internet resources.

XRepository

XRepository is an online library for XML-based data exchange formats, launched in January 2009. This website constitutes a central location for the publication of a broad spectrum of data related to eGovernment projects, including data models, XML schemes and relevant documentation. Once published, the data is available for re-use by other administrations and designers of business processes. The website also facilitates online research on standards and interfaces, which can be subsequently downloaded at no cost. The online library is operated by the Co-ordination Office for IT Standards (KoSIT) in Bremen.

6.8 Cross-border platforms

EBR, ECRIS and EUCARIS

The data of the German Business Registry can be accessed by EU Member States through the **European Business Registry (EBR)**. Germany is also a member of **ECRIS** and **EUCARIS**.

6.9 Base registries

Services Registry - German Administration Services Directory (DVDV)

The **German Administration Services Directory (DVDV)** is a multilevel and cross-sectoral infrastructure component of eGovernment in Germany. More specifically, it is the professional and administrative cross-border infrastructure that ensures the safe and reliable provision of automated services and specialised procedures, as well as the secure and legally binding communication between authorities and with the public administration in Germany. The DVDV is based on a directory which lists agencies and other providers with their respective services.

The DVDV relies exclusively on open internet protocols. Worldwide, it is one of the first and largest standardised Service Oriented Architecture (SOA) implementations in the government area and was made possible through unique cooperation between various levels of government and sectors in the Federal Republic of Germany.

Registry Factory

Germany has developed a new innovative tool to ensure a more efficient registry creation and administration, known as the **Registry Factory**. The Registry Factory provides an approach to information technology which implies availability and reusability of the developed assets for any public authority wanting to create and maintain base registries. Such assets include standardised architecture, solutions, technical infrastructure, cross-sectional components, programming libraries and middleware, all of which are available for free as open source.

The Registry Factory is a solution for the construction and operation of IT systems for conducting electronic registrations in the Federal Office of Administration. The standards and tools of the Registry Factory include blueprints, building blocks, an operating platform and methodological guidelines for software engineering and development tools. The Registry Factory is designed to support custom software

development. Business Information Systems, in general, can be built using the technical foundations. The Registry Factory provides additional registry-specific blueprints and building blocks to build registries. All parts can be used either in combination or separately.

Further developments

The German Federal Ministry of the Interior, Building and Community has identified strategic aims and possible activities for modernising registers. Currently preparatory work is being done with the aim to define the scope of future activities.



7

Cross-border Digital Public Administration Services

7 Cross-border Digital Public Administration Services

Further to the information on national digital public services provided in the previous chapters, this final chapter presents an overview of the basic cross-border public services provided to citizens and businesses in other European countries. **Your Europe** is taken as reference, as it is the EU one-stop shop which aims to simplify the life of both citizens and businesses by avoiding unnecessary inconvenience and red tape in regard to 'life and travel', as well as 'doing business' abroad. In order to do so, Your Europe offers information on basic rights under EU law, but also on how these rights are implemented in each individual country (where information has been provided by the national authorities). Free email or telephone contact with EU assistance services, to get more personalised or detailed help and advice is also available.

Please note that, in most cases, the EU rights described in Your Europe apply to all EU member countries plus Iceland, Liechtenstein and Norway, and sometimes to Switzerland. Information on Your Europe is provided by the relevant departments of the European Commission and complemented by content provided by the authorities of every country it covers. As the website consists of two sections - one for citizens and one for businesses, both managed by DG Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) - below the main groups of services for each section are listed.

7.1 Life and Travel

For citizens, the following groups of services can be found on the website:

- **Travel** (e.g. Documents needed for travelling in Europe);
- **Work and retirement** (e.g. Unemployment and Benefits);
- **Vehicles** (e.g. Registration);
- **Residence formalities** (e.g. Elections abroad);
- **Education and youth** (e.g. Researchers);
- **Health** (e.g. Medical Treatment abroad);
- **Family** (e.g. Couples);
- **Consumers** (e.g. Shopping).

7.2 Doing Business

Regarding businesses, the groups of services on the website concern:

- **Running a business** (e.g. Developing a business);
- **Taxation** (e.g. Business tax);
- **Selling in the EU** (e.g. Public contracts);
- **Human Resources** (e.g. Employment contracts);
- **Product requirements** (e.g. Standards);
- **Financing and Funding** (e.g. Accounting);
- **Dealing with Customers** (e.g. Data protection).

The Digital Public Administration Factsheets

The factsheets present an overview of the state and progress of Digital Public Administration and Interoperability within European countries.

The factsheets are published on the Joinup platform, which is a joint initiative by the Directorate General for Informatics (DG DIGIT) and the Directorate General for Communications Networks, Content & Technology (DG CONNECT). This factsheet received valuable contribution from Carsten Rosche Federal Ministry of the Interior, Building and Community.



The Digital Public Administration factsheets are prepared for the European Commission by Wavestone.

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ISA² is a EUR 131 million programme of the European Commission which develops digital solutions that enable interoperable cross-border and cross-sector public services, for the benefit of public administrations, businesses and citizens across the EU.

ISA² supports a wide range of activities and solutions, among which is the National Interoperability Framework Observatory (NIFO) action.

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